1893.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES

OF THE

Sanitary District of Chicago,

FROM

January 1, 1893, to December 31, 1893.

RIALTO BUILDING.

JOHN F. HIGGINS, PRINTER. 196-8 SOUTH CLARK STREET.

- MEMBERS OF -

BOARD OF TRUSTEES

—OF THE—

SANITARY DISTRICT OF CHICAGO.

For the Year 1893.

BOARD OF TRUSTEES.

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WILLIAM BOLDENWECK,	*146 S. Franklin Street.*
LYMAN E. COOLEY,	*Room 705, 21 Quincy Street.*
BERNARD A. ECKHART,	*66 N. Canal Street.*
ARNOLD P. GILMORE,	*Venetian Building.*
THOMAS KELLY	*3622 S. Western Avenue.*
RICHARD PRENDERGAST,	*805 Rookery Building.*
WILLIAM H. RUSSELL,	*3126 Calumet Avenue.*
FRANK WENTER,	*115 W. Fourteenth Street.*

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THOS. F. JUDGE,	*Clerk.*
MELVILLE E. STONE,	*Treasurer.*
*BENEZETTE WILLIAMS, †ISHAM RANDOLPH,	*Chief Engineer.*
ORRIN N. CARTER,	*Attorney.*

OFFICES OF THE DISTRICT, RIALTO BUILDING.

*Resigned June 7, 1893.
†Elected to fill vacancy June 7, 1893.

COMMITTEES FOR 1893 AND 1894.

COMMITTEE ON JUDICIARY.

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WILLIAM BOLDENWECK, JOHN J. ALTPETER.

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COMMITTEE ON LABOR.

JOHN J. ALTPETER, *Chairman.*

THOMAS KELLY, BERNARD A. ECKHART.

THOMAS F. JUDGE, Clerk of District.

REGULAR MEETINGS—The Board of Trustees meet every Wednesday at 1:30 o'clock P. M
All Committees subject to call of Chairman.

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PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JANUARY 4, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, January 4, 1893, at 1:30 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7)—and subsequently Mr. Gilmore, making a total of eight (8)—members were present.

MINUTES.

The minutes of the regular meeting held Wednesday, December 28, 1892, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept. Chief Eng's Roll, Dec. 1892.....	$1,657 26
Eng. Dept., Div. No. 1, week ending Dec. 31, '92.....	1,218 30
Eng. Dept., Div. No. 1, (Sag building) week ending Dec. 31,1892...	98 30
Eng. Dept., Div. No. 2, week ending Dec. 31, '92.....	312 60
Eng. Dept., Div. No. 2, (Illinois Valley) week ending Dec. 31, '92.....	102 00
Eng. Dept., Div. No. 2, (General Surveys) week ending Dec. 31, '92.....	166 80
Eng. Dept., Div. No. 3,	

week ending Dec. 31, '92	310 50	
Eng. Dept., Div. No. 4, week ending Dec. 31, '92	49 20	
Eng. Dept., discharged men's roll, Dec., '92	126 60	
		$4,041 56
Clerical Dept., Clerk's roll, Dec., 1892	$ 483 33	
Clerical Dept., office roll, week ending Dec. 31, '92	36 00	
		519 33
Law Dept., Attorneys' roll, Dec., '92	$ 1,508 33	
Law Dept., Joliet roll, Dec., '92	333 34	
Law Dept., office roll, week ending Dec. 31, '92	65 50	
		1,907 17
Treasury Dept., Treasurer's roll, Dec., '92		166 67
General account, Sanitary Inspector's roll, Dec. '92	200 00	
General account, Trustees' roll, Dec., '92	2,333 34	
		2,533 34
Total		$9,168 07

ENGINEERING DEPARTMENT.

J. M. W. Jones' Stationery & Printing Co. (tableting paper)	1 00	
John Morris Co. (stationery)	50 76	
John Morris Co. (stationery)	52 09	
E. Dietzgen & Co. (draughting material)	103 80	
W. H. Salisbury & Co. (rubber gloves)	9 72	
The Consumers Pure Ice Co., (water)	4 50	
Wagner Bros. (livery)	6 00	
Robert H. Cowdrey, (sundries)	2 73	
Robert H. Cowdrey, (Henry tree claim)	20 00	
A. C. Schrader, (emergency)	60 75	
		$ 311 35

LAW DEPARTMENT.

Joseph Donnersberger, (right of way services)	$ 250 00	
James M. Purcell (court stenographer)	329 00	
A. J. Mathewson (making maps)	41 00	
O. N. Carter (sundries)	7 35	
Arthur Jordan (traveling)	4 60	
		$ 631 95

GENERAL ACCOUNT.

Chicago Deposit Vault Co. (rent of offices for quarter)	$ 1,772 50	
"The Rialto," (janitor service, Dec., '92,)	77 50	
		$ 1,850 00
Grand total		$11,961 37

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 1038, Clerical Department (stationery) $36.80

Mr. Russell, seconded by Mr. Boldenweck, moved that Requisition No. 1038, for the Clerical Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and Requisition No. 1038 for Clerical Department as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending December 31, 1892.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending Decem-

ber 31, 1892, as the same have been reported to me:

Engineering Department	114
Clerical Department	3
Treasury Department	1
Law Department	8
Total employes	126

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

REPORT OF PROGRESS ON VARIOUS WORKS.

The Clerk presented a report from the Chief Engineer with reference to the progress of various works and the condition of the appropriations for the same, made in response to an order passed at the meeting held December 28, 1892, (page 971 of the proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the order of your Honorable Board: "That the Chief Engineer report to this Board the progress made on the surveys of the Chicago River, Skokie cut-off, Illinois Valley floods, Zymotic disease maps, and what portion of the appropriations for these different works are unexpended," I beg to report as follows:

1. *Survey of the Chicago River*—The field work for the triangulation, soundings and topography for which appropriations were made, January 30th and July 20th, 1892, amounting in all to $16,000.00 is entirely completed and the notes are all in the hands of the Division of Drafting, and the platting of the same is about half done. There has been expended on this work $14,362.24 for field work and $1,671.66 for drafting, making $16,033.90 in all.

The location of street lines, authorized November 9th, 1892, has been in progress for five weeks. The field work for both sides of the main river, along the South Branch from the main river to Washington street, on the west side of the South Fork from Archer avenue to the West Fork, and along the east side of the South Fork, and the south side of the South Branch, is completed from Archer avenue to the vicinity of Quarry street. It is hardly probable that this work can be completed in less than three or four months. No specific appropriation has been made for this part of the work. There was expended upon it to the first of January $1,649.66, and the expenses will continue to run about $500 per month. I look upon this work as vital to the usefulness of the other portion of the river survey.

2. *Skokie cut-off*—The survey in the vicinity of Winnetka authorized September 21st, 1892, is about three-fifths completed; the field work will not be finished until some time in February. No appropriation was made for this work.

3. *Illinois Valley floods*—The field examinations for this work are closed and the party has returned to Chicago. The team and two men that composed the party have been discharged, leaving none but Mr. Ward, who had charge of the work, and who will be engaged in platting the work and compiling the notes for perhaps two months or more. There has been expended to January 1st $3,002.79 and it will cost $500 or $600 more to put the matter in proper form for permanent record and use. I do not understand that any specific appropriation was made for this work. It was estimated that the cost would not much exceed $2,000, but when it came to a survey of the lower part of the river it was found that to obtain certain information which it is desirable to have, that a considerable number of soundings should be made, which have materially increased the cost.

4. *Zymotic disease maps*—Authorized November 16th, 1892, will be fully completed in a week.

The copies for the State Board of Health authorized December 21st, 1892, will require two or three weeks for their completion. No specific appropriation has been made for this work.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engin

REORGANIZATION OF ENGINEERING DEPARTMENT.

The Clerk presented a report with reference to the reorganization of the Engineering Department and sundry other matters, presented in response to

an order passed at the meeting held December 28, 1892, (page 971 of the proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be referred to the Joint Committee on Engineering and Rules.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT:

"CHICAGO, Jan. 4, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The order passed December 28, 1892:

"That the Chief Engineer, at the next regular meeting of the Board, present such plans as he may deem proper for the organization of the Engineering Department, with a view of efficiency and economy, and prevent such other matter in reference to additional rooms, etc., which may be required for the coming year," has received my earnest consideration. An experience of eleven months satisfied me that both efficiency and economy could be subserved by introducing certain changes in the system of accounting for property and reporting expenditures, changes which are dependent wholly upon departmental regulations. In accordance with this conclusion, regulations introducing these changes went into effect the first of the year. As a matter of economy I have also discontinued the land survey party, being convinced that this work can be done more advantageously by the various division parties employed on construction.

Except in the mere reduction of the force employed by this department, as special branches of work are closed up, I know of no further changes of organization which can be advantageously made, unless it be by act of the Board, and whether any such change should be made is dependent upon what the policy of the Board is to be with regard to ordering the engineering work of the Sanitary District.

In another communication this day submitted, I have given the state of progress of, and as nearly as possible, the time when the several branches of work which the Engineering Department has in hand, will be completed. In addition to these I might have said that the two boring parties will be through about the middle of this month. It is thus seen that all special field work will probably come to an end in from one to three months, and thereafter, so far as I can now see, no further surveys or investigations of an extensive kind will be soon required in the work of the Sanitary District. As the main work and the adjuncts develop, surveys and investigations of minor importance will doubtless be needed to enable the details to be worked out, but this cannot be done until the general plan both of the main work and the adjuncts are decided upon. Any attempt to anticipate the skeleton plan about which these details should cluster will be fruitless.

The rules of the Board in providing one Assistant Chief Engineer and two principal Assistant Engineers, presupposes three sub-divisiions of the distinctly engineering work of this Department. I am of the opinion that since the special surveys and investigations are about closed, that henceforth the engineering work of this department can be more economically and efficiently handled with two divisions instead of three, and I recommend that it be done. This will do away with a great deal of unnecessary work and will so consolidate the office forces that less office room will be required for the future than would otherwise be the case. As is well known, if the organization remains as it is, materially more room is needed, and must be had as soon as possible. If the proposed change is made the Engineering Department will be well served by exchanging the rooms now occupied by Division 2, for the present Board room, and retaining a small store room at the west end which will give access to the vaults, thus bringing the rooms occupied by the department contiguous to one another.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

ADDITIONAL OFFICE AT LOCKPORT.

The Clerk presented a report from the Chief Engineer requesting permission to rent an additional office at Lockport; and the report was read.

Mr. Kelly, seconded by Mr. Altpeter, moved that the report be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT:

"CHICAGO, Jan. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Owing to certain changes which have been made in the construction divisions of this Department I have found it undesirable to establish a division headquarters at Romeo; hence the requisition granted for erecting an office building at that place will not be acted upon.

It is found necessary, however, to secure better quarters at Lockport than those now used, they having been taken only as a temporary measure. I therefore respectfully make requisition for authority to lease an office at Lockport at a rate not exceeding $20 per month.

Respectfully submitted.

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

AMENDMENT TO RULE 3—TIME OF MEETING.

Under "Unfinished Business," the amendment to Rule 3 changing time of meeting, presented, ordered printed and laid over, at the meeting held December 28, 1892, (page 972 of the proceedings) was again read.

Mr. Kelly, seconded by Mr. Altpeter, moved the adoption of the amendment.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—Mr. Eckhart—one (1).

Upon which result the President declared the motion carried, and the amendment adopted.

The following is

RULE 3 AS AMENDED:

"3, Regular meetings of the Board of Trustees shall be held on Wednesday of each week, at half-past one o'clock P. M. sharp.'

AMENDMENT RIGHT OF WAY ORDINANCE—WILLOW SPRINGS TO SUMMIT.

Mr. Kelly, Chairman, presented for the Committee on Judiciary, an ordinance amending the ordinance for right of way from Willow Springs to Summit, passed at the meeting held August 10, 1892, (page 672 of proceedings); and the amending ordinance was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved the adoption of the amending ordinance.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, and the ordinance amending the ordinance for right of way from Willow Springs to Summit passed at the meeting held August 10, 1892, adopted.

The following is

THE ORDINANCE:

"*Be it ordained by the Board of Trustees of the Sanitary District of Chicago:*

That Section 1 of the right-of-way ordinance, laying out and establishing a route for the Main Channel from Willow Springs to Summit, Illinois, passed by this Board at its meeting of August 10, 1892, be and the same is hereby amended so as to read as follows:

"SECTION 1. That there be and is hereby laid out and established a route for a Main Channel to be hereafter constructed and maintained, together with the necessary additions thereto, over and upon certain lands lying in the County of Cook and State of Illinois, said lands being situated in the Valley of the Desplaines River, between the center line of the Willow Springs road and the Range line at Summit, all in Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, and included in the following more fully described boundaries, to-wit:

Beginning at the point of intersection of the northwesterly reserve line of the Illinois and Michigan Canal and the center line of the Willow Springs road, said point being in Section thirty-two (32), Township thirty-eight (38) North, Range twelve East of the Third Principal Meridian, thence northwesterly along the center line of said road to its intersection with the southeasterly boundary line of the right-of-way of the Chicago, Santa Fe & California Railway; thence northeasterly along said southeasterly boundary line through Sections 32, 33, 28, 21, 22, 15, 14 and 11 to its intersection with the east line of said Section 11, thence north along said Section line to the northeast corner of said Section 11, thence east 1320 feet along the north line of Section 12, thence north on a line parallel with the west line of Section 1 to the east and west center line of said Section 1; thence east on said east and

west center line to the center of said Section; thence north on the north and south center line of said Section to the northeast corner of the southeast quarter of the northwest quarter of said Section; thence east on a line parallel with the north line of said Section to a point 1250 feet west of the east line of said Section; thence south on a line parallel with the east line of said Section to the north line of the east fraction of the southeast quarter of said Section 1; thence south on a line parallel with the east line of said southeast quarter of said Section 1 to its intersection with the south line of said Section 1; thence east along said south line to the northeast corner of Section 12; thence south along the Range line to its intersection with the northerly boundary line of the right-of-way of the Chicago, Alton & St. Louis Railroad; thence southwesterly along the northerly boundary line of said railroad to its intersection with the south line of said Section 12; thence west along said south line to its intersection with the northwesterly reserve line of the Illinois and Michigan Canal; thence southwesterly along said reserve line through Sections 13, 14, 23, 22, 27, 28, 33 and 32 to the point of beginning.

Said Main Channel beginning at the easterly end of the Main Channel heretofore laid out and established by an ordinance passed by the Board of Trustees of the Sanitary District of Chicago March 30, A. D. 1892, in Section thirty-two (32), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian in Cook County, Illinois, and extending to the east line of Section twelve (12) in Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian in said county.

Said land includes the route of the Main Channel and such additional lands as are necessary for the corporate purposes of said Sanitary District of Chicago."

OPINIONS OF TITLE UNDER AMENDED ORDINANCE.

Mr. Kelly presented an order authorizing and directing the Attorney to contract with the Title Guarantee & Trust Co. for opinions of title to right of way lands included in the amending ordinance just adopted; and the same was read

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Attorney authorized and directed to secure opinions of title from the Title Guarantee & Trust Co. for right of way lands included in the amending ordinance just adopted, as provided in the order.

The following is

THE REPORT:

"*Ordered*, That the Attorney be authorized to enter into contract with the Title Guarantee and Trust Company to furnish opinions in the same form as those heretofore furnished this District by said company, on titles to all lands, necessary for the corporate purposes of this District, included within the boundaries of the right-of-way as laid out and established by the amendment this day adopted to Section one (1) of the right of way ordinance of August 10, 1892, on such terms as said Attorney may deem just and fair."

CUTTING OF ICE ON RIGHT-OF-WAY.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to requests for permission to cut ice on the right of way of the district; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be concurred in, printed and placed on file.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report concurred in, ordered printed and placed on file.

The following is

THE REPORT:

"January 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—The Joint Committee on Finance and Engineering have had under consideration several times, the question of allowing ice to be cut or stored on the property now owned by the Sanitary District.

Your committee would recommend that the District do not permit ice to be cut or stored for commercial purposes, either by contractors or other persons.

on any property belonging to the District, and that the proper officers of the Board, from and after the adoption of this report, see to it that the conditions herein contained are observed.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
L. E. COOLEY,
WM. BOLDENWECK,
THOMAS KELLY,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

RULES FOR SANITARY INSPECTOR.

Mr. Gilmore, Chairman, presented as a report from the Committee on Health and Public Order a set of provisional rules for the government of the Sanitary Inspector and recommended their adoption; and the rules were read.

Mr. Gilmore, seconded by Mr. Boldenweck, moved that the recommendations of the Committee be concurred in, and the provisional rules just presented be adopted and ordered printed.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—Mr. Altpeter—one (1).

Upon which result the President declared the motion carried, the recommendation of the Committee concurred in, and the provisional rules just presented adopted and ordered printed.

The following is

THE REPORT:

"*Rules for the Guidance of the Sanitary Inspector.*

RULE 1. The Sanitary Inspector shall devote his entire time to the duties of his office.

RULE 2. He shall be in readiness to hold daily consultations with the Board in reference to all matters pertaining to his department, providing he is not out on the route on duty

RULE 3. He shall make a thorough inspection of the various camps and hospitals along the route twice a week, and oftener, if so ordered by the Board.

RULE 4. He shall be subject to the order of the Board at all times in case of necessity, such as the occurrence of epidemic in the camps, and in such emergency shall be on the ground in order to give his personal attention to the means of suppressing the same.

RULE 5. He shall make a report to the Board semi-monthly on the sanitary condition of the camps under his supervision."

RULES FOR SANITARY INSPECTOR TO BE PREPARED.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the Committee on Rules be directed to prepare rules for the guidance of the Sanitary Inspector

The motion prevailed unanimously and the Committee were so instructed

ADJOURNMENT.

Upon motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JANUARY 11, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, January 11, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9) members were present.

MINUTES.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the minutes of the regular meeting held January 4, 1893, be approved as printed.

Upon roll-call the vote stood Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting Mr. Cooley—one (1). Nays—Mr. Gilmore—one (1).

Upon which result the President declared the motion carried, and the minutes of the regular meeting held January 4, 1893, approved as printed.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Jan. 7, '93	$1,276 35
Eng Dept., Div. No. 1, (Sag building) week ending Jan. 7, 1893	85 30
Eng. Dept., Div. No. 2, week ending Jan. 7, '93	361 20

Eng. Dept., Div. No. 2, (General Surveys) week ending Jan. 7, '93	$ 166 80	
Eng. Dept., Div. No. 2, (Illinois Valley) week ending Jan. 7, '93	8 00	
Eng. Dept., Div. No. 3, week ending Jan. 7, '93	256 50	
Eng. Dept., Div. No. 4, week ending Jan. 7, '93	49 20	
		$2,203 35
Clerical Dept., office roll, week ending Jan. 7, '93		39 00
Law Dept., office roll, week ending Jan. 7, '93		63 00
Total		$2,305 35

ENGINEERING DEPARTMENT.

Construction—		
McArthur Bros. (Sec. 2, Jan. 1, '93)	$1,543 50	
McArthur Bros., (Sec. 3, Jan. 1, '93)	94 50	
Agnew & Co. (Sec. 5, Jan. 1, '93)	259 88	
Agnew & Co. (Sec. 6, Jan. 1, '93)	661 50	
Agnew & Co. (Sec. 7, Jan. 1, '93)	571 81	
Agnew & Co. (Sec. 8, Jan. 1, '93)	3,098 26	
Agnew & Co. (Sec. 9, Jan. 1, '93)	1,326 85	
E. D. Smith & Co. (Sec. 10, Jan. 1, '93)	5,044 38	
Mason, Hoge & Co. (Sec. 12, Jan. 1, '93)	3,952 59	
Mason, Hoge & Co. (Sec. 13, Jan. 1, '93)	5,690 35	
McCormick Construc'n Co. (Sec. 14, Jan. 1, '93)	1,307 25	
Total	$28,550 87	
John C. des Granges, (services)	7 50	
Emil Rudolph, (surveying street lines, river)	750 00	
E. Dietzgen & Co. (draughting material)	170 62	
Benezette Williams, (emergency)	112 65	
		$24,591 64

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 4 25	
Wyckoff, Seamans & Benedict, (repairing typewriter)	50	
Warner's Towel Supply, (toweling)	90	
		$ 5 65

LAW DEPARTMENT.

Land Account—		
O. N. Carter, (land)	$375 00	
Barnard & Gunthorp, (printing)	15 00	
Adams A. Goodrich, (legal services)	200 00	
R. M. Wing, (legal services)	250 00	
U. W. Weston, (expert witnesses fees)	340 00	
U. W. Weston, (expert witnesses fees)	995 00	
O. N. Carter, (expert witnesses fees)	38 00	
		$ 2,213 00

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings, December, '92)	$ 116 35	
The *Chicago Herald*, Co. (advertising Main Channel)	27 30	
The *Tribune* Company, (advertising Main Channel)	22 75	
The *Inter Ocean*, (advertising Main Channel)	22 50	
The *Inter Ocean*, (advertising bonds, September 19-21, 1892)	30 00	
The *Chicago Evening Post* Co. (advertising Main Channel)	18 20	
Chicago *Evening Journal*, (advertising Main Channel)	13 65	
The Chicago *Dispatch*, (advertising Main Channel)	18 20	
Illinois *Staats Zeitung* Co. (advertising Main Channel)	14 00	
Chicago *Tageblatt* Pub. Co. (advertising Main Channel)	9 10	
German-American Pub. Co. (advertising Main Channel)	13 75	
The Chicago *Drovers Journal*, (advertising Main Channel)	36 40	
Joliet Times, (advertising Main Channel)	10 00	
Aug. Geringer, *Daily Svornost*, (advertising Main Channel)	9 20	
		$ 361 40
Grand total		$29,477 04

Mr. Eckhart, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley,

Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—none.

(Mr. Prendergast voted "yea" on all vouchers except those for "Construction," on which he was excused from voting.)

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 281, Engineering Department (plumb-bob chains)	$1.00
No. 442, Law Department (furniture)	83.75
No 1039, Clerical Department (stationery and binding)	202.30
Total	$287.05

Mr. Boldenweck, seconded by Mr. Russell, moved that Requisitions No. 281 for Engineering Department, No. 442 for Law Department, and No. 1039 for Clerical Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—none.

Upon which result the President declared the motion carried and Requisitions No. 281 for Engineering Department, No. 442 for Law Department, and No. 1039 for Clerical Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending January 7, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending January 7, 1893, as the same have been reported to me:

Engineering Department	98	
Engineering Department (Sag building)	9	
		107
Clerical Department		3
Treasury Department		1
Law Department		7
Total employes		118

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of December, 1892; and the same was read.

By unanimous consent the report was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of December was $180.82, divided as follows:

Salaries	$ 144 00
Stationery	10.90
Sundry expenses	25.92
Total	$ 180.82

There are no outstanding liabilities, and the expenses for the present month will be under $750.00.

The total amount expended and charged to the General Account during the month of December was $355.79, divided as follows:

Printing	$208.67
Janitor service	75 00
General expenses	72.12
Total	$ 355.79

The only outstanding liability is about $450.00 for advertising, and the expenses for the present month will be under $3,500.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of December, 1892; and the same was read.

By unanimous consent the report was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 11, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I report herewith the total amount paid out on account of and charged to the Law Department, during the month of December, 1892, classified as follows:

Salaries.

Attorneys'	$1.175 00	
Right of way	443 34	
Office force	132 00	
		$1,750 34

General Expenses.

Right of way	$1.123 01	
Court costs	137 50	
Legal services	1,913 33	
Stationery and printing	18 23	
Sundries	22 07	
		$3,214 14

Land Account.

Right of way	$144 203 60
Total	$149,168 08

The current expenses for the present month will not vary to any great extent from those of last month.

Appeal bonds have been filed in the case known as the Cullerton-Piper suit, and the District is now entitled to and has possession of all the land in Cook County, below Willow Springs, which we need at present for the corporate purposes of the District. The suit that was on trial at the time of the last report has been completed, and as soon as the motion for a new trial is disposed of, the District can obtain possession of the land. Another trial to condemn about 430 acres of land between Willow Springs and Summit will be begun to-morrow in the Circuit Court.

A suit was commenced December 31st to obtain by condemnation three small pieces of land west of the Santa Fe Railroad, at Romeo, in Will County. This suit is set for trial in March. When this is obtained all of the land in Will County needed to carry on the work under the contracts already let, will be in the possession of the District.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MAINTENANCE OF PUBLIC ORDER ON RIGHT OF WAY.

The Clerk presented a report and opinion from Attorney Carter and General Counsel Wilson, with reference to the rights and powers of the Sanitary District in preserving public order on the right of way, made in response to a report presented at the meeting held December 28, 1892, (page 969-970 of the Proceedings); and the same was read.

Mr. Gilmore, seconded by Mr. Kelly, moved that the report be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We have considered the questions submitted to us by your Board by a resolution passed December 28, 1892, in regard to the powers of the Board or contractors to preserve peace and order on and along its right of way, and beg leave to report our conclusions as follows:

We do not find that either your Honorable Board or the contractors doing the work for your Board are vested with any special police powers. The Sanitary District of Chicago was created for the purpose of providing an outlet for the sewage of the territory lying within the limits of the District. Your Board is authorized to levy taxes and incur indebtedness only for the accomplishment of said end or object. The funds in the possession of your Board should be devoted exclusively for the purpose of accomplishing said end. Having in charge the property of the District and the construction of the works necessary to accomplish the end for which the District is created, you have the right, and it would be your duty, to protect said property and said work, and you would be authorized to make whatever expenditure of money would be necessary to secure such protection.

If the authorities vested with the

police power of the State are unwilling or unable to afford the work being carried on by you, and the property of the District, adequate protection without pecuniary aid from you, in our opinion, you would have the right to afford the pecuniary aid to such authorities necessary to secure adequate protection for the work and property of the District. Your Board has no right or power to make expenditures to preserve order, either on or off its right of way, except to the extent and in so far as it may be necessary to protect the work and property of the District.

The contractors doing work for the Board, and having for that purpose possession and control of specified parts of the right of way of the District, would have the same right and power to preserve peace and order thereon that any private individual has to preserve peace and order upon property in his possession and under his control. This includes the power to eject and put off of the premises in their possession and under their control any person or persons disturbing the peace or interfering with the prosecution of the work for the District under their contract.

Yours very truly,

(Signed) ORRIN N. CARTER,
Attorney.

JOHN P. WILSON,
General Counsel."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from Treasurer Stone for the month of December, 1892; and the same was read.

Mr. Kelly, seconded by Mr. Russell, moved that the report be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

Balance on hand at date of last report		$1,555,970.61
Received from Blair & Co. for 510 Sanitary District Bonds	510,000.00	
Received from Blair & Co., premium on the above 510 bonds	7,713.75	
Received from Blair & Co., accrued interest on the above 510 bonds	1,964.38	
Received from Law Department, land acct. Griffin et al., judgment money refunded	1,176.50	
Received from National Bank of Illinois, interest for December	665.12	
Received from Metropolitan National Bank, interest for December	667.30	
Received from Ft. Dearborn National Bank, interest for December	664.77	
Received from Chicago National Bank, interest for December	672.85	
Received from American Trust and Savings Bank, interest for December	887.26	
Total cash received for month		$2,080,332.54
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 702.40	
Treasury Department	192.67	
Engineering Departm't.	16,248.64	
Engineering—Construction Account	53,921.03	
Law Department	5,034.23	
Law Department—Land Account	145,968.35	
General Account	2,505.78	
		224,573.10
Balance this date, in banks as per schedule endorsed hereon		$1,855,759.44

(Signed) MELVILLE E. STONE,
Treasurer.

CHICAGO, January 3, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 326,122.08
Chicago National Bank	330,638.08
Metropolitan National Bank	327,859.95
National Bank of Illinois	326,962.61
American Trust and Savings Bank.	544,176.72
Total	$1,855,759.44

APPOINTMENT OF ASSISTANT ATTORNEY.

The Clerk presented a report from the Attorney, transmitting the resignation of Mr. William W. Wheelock as Assistant Attorney, nominating Mr. Haynie R. Pearson to fill the vacancy, and asking that the nomination be confirmed; and the report was read.

Mr. Prendergast, seconded by Mr. Kelly, moved that the resignation of Mr. William W. Wheelock as Assistant Attorney be accepted, the nomination of Mr. Haynie R. Pearson to fill the vacancy be confirmed and the report be printed and placed on file.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast,

Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the resignation of Mr. William W. Wheelock as Assistant Attorney accepted, the nomination of Mr. Haynie R. Pearson to fill the vacancy confirmed, and the report ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Owing to his recent election to the State Legislature, Mr. William W. Wheelock has handed me his resignation as Assistant Attorney of this Department.

Subject to your confirmation I hereby appoint Mr. Haynie R. Pearson to fill this vacancy at a salary of fifteen hundred dollars per annum.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

REORGANIZATION OF ENGINEERING DEPARTMENT.

Mr. Kelly, in behalf of the Joint Committee on Engineering and Rules, presented a majority report with reference to the report of the Chief Engineer on the reorganization of the Engineering Department and sundry other matters, presented and referred to that Committee at the meeting held January 4, 1893 (page 976 of the Proceedings); and the majority report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the majority report of the Joint Committee on Engineering and Rules, just presented, be adopted, the recommendations made therein be concurred in and the report ordered printed and placed on file.

Mr. Cooley, Chairman of the Joint Committee, presented a minority report from that Committee with reference to the same subject, and the minority report was read.

Mr. Cooley waived action on the minority report, and by unanimous consent the same was ordered printed and placed on file.

Upon roll-call on the original motion of Mr. Kelly to adopt the majority report, the vote stood: Yeas—Altpeter, Boldenweck, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—Mr. Cooley—one (1).

Upon which result the President declared the motion carried, the majority report of the Joint Committee on Engineering and Rules just presented adopted, the recommendations made therein concurred in and the report ordered printed and placed on file.

The following is

THE MAJORITY REPORT:

"CHICAGO, Jan. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Rules to whom was referred a communication of the Chief Engineer of January 4, 1893, made in response to an order passed by the Board December 28, 1892, ordering the Chief Engineer to 'report to this Board such plans as he may deem proper for the reorganization of the Engineering Department, with a view of efficiency and economy, and present such other matters in reference to additional rooms, etc., which may be required for the coming year.'

Your Committee report that they had the matter under consideration, in conference with the Chief Engineer, and beg leave to submit the following majority report:

The Chief Engineer recommends, since the special surveys and investigations are about closed, that henceforth the engineering work of his department can be more economically and efficiently handled with two divisions instead of three, and therefore further recommends that he be empowered to consolidate the divisions, believing that under the rules the concurrence of the Board would be required to make the change proposed. The rules prescribe that the Chief Engineer shall employ one Assistant Chief Engineer and two Principal Assistants, and that such assistants shall be in charge of such operations as may be assigned by the Chief Engineer, and, inasmuch as for the last twelve months the engineering force was divided into three engineering divisions and one office force, therefore, the interpretation of the rules may lead to the conclusion that it would require the concurrence of the Board in reorganizing and consolidating one or two such divisions.

Your Committee recommend that this Board concur in the reorganization of the

Engineering Department, as recommended by the Chief Engineer in his communication of January 4, 1893.

In reference to additional room, your Committee also concur in the recommendation of the Chief Engineer, and recommend that the same be referred to the Committee on Rules, with directions to enter into negotiations with the owners of the building and report to the Board as soon as possible.

Respectfully submitted,

(Signed) FRANK WENTER,
B. A. ECKHART,
W. H. RUSSELL,
WM. BOLDENWECK.
THOMAS KELLY,
JOHN J. ALTPETER,

Joint Committee on Engineering and Rules."

The following is

THE MINORITY REPORT:

"CHICAGO, Jan. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Under order of December 28th, the Chief Engineer is instructed to 'present such plans as he may deem proper for the reorganization of the Engineering Department, with a view to efficiency and economy, and present such other matters in reference to additional rooms, etc., which may be required for the coming year.'

In response thereto, the Chief Engineer submits on January 4th, a communication which is referred to the Joint Committee on Engineering and Rules, and this communication, in conjunction with a progress report on certain special surveys, informs the Board of changes and reductions that are contemplated in the personnel of the force when this special work is completed, and in the event of no additional work being ordered.

The question of additional room is already in the hands of the Committee on Rules, by order of September 21st, and this Committee has not reported finally in the premises. As it is not proposed to change the authority of the Chief Engineer, either by increasing or diminishing the number of men authorized, or changing the rank and pay, as now defined by the rules and by the requisition thereunder, approved by this Board on July 27th, it does not appear that any action is required by this Board, and the communication is herewith returned to be filed as a matter of information.

The functions of the Chief Engineer in regard to the organization and administration of the Engineering Department, are set forth in Regulations 32 and 35 inclusive. From these it appears that the organization of his force, the assignment of employes that may be authorized, and the employment and discharge of men, are matters solely within his discretion. There are no limitations except in conforming to certain requirements in making returns, in making requisition for new material and new employes, and in the appointment to and removal from four designated positions, as covered in Regulations 7 and 33. The changing of these regulations is a matter for the Board, and the Board may change the authority to employ men, if it so elects. Nothing of this kind is now proposed by the Chief Engineer or the Committee. It is believed that a considerable reduction can be made in the authority to employ men without prejudice to the service.

After the annual reports and estimates for the current year, as called for in Regulation 15, it will probably be wise to carefully consider the rules and regulations, and the existing authority in relation to the Engineering Department, with a view to such changes as economy and efficiency may seem to require.

This should be done in any event in order that the Board may be satisfied that the best possible system of responsibility is provided for administering millions of work. There are also engineering problems of the highest order in connection with adjuncts, which must be taken up as soon as the Main Channel is provided for. These are of less financial importance, but make necessary a moderate force of the highest technical character.

Respectfully submitted,

[Signed] L. E. COOLEY,
Chairman.

Joint Committee on Engineering and Rules."

COMMUNICATIONS.

The Clerk presented a communication from Mr. Alfred Harley, contractor on Section 1 of the Main Channel, with reference to the progress of the work; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be referred to the Committee on Engineering.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, Jan. 10, 1893.

To the Honorable Board of Sanitary Trustees:

GENTLEMEN—I have the pleasure to report progress on Section One, as follows:

I have all of the buildings nearly ready for our men and our machinery ready for shipment on to the ground. I will go ahead as fast as practicable, but I think you will agree with me that it is impossible to pull stumps out of solid frozen ground

I realize, however, that it is to my interest to dam out the river at the earliest possible moment, and this will be done by me.

Yours very truly,

(Signed) ALFRED HARLEY."

The Clerk also presented a communication from Mr. John J. Panoch, Chairman of the Committee on "Out-Door Relief," Board of Commissioners of Cook County, to President Wenter, with reference to the care of the poor on and along the right of way and making appropriations for the same; and the communication was read.

Mr. Gilmore, seconded by Mr. Kelly, moved that the Clerk be directed to inform Chairman Panoch that this Board was of the opinion that the consideration and making of appropriations for relief of the poor on and along the right of way not within the scope of their corporate power and consequently they could take no action in the matter.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, Jan. 9, 1893.

Frank Wenter, President Drainage Trustees, Chicago:

DEAR SIR—As Chairman of "Out Door Relief" of the County Board, I would respectfully ask you to appoint a committee to confer with our committee in reference to a letter we have received from the "Supervisor of the Town of Lemont," requesting us to increase our appropriations for the care of the needy in said town.

My reasons for requesting this of you is because we understand that the "Drainage Trustees" have made arrangements with the contractors to take care of the poor, and by the appointment of a committee by you it would enable us to act intelligently in the matter from the information we would receive from such a committee.

Trusting you will kindly give this matter due consideration, I am

Respectfully yours,

(Signed) JOHN J. PANOCH,

Chairman Out Door Relief, County Board.

(P. S.) Our committee meets at County Agent's Office, 130 South Clinton, on Friday, January 13, at 10:30 A. M."

REPORT ON RIVER DIVERSION.

Mr. Cooley presented an order directing the Chief Engineer to report at the next meeting on work done and to be done on river diversion; and the same was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the order be adopted.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—Mr. Prendergast—one (1).

Upon which result the President declared the motion carried and the Chief Engineer instructed in accordance with the order.

The following is

THE ORDER

"*Ordered*, That the Chief Engineer report at the next meeting of the Board, the amount and cost of work on each section of the river diversion, between Willow Springs and Lockport, and the amount of work done on the river diversion to January 1st on each of said sections, and the amount remaining to be done, after that date; also, that he report the condition of each section in regard to protection against floods."

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JANUARY 18, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-third regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, January 18, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7) and subsequently Mr. Prendergast—making a total of eight (8) members were present.

MINUTES.

The minutes of the regular meeting held January 11, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Jan. 14, '93	$1,321 55	
Eng. Dept., Div. No. 1, (Sag Building) week ending Jan. 14, '93	96 60	
Eng. Dept., Div. No. 2, week ending Jan. 14, '93	361 80	
Eng. Dept., Div. No. 2, (General Surveys) week ending Jan. 14, '93	166 80	
Eng. Dept., Div. No. 3, week ending Jan. 14, '93	256 50	
Eng. Dept., Div. No. 4, week ending Jan. 14, '93	49 20	
		$2 252 45
Clerical Dept., office roll, week ending		

Jan. 14, '93.....		$ 39 00
Law Dept., office roll, week ending Jan. 14, '93.....		63 00
Total.....		$2,354 45

ENGINEERING DEPARTMENT.

E. Dietzgen & Co., (drafting material)..	$ 29 92	
Richey, Miniter & McDonald Co., (lumber for Sag Building)....	849 59	
Ebin J. Ward, (expense).....	40 54	
Ebin J. Ward, emergency).....	181 90	
Ebin J. Ward, (emergency).....	53 25	
		$ 1,155 20

LAW DEPARTMENT.

Wm. Dougall, M. D., (medical expert)....	$ 15 00	
O. N. Carter, (expense)	44 29	
		$ 59 29

GENERAL ACCOUNT.

The Chicago Edison Co., (electric light lamps).....	$ 6 00	
The Chicago Telephone Co. (telephone service).....	31 25	
The *Chicago Daily News* Co. (advertising Main Channel)..	27 30	
The *Chicago News Record*, (advertising Main Channel).....	18 20	
Chicago *Arbeiter Zeitung* Pub. Co. (advertising Main Channel)	10 50	
Norden Pub. Co. (advertising Main Channel).....	6 50	
		$ 99 75
Grand total.....		$ 3 668 69

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers as read and shown above be approved and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 282, Engineering Department (drafting material).....	$52.50
No. 445, Law Department (shelving).....	$ 9.00
No. 1040, Clerical Department and General Account (furniture and stationery)	59.00
Total.....	$120.50

Mr. Gilmore, seconded by Mr. Cooley, moved that Requisitions No. 282 for Engineering Department, No. 445 for Law Department, and No. 1040 for Clerical Department and General Account, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and Requisitions No. 282 for Engineering Department, No. 445 for Law Department, and No. 1040 for Clerical Department and General Account, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending January 14, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending January 14, 1893, as the same have been reported to me:

Engineering Department.....	103	
Engineering Department (Sag Building).....	10	
		— 113
Clerical Department.....		3
Treasury Department.....		1
Law Department...		8
Total employes.....		125

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

REPORT ON RIVER DIVERSION.

The Clerk presented a report (with enclosure) from the Chief Engineer, made in response to anorder passed at the meeting held January 11, 1893 (page 989 of the Proceedings), with reference to work done and to be done on river diversion; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report (with enclosure) be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT WITH ENCLOSURE:

"CHICAGO, Jan. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In compliance with the order passed January 11, 1893, "That the Chief Engineer report at the next meeting of the Board the amount and cost of work on each section of the river diversion between Willow Springs and Lockport, and the amount of work done on the river diversion to January 1 on each of said sections, and the amount remaining to be done after that date; also, that he report the condition of each section in regard to protection against floods," I beg to submit the enclosed report of the Assistant Chief Engineer, which gives a detailed statement of the present condition of the excavation for river diversion and the protection against floods, from Sections one to fourteen inclusive.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

ENCLOSURE:

"CHICAGO, Jan. 17, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I submit herewith a table showing the amount and cost of work to be done on each Section of River Diversion between Willow Springs and Lockport, and amount of work done to January 1, 1893:

Sections	Cost of Work to be Excavated.		Cost of Work Done to Jan. 1, 1893.		Cost of Work to be Done.	
	Gla. Drift.	Solid Rock.	Gla. Drift.	Solid Rock.	Gla. Drift.	Solid Rock.
1....	$37,836.45	.....	.....	.....	$37,836.45	.....
2....	18,355.96	.....	$ 2,436.00	.....	15,919.96	.....
4....	32,400.00	.....	.....	.....	32,400.00	.....
6....	16,200.00	.....	.....	.....	16,200.00	.....
7....	10,507.64	$30,537.05	3,016.00	$ 367.50	7,491.64	$30,169.55
8....	17,583.02	69,211.77	12,298.00	8,499.08	5,285.02	60,712.69
9....	9,880.78	16,063.64	9,360.00	2,030.16	520.78	14,033.48
10....	7,686.00	46,105.60	6,850.00	16,056.00	836.00	30,049.60
11....	4,998.51	4,163.80	756.25	3,590.03	4,242.26	573.77
Totals	$155,448.36	$166,081.86	$34,716.25	$30,542.77	$120,732.11	$135,539.09

Sections	Total to be Excavated.		Total Excavated to Jan. 1, 1893.		Remainder.	
	Gla. Drift.	Solid Rock.	Gla. Drift.	Solid Rock.	Gla. Drift.	Solid Rock.
1....	140,135	.....	.....	.....	140,135	.....
2....	65,557	.....	8,700	.....	56,857	.....
4....	120,000	.....	.....	.....	120,000	.....
6....	60,000	.....	.....	.....	60,000	.....
7....	40,414	41,547	11,600	500	28,814	41,047
8....	67,627	92,591	47,300	11,370	20,327	81,221
9....	38,003	20,889	36,000	2,640	2,003	18,249
10....	30,744	57,632	27,400	20,070	3,344	37,562
11....	16,524	5,254	2,500	4,530	14,024	724
Totals	579,004	217,913	133,500	39,110	445,504	178,803

To January 16; 9,600 cubic yards of Glacial Drift and 11,520 cubic yards of Solid Rock have been excavated on River Diversion.

About 600 feet of the lower end of Section 2, all of Sections 3, 4 and 5, one-third of Section 6, 1,200 feet of Section 7, about 1,000 feet on each of Sections 9 and 10, all of Sections 11, 12, 13 and the upper half of Section 14 are protected against floods.

Yours truly,

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

REPORT OF SANITARY INSPECTOR.

The Clerk presented a report from Sanitary Inspector Martin, made in accordance with the rules, with reference to the sanitary condition of the camps on the right of way; and the same was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report of the Sanitary Inspector, just read, be printed and referred to the Committee on Health and Public Order.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

" CHICAGO, Jan. 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since my last report was submitted, there has been a decided improvement in the sanitary condition of those camps, where deficiencies in this respect existed. I at that time called your attention to an effort being made to comply with the regulations adopted by the Board for the benefit of the various camps, and they have been printed and posted in conspicuous places at the several headquarters. I think that in a short time we will overcome the existing defects and have the sanitary arrangements in as good condition as the surroundings will permit.

The building on Section 2 of the McArthur Bros. that was so badly overcrowded has been improved by the addition of a new bunk house. The old sleeping rooms have been properly ventilated; a new well drilled into the rock; with the addition of a few improvements, which are to be made, this camp will be in a first class shape.

Their place on Section 4 is closed. There are about 150 men working on Sections 5 and 6 which were the most objectionable places on the entire line; there is nothing being done, only a few men left to look after the stock. On Section 7 they have put ventilators into the roof of the sleeping quarters and have contracted for a well to be drilled on the place; this will overcome the most objectionable features of this camp. They employ about 40 men. On Section 8 (Guilford's) place they have added fixed ventilators in the roof of the bunk room, have sliding windows on each side and propose raising the roof; they are working 120 men. Section 9, (Campbell's camp,) they are obtaining water from a spring in the quarry across the canal; when the weather permits they will pipe it into camp. I shall see that they do so or drill a well. They were using water from the Desplaines River; there are some 50 men here, the majority of them living in Lemont.

The E. D. Smith camp is in its usual good condition; their working force at present number some 160 men. The Mason, Hoge sections are in good shape, are gradually bettering their surroundings and are ready to adopt any suggestions for improvements that may be made; 600 men constitute the working force on their several sections. The McCormick camp on Section 14 are running a small force of 70 men. There is no sickness in any of the camps at present, and it is fortunate for the men that it is so, as there is no place that they can be taken to in the event of such misfortune overtaking them. The hospitals at Lemont and Lockport and Joliet will not receive them unless they have means. They get no medical attention at the camp, and it seriously sick will have a slim chance of pulling through. I think it would be a good plan for the contractor to retain two cents a day from each man in order to have a fund to meet such emergencies, until our own hospital system is established, which will take several months to complete.

Trusting that the suggestion will meet with your approval, this report is most respectfully submitted.

Sincerely yours,

(Signed) WM. MARTIN, M. D.,

Sanitary Inspector."

RESCINDING ORDER FOR LEASE TO M'ARTHUR BROS.

Mr. Kelly presented an order rescinding the order passed at the meeting held

November 9, 1892 (page 863 of the Proceedings), directing the Attorney to prepare a lease between the District and McArthur Bros. for all buildings on Sections 2, 3 and 4 of the Main Channel; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved the adoption of the rescinding order.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the order rescinding the order directing the Attorney to prepare lease between the District and McArthur Bros. for all buildings on Sections 2, 3 and 4 on the Main Channel, passed November 9, 1892, rescinded.

The following is

THE ORDER.

"*Ordered*, That the order heretofore passed by this Board, November 9, 1892, directing the Attorney to prepare a lease for this District and McArthur Brothers be and the same is hereby rescinded."

NEW LEASE OF BUILDINGS TO M ARTHUR BROS.

Mr. Kelly presented an order directing the Attorney to prepare a lease between the District and McArthur Bros. for all buildings on Sections 2, 3 and 4 on the Main Channel, under conditions as provided in the order, and authorizing and directing the President and Clerk to execute said lease; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney directed to prepare a lease with McArthur Bros. for all buildings on Sections 2, 3 and 4 on the Main Channel, under conditions as provided in the order, and the Clerk and President authorized and directed to execute said lease.

The following is

THE ORDER:

"*Ordered*, That the Attorney prepare a lease for this District and McArthur Brothers, contractors for Contract Sections two (2), three (3) and four (4), leasing to said contractors for and during the terms of their respective contracts all the buildings now belonging to said Sanitary District, located within the limits of said contract sections, or located partly within said sections and partly on the Illinois and Michigan Canal Reserve, at a rental for all of said buildings of twenty-five ($25) dollars per month during said term, payable in installments of one hundred and fifty ($150) dollars each at the expiration of each six months thereof. Said lease to bear date of November 14, 1892, and to provide that said buildings shall not be used by any other person, persons or corporation, nor shall the buildings erected for ice-houses be used for storing ice for commercial purposes; that should the District be compelled to remove any of said buildings from the canal reserve it may, on notice, terminate said lease as to the buildings so removed; that said buildings be kept insured by lessee, loss payable to this District, for not less than five thousand ($5,000) dollars, or such part thereof as will be taken by regular companies; that should said buildings be destroyed or partially destroyed by fire, or otherwise, there shall be no obligation on the part of the District to rebuild same, but such destruction shall terminate said lease as to said buildings. And that should said lease be terminated as to one or more of said buildings, lessee may still retain his lease-hold interest in the remainder of said buildings without, however, any diminution of the rental herein provided for. And that the President and Clerk be authorized and directed to execute said lease on the part of this District."

TRACK PERMIT TO "SANTA FE" RAILROAD COMPANY.

Mr. Kelly presented an order authorizing and directing the President and Clerk to execute an agreement with the Atchison, Topeka & Santa Fe Railroad Company for track privileges at Romeo, under conditions as provided in the order; and the same was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried the order adopted, and the President and Clerk authorized and directed to execute an

agreement with the Atchison, Topeka & Santa Fe Railroad Company for track privileges at Romeo, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the President and Clerk execute on the part of the District an agreement, in such form as the Attorney shall approve, granting to the Atchison, Topeka and Santa Fe Railroad Company permission to lay down and operate one side track over, upon and across certain land in that part of the northwest quarter (¼) of Section two (2), Township thirty-six (36) north, Range ten (10) east of the Third Principal Meridian, lying between the westerly reserve line of the Illinois and Michigan Canal and the easterly boundary line of the right of way of said railroad company. Said track to be used solely for the delivery of freight to the contractors of the District, and to be removed within thirty days after the completion of the Main Channel through said Section two (2). Said agreement also to provide for the termination by the District of the license therein granted on sixty days' notice, in writing, said track, if not removed pursuant to notice or at the expiration of the time granted, to be the property of the District, and should the District remove same, the expense of such removal to be paid by said railroad company."

PURCHASE OF "TEWKESBURY, NORTON AND WILLIAMS LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering with reference to the purchase of right of way lands in the Counties of Will and Du Page, owned by Messrs. William J. Tewkesbury, John L. and Lemuel D. Norton and Stephen J. Williams, and directing the Clerk to pay said parties, on the voucher of the Attorney, for said lands as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, the recommendations made therein concurred in, and the Clerk directed to pay said parties, on the voucher of the Attorney, for said lands, as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, the recommendations made therein concurred in, and the Clerk directed to pay said parties, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Jan. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons, at the prices here stated, to-wit:

From William J. Tewkesbury, land hereinafter described for the sum of Two Thousand, Ninety-four and Thirty One-hundredths ($2.094.30) Dollars.

From John L. Norton and Lemuel D. Norton, the land hereinafter described, for the sum of One Hundred and Twenty ($120) Dollars.

From Stephen J. Williams, the land hereinafter described, for the sum of Twenty-five Hundred ($2,500) Dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said William J. Tewkesbury the sum of Two Thousand, Ninety-four and Thirty One-hundredths ($2,094.30) Dollars in full payment for the following described land, to-wit:

That part of the north fraction of the southwest quarter of Section Fifteen (15), Township Thirty-seven (37), north, Range Eleven (11), east of the Third Principal Meridian, lying southerly of a line drawn northeasterly from a point in the west line of said north fraction, 688.11 feet south of the northwest corner of said southwest quarter (¼) to a point in the north line of said north fraction 1,684.55 feet east of the northwest corner of said southwest quarter (¼), together with the riparian rights thereof, said land lying and being situate in the County of Du Page, in the State of Illinois.

To John L. Norton and Lemuel D. Norton, the sum of One Hundred and Twenty ($120) Dollars in full payment for the following described land, to-wit:

Part of the northwest quarter (¼) of Section Two (2), Township Thirty-six

(36) north, Range Ten (10), east of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the north line of said northwest quarter (¼) 429 feet west of the Westerly Reserve line of the Illinois and Michigan Canal, and running thence southerly along a line parallel with said Westerly Reserve line 445.5 feet; thence east along a line parallel with said north line to a line parallel with and 50 feet westerly from the westerly boundary line of the right of way of the Chicago, Santa Fe & California Railway; thence northerly along said line parallel with said westerly boundary line to said north line of said northwest quarter (¼), thence west along said north line to the point of beginning. Said land lying and being situate in the County of Will, in the State of Illinois.

To Stephen J. Williams, the sum of Twenty-five Hundred ($2,500) Dollars, in full payment for the following described land, to-wit:

All that part of the southeast quarter (¼) of Section Three (3), Township Thirty-six (36), north, Range Ten (10), east of the Third Principal Meridian, lying east of the center thread of the Desplaines River.

Also, all that part of the south half (½) of the northeast quarter (¼) of Section Three (3), Township Thirty-six (36), north, Range Ten (10), east of the Third Principal Meridian, lying east of the center thread of the Desplaines River, and of the east branch thereof.

Also, all that part of the southeast quarter (¼) of Section Thirty-four (34), Township Thirty-seven (37), north, Range Ten (10), east of the Third Principal Meridian, lying east of the center thread of the east branch of the Desplaines River, except that part thereof formerly owned by Thomas Kirman, all said land lying and being situate in the County of Will, in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
W. H. RUSSELL,
WM. BOLDENWECK,
Joint Committee on Finance and Engineering."

BOARD OF CONSULTING ENGINEERS.

Mr. Gilmore, Chairman, presented a report from the Special Committee on Board of Consulting Engineers, presenting and recommending certain engineers to act as such a Board, as provided in the report; and the same was read.

Mr. Gilmore, seconded by Mr. Prendergast, moved the adoption of the report.

During the discussion the President called Mr. Boldenweck to the Chair.

Upon roll-call on the motion of Mr. Gilmore the vote stood: Yeas—Messrs. Gilmore, Prendergast, Russell and Wenter—four (4). Nays—Messrs. Boldenweck, Cooley, Eckhart and Kelly—four (4).

Upon which result the President declared the report lost.

The following is

THE REPORT:

"CHICAGO, Jan. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In pursuance of an order of this Board, passed November 16, 1892, your Special Committee wish to report that they have communicated with and obtained the consent of the following named gentlemen, any three of whom will be willing to serve on a Board of Consulting Engineers, and your Committee wish to recommend that three of the following named gentlemen be appointed forthwith at a salary not to exceed $5,000 per annum each: Mr. Henry Fladd, Mr. Albert Noble, Mr. S. G. Artingstall, Mr. Rudolph Hering, Mr. George Morrison.

Respectfully submitted,

(Signed) A. P. GILMORE,
Chairman.
RICHARD PRENDERGAST,
Special Committee on Board of Consulting Engineers."

The President then resumed the chair.

By unanimous consent Mr. Prendergast was excused from the meeting.

COMMUNICATIONS.

The Clerk presented a communication from Dr. John D. Ware, Commissioner of the City Health Department, asking the loan of certain maps for use in the

annual report of that Department; and the same was read.

Mr. Gilmore, seconded by Mr. Kelly, moved that the request be granted and the Chief Engineer be directed to loan the maps requested.

Upon roll call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the request granted and the Chief Engineer directed to loan the maps requested.

The following is

THE COMMUNICATION:

"CITY OF CHICAGO,
DEPARTMENT OF HEALTH,
January 18, 1893.

To the Honorable the Board of Drainage Trustees, Chicago:

GENTLEMEN—I respectfully ask for the loan of the sanitary maps of your Board, made from data furnished by this department. I also ask permission to have these maps reduced in size and inserted in the annual report of the Department of Health, giving your Honorable Board the full credit of their preparation.

Very respectfully,

(Signed) JOHN D. WARE, M. D.,
Commissioner of Health."

WARRANTS REDEPOSITED.

Mr. Eckhart presented an order directing the Clerk to redeposit two warrants, Nos. 908 and 959, for $500 and $250 respectively, drawn in favor of Mr. Henry J. Willing for services as Trustee; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Eckhart, Gilmore, Kelly, Russell and Wenter—six (6). Excused and not voting—Mr. Cooley—one (1). Nays—none.

Upon which result the President declared the motion carried, and the Clerk instructed to redeposit said warrants in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby directed to redeposit with the Treasurer, to the credit of the Sanitary District, Warrants Nos. 908 and 959 for $500 and $250, respectively, drawn in favor of Mr. Henry J. Willing for services as Trustee."

ADJOURNMENT.

Upon motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JANUARY 25, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, January 25, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell, Wenter—seven (7) and subsequently Mr. Gilmore—making a total of eight (8) members were present.

MINUTES.

The minutes of the regular meeting held January 18, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Jan. 21, '93	$1,236 15	
Eng. Dept., Div. No. 1, (Sag Building) week ending Jan. 21, '93	75 70	
Eng. Dept., Div. No. 2, week ending Jan. 21, '93	371 60	
Eng. Dept., Div. No. 2, (General Surveys) week ending Jan. 21, '93	166 80	
Eng. Dept., Div. No. 3, week ending Jan. 21, '93	256 50	
Eng. Dept., Div. No. 4, week ending Jan. 21, '93	49 20	
		$2,155 95
Clerical Dept., office roll, week ending		

Jan. 21, '93		$ 39 00
Law Dept., office roll, week ending Jan. 21, '93		63 00
Total		$2,257 95

ENGINEERING DEPARTMENT.

Construction—		
McArthur Bros. (Sec. 2, Jan. 16, '93)	$2,401 00	
Agnew & Co. (Sec. 6, Jan. 16, '93)	354 37	
Agnew & Co. (Sec. 7, Jan. 16, '93)	367 06	
Agnew & Co. (Sec. 8, Jan. 16, '93)	2,449 32	
Agnew & Co. (Sec. 9, Jan. 16, '93)	894 61	
E. D. Smith & Co. (Sec. 10, Jan. 16, '93)	5,124 87	
Mason, Hoge & Co. (Sec. 12, Jan. 15, '93)	2,600 39	
Mason, Hoge & Co. (Sec. 13, Jan. 15, '93)	3,858 97	
McCormick Construc'n Co. (Sec. 14, Jan. 15, '93)	1.085 88	
Total	$19,136 47	
F. Mayer & Co. (blue prints)	214 47	
Buff & Berger, (instruments)	826 75	
A. H. Abbott & Co (drawing material)	36 00	
Cameron, Amberg & Co. (stationery)	182 42	
Cameron, Amberg & Co. (stationery)	20 20	
E. G. Christoph Lith. Co. (letter heads)	109 00	
Barnard & Gunthorp, (printing specifications)	125 00	
Hibbard, Spencer, Bartlett & Co (hardware)	3 58	
Wagner Bros. (livery)	26 00	
George W. Adelmann, (livery)	11 00	
Chicago Toilet Supply Co (toweling)	5 40	
Chas. Miller, (rent)	2 00	
John Sherwood, (rent)	3 50	
J. T. Freeman & Co. (rent, Lockport)	8 00	
L. J. Myers (rent, Willow Springs)	20 00	
H. L. Norton, (rent, Lemont)	18 00	
D. C. Dunlap, (buggy for December)	45 00	
Robt. H. Cowdrey, (postage stamps)	20 00	
Wm. Kirkham, (gauge reading)	10 00	
Geo. Brainard, (gauge reading)	10 00	
Hibbard, Spencer, Bartlett & Co. (hardware, Sag building)	46 96	
Horton, Gilmore, McWilliams & Co. (hardware, Sag building)	$ 7 03	
Knickerbocker Ice Co. (brick, Sag building)	54 20	
D. C. Dunlap, (traveling—part Sag bldg.)	83 68	
Chas. L. Harrison, (expense)	17 65	
Alex. E. Kastl, (expense)	7 05	
A. C. Schrader, (emergency)	20 00	
A. C. Schrader, (emergency)	26 00	
Alex. E. Kastl, (emergency)	4 50	
L. J. Myers, (traveling)	23 15	
T. F. Richardson, (traveling)	12 38	
Hiram A. Miller, (traveling)	19 65	
Hiram A. Miller, (traveling)	15 79	
Hiram A. Miller, (rent, Sag building)	25 00	
		$21,195 83

LAW DEPARTMENT.

Cameron, Amberg & Co (stationery)	$ 9 00	
Jacobs, Coles & Co. (stationery)	8 30	
Wm. C. Barber, (abstracts)	10 00	
Hibbard, Spencer, Bartlett & Co. (cuspidors)	1 50	
Walter S. Haines, M. D. (bacteriological analyses of water)	200 00	
Wm. T. Belfield, M. D bacteriological analyses of water)	170 00	
Orrin N. Carter, (expense)	88 58	
		$ 487 38
Grand total		$23 941 16

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above be approved, and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 283, Engineering Department (sponges)	$ .60
No. 284, Engineering Department (typewriter paper)	19.80
No. 285, Engineering Department (profile paper)	64.80

No. 286, Engineering Department (computation paper)	$ 4.00
Total	$ 89.20

Mr. Kelly, seconded by Mr. Boldenweck, moved that requisitions Nos. 283, 284, 285 and 286 for the Engineering Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and Requisitions No. 283, 284, 285 and 286 for the Engineering Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending January 21, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Jan. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending January 21, 1893, as the same have been reported to me:

Engineering Department	101
Engineering Department (Sag Building)	11
	112
Clerical Department	3
Treasury Department	1
Law Department	8
Total employes	124

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report from the Engineering Department for the month of December, 1892; and the same was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be printed and referred to the Committee on Engineering.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, Jan. 25, 1893

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of this Department for the month of December; also a classified statement of expenses in the usual form.

Expenses for the month of December were as follows:

Contractors estimates	$56,857.36
Pay rolls	11,978.21
Material, etc	1,175.86
Total	$70,011.43

I estimate that the expenses of the Department for the month of January, including contractors' estimates, will be $60,000.

This report has been delayed beyond the usual time owing to closing up of the business of the year and the necessary transfer of property due to certain changes in the method of accounting.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer.

"CHICAGO, Jan. 6, 1892.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Expenses and operations of Division One during the month of December, are as follows:

Pay roll	$ 5,927.40
Material	321.19
Contractors' estimates	56,857.36
Total	$63,105.95

Estimated expenses, pay roll and material for January, $7,000.

The work of the divisions, principally, has been, cross-sectioning, taking cross sections, and copying notes of cross-sec-

tions of work done to January 1, 1893, and making estimates. Location of the center line of proposed channel between Summit and Western Indiana Railway crossing and surveys at Joliet. One boring machine working on Section 5. and the other on Section F, Summit.

During January the divisions will be engaged largely in copying cross-section notes for Chicago office and taking care of the usual division work.

Amount of work done to January 1 on the different sections is as follows:

Sections.	Cubic yards	
	Glacial Drift.	Solid Rock.
2, Main Channel	16 000	.....
2, River Diversion	8,700	.....
3, Main Channel	36.400	.....
4, Main Channel	31 500	.....
5, Main Channel	23 600	.....
6, Main Channel	18 200	.....
7, Main Channel	18 200	.....
7, River Diversion	11,600	500
8, Main Channel	7,500	1 470
8, River Diversion	47 300	11.370
9, Main Channel	10 400	.....
9, River Diversion	36,000	2.640
10, Main Channel	18 800	280
10, River Diversion	27 400	20,070
11, Main Channel	24.800	7,150
11, River Diversion	2 500	4 530
12, Main Channel	15.553	22.100
13, Main Channel	32,522	30,700
14, Main Channel	15 000	20,800
Totals	402 275	121.610

	cu. yds.
Main Channel, glacial drift	268.775
Main Channel, solid rock	82 500
River diversion, glacial drift	133.500
River diversion, solid rock	39,110

Total amount of estimates paid previous to estimate of January 1s, 1893, $151,371.97.

RIVER DIVERSION QUANTITIES.

Section.	Total to be excavated.		Total excavat'd to Jan. 1, 1893.	
	Glacial Drift.	Solid Rock.	Glacial Drift.	Solid Rock.
1	140.135	.....	.....	.....
2	65 557	.....	8,700	.....
4	120 000	.....	.....	.....
6	60,000	.....	.....	.....
7	40,414	41.547	11,600	500
8	67,627	92.591	47.300	11 370
9	38 003	20,889	36 000	2 640
10	30.744	57.632	27.400	20,070
11	16.524	5 254	2,500	4.530
	579 004	217.913	133 500	39.110

FORCE REPORT.

	Men.	*Teams.*
Section 2 daily average	134	29
Section 3 daily average	12	5
Section 4 daily average	15	1
Section 5 daily average	5	9
Section 6 daily average	26	22
Section 7 daily average	39	3
Section 8 daily average	114	10
Section 9 daily average	64	3
Section 10 daily average	236	21
Section 11 daily average	56	16
Section 12 daily average	72	16
Section 13 daily average	156	23
Section 14 daily average	117	46
Total daily average	1046	204

Drills	11
Channel machines	1

Yours truly,

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

"CHICAGO, Jan. 6, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Enclosed is transmitted the classified statement of expenditures and work done by Division 2 for the month of December, 1892.

The general work, besides current reports, included the consideration of miscellaneous matters pertaining to hydraulic elements and calculations for Main Channel and flood diversions; also the establishment of water gauges along the Desplaines River.

The platting of field notes pertaining to the Chicago River survey was completed.

Calculations were made as to various water surface profiles in Main Channel for varying lake levels.

A chart of oscillation of Lake Michigan to 1892 was prepared.

The data necessary for completion of flow measurements at mouth of Illinois River was secured.

Report was made on the comparative cost of various channels having capacities of 1,000,000, 600,000 and 300,000 cubic feet per minute.

The field work pertaining to flood examinations in Illinois River was brought to a close and the party returned to Chicago.

The survey of the head waters of the North Branch was continued. Some platting of notes of survey of the Des-

plaines River north of Summit was done.

The street line survey along Chicago River was continued.

The making of zymotic disease maps for the use of the Board of Trustees was continued.

The making of zymotic disease maps for the State Board of Health was undertaken.

A small amount of work on right of way was done.

The expense for the month has been $3,510.08, distributed as follows:

General work	$ 301.36
Chicago River survey	132.65
Water profiles, Main Channel	40.64
Oscillations, Lake Michigan	7.60
Flow measurements	253.16
Channels of varying capacity	19.00
Illinois River floods	544.32
Survey of North Branch headwaters	1,065 05
Survey Desplaines River	7 94
Street line survey, Chicago River	788.33
Zymotic disease map, for Trustees	240 73
Zymotic disease maps, for State	95.80
Right of way	13.50
Total	$3.510.08

The expenditures for January, 1893, will be about $4,000.00.

The work for January will consist of a continuance of the work for December and such other work as may be ordered.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

"CHICAGO, January 16, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Enclosed please find the classified statement of expenditures and work done by Division 3 during the month of December, 1892.

The work on the maps of the Chicago River Survey was continued without any interruption during the month. There will be ten maps in all of this work. With the exception of the street lines, the first four maps showing the river between Forty-third to Twenty-second streets, are done; and the fifth, sixth, and greater part of the seventh maps, showing the river between Twenty-second and Harrison streets, are platted.

The platting and inking of the sewer map of the District was continued, and the collection of notes and information from the County Records for this purpose was practically finished.

The maps of the Main Drainage Channel, showing the right of way as acquired, and to be acquired, as ordered by the Board of Trustees, was completed.

The notes of line "C," on the tow-path of the Illinois and Michigan Canal from Ashland avenue to Summit, were also platted.

Surveys for the right of way on several tracts near Romeo, and on a proposed cut-off of the C. S. F. & C. Railway near Lemont, were completed by the land survey party. At the end of the month the land surveying for the right of way was transferred to Division 1, and the land survey party was discontinued.

The expense of this division during the month of December, 1892, was $2,308.45.

During this month the maps of the Chicago River Survey, and of the sewerage districts in and adjacent to Chicago, and the regular routine work will be continued. The two topographical maps of the Sanitary District and the territory adjacent thereto, will be commenced.

The expense for the month of January, 1893, is estimated at $1,500.

Respectfully submitted,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

(Enclosing classified statement.)

DEPOSIT FOR "TIEDT LAND" RETURNED.

The Clerk presented a report from the Attorney enclosing County Treasurer's check for John Tiedt's portion of the money deposited with the County Treasurer under order of October 26, 1892 (page 837 of the Proceedings) for right of way lands in the suit of the District versus James Murphy, John Tiedt, et al.; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be printed, placed on file, and the Clerk directed to deposit the enclosed check, with the Treasurer to the credit of the District.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report that in the suit of the District vs. James Murphy, John Tiedt, et al., General Number 105,723, there was deposited with the order of your Board of October 26, 1892, the aggregate amount of the verdicts in said cause; that of said amount the sum of three thousand nine hundred and eighty-eight and fifty one-hundredths ($3,988.50) dollars was the amount of the verdict returned for the land of John Tiedt, known in said suit as "Tract 42," that by inadvertence the jury included in said verdict the east thirty-three (33) feet of said tract, belonging to Edward F. Cullerton, which, by agreement of Counsel, was to have been tried in a subsequent suit. That of said sum of $3,988.50, one hundred and fifty ($150) dollars thereof was awarded on account of said thirty-three foot strip, and another jury subsequently returned a verdict therefor, the amount of which has been paid to the County Treasurer; hence the District was entitled to a return of said $150 from the County Treasurer. I have procured an order upon said County Treasurer directing him to repay said amount to the District, which has been done pursuant to said order.

I therefore return to you herewith the check of Charles Kern, County Treasurer, drawn upon the National Bank of Illinois to the order of M. E. Stone, Treasurer, for said sum of $150.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

ANNUAL REPORT OF CLERICAL DEPARTMENT FOR 1892.

The Clerk presented the annual report of the Clerical Department for the year 1892; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be printed and referred to the Finance Committee.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith submit, in accordance with the rules of your Honorable Body, the annual report of this department for the year ending December 31, 1892.

The sale of the issue of $2,000,000 five per cent. bonds of the District was advertised extensively here and in the East. There were five bids for the issue, all being above par, the highest that of Messrs. Blair & Co. of New York, being for the entire issue at $1.01\frac{51}{100}$ per cent—a premium of $30,250. There was also an alternate highest bid from the same firm for the entire issue (if made payable in gold at New York) at $1.02\frac{57}{100}$ per cent—a premium of $45,400. As will be seen by the report, there yet remains in the hands of the Treasurer of the District, subject to call of the purchaser, $990,000 of this issue.

The tax levy for 1891, which was $1,050,000, yielded to the District the sum of $1,022,112.50, the sum of $237.25 being also collected on previous years. The tax levy for the year 1892 will in all probability yield the District over $1,200,000.

During 1892 the sum of $26,029.18 was collected from the depositories as interest on the balances of the District funds, making a total of $32,783.82 to date.

There has been expended during the year for lands, the sum of $586,795.63, and for actual construction $151,371.97.

I estimate that the expenditures on account of the Clerical Department for the coming year will be under the sum of $12,000, and for the General Account under the sum of $50,000.

In the tables hereto attached will be found an account by months and funds of the receipts and disbursements of the Sanitary District for the past year, and a summary of the same. There will also be found a summary of the total receipts and expenditures of the Sanitary District by years and funds from February 1st, 1890, to and including December 31, 1892.

All of which is respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk of Sanitary District of Chicago."

FINANCIAL STATEMENT.

RECEIPTS AND DISBURSEMENTS—SANITARY DISTRICT OF CHICAGO, 1892.

Receipts.

Balance on hand January 1, 1892		$ 729,190 70
Engineering Department (plans)	$ 348 00	
Tax account (taxes 1890–1891)	1,022 349 75	
Interest account (bank balances)	26,029 18	
Bond account (sale of bonds)	1,010.000 00	
Bond Interest and Premium account (sale of bonds)	17,240 63	
Law Department, Land account (deposit returned)	1,176 50	
General account (rent of dock lands)	20 00	
Total		$2,077,164 06
Grand total		$2,806,354 76

Disbursements.

Engineering Department	$ 132,621 12	
Engineering Department, Construction account	151.371 97	
Clerical Department	7,730 02	
Treasury Department	1 880 26	
Law Department	39.567 37	
Law Department, Land account	587,972 13	
General account	41,126 13	
Total		$ 962,269 00
Balance on hand December 31, 1892		1,844,085 76*
Grand total		$2,806.354 76

NOTE—

*There are outstanding warrants reported unpaid by the Treasurer to the amount of	$ 11.673 68
Which added to the above balance of	1,844,085 76
Shows the Treasurer's balance of	$1,855,759 44

RECEIPTS SANITARY DISTRICT OF CHICAGO—JANUARY 1, 1892, TO DECEMBER 31, 1892.

MONTHS.	Engineer'g Dept.	Tax Acct.	Interest Account.	Bond Account.	Bond Int. and Prem. Account.	Law Dept. Land Acct.	General Account.	Totals.
January	.....	.....	$1,535.91	.....	.....	.....	.....	$1 535.91
February	.....	$10 000.00	1.296 77	.....	.....	.....	.....	11,296.77
March	.....	96 962 54	1,566.82	.....	.....	.....	.....	98,529.36
April	.....	218 042.48	1,969.41	.....	.....	.....	.....	220,011 89
May	.....	50,000.00	2.106 63	.....	.....	.....	.....	52 106.63
June	.....	.....	2 082.41	.....	.....	.....	.....	2 082.41
July	.....	25,000 00	2 096.46	.....	.....	.....	$20.00	27,116.46
August	$260.00	175,000.00	2,188.29	.....	.....	.....	.....	177.448.29
September	.....	150 000 00	2 286 08	.....	.....	.....	.....	152,286 08
October	88.00	150 000.00	2 386.25	.....	.....	.....	.....	152,474.25
November	.....	147,344 73	3,006 85	$500 000.00	7 562 50	.....	.....	657,914.08
December	.....	.....	3.507 30	510,000.00	9,678.13	$1.176 50	.....	524,361 93
Totals	$348 00	$1.022 349.75	$26,029.18	$1.010 000 00	$17,240 63	$1.176.50	$20.00	$2.077.164 06

DISBURSEMENTS—SANITARY DISTRICT OF CHICAGO—JANUARY 1, 1892 TO DECEMBER 31, 1892.

MONTHS.	Engineer'g Dept.	Eng. Dept. Construc'n Account.	Clerical Dept.	Treasury Dept.	Law Dept.	Law Dept. Land Acct	General Account.	Totals.
January	$ 3,384.34	.....	$520.90	.....	$1.337 15	$1,800.00	$4.414.76	$11.457.15
February	2 603.93	.....	496.78	.....	1,019.89	.....	2 301.36	6 421.96
March	8.497.34	.....	561.51	$166.67	1,888 75	.....	2 661.61	13.775.88
April	10,238.11	.....	644.79	343.26	1,146 01	3,187 00	4.332.40	19.891.57
May	10,643 69	.....	623.88	173.67	3,559.34	19,500 00	2.660.21	37.160.79
June	11.165.89	.....	685.24	166.66	1 896 08	1 366 00	2 701.30	17.981.17
July	14,460.14	.....	689.51	166 67	2 006 40	122.859.25	4 880 91	145.062 88
August	12,254.12	.....	660 41	166.66	2 653.79	57 861.25	2 293.21	75,889.44
September	16,611.53	.....	686.72	170.67	5 324.24	43.174 6<	2 984 26	68 952.10
October	13 989.91	$39 155.03	774.53	166.66	8 702.61	76,580.60	5,009.98	144.379 32
November	12,544 61	55 359.58	685 60	166.67	4 774 88	115,675 00	4,380 35	193,586 69
December	16,227.51	56,857.36	700.15	192.67	5,258.23	145,968.35	2,505.78	227,710.05
Totals	$132 621 12	$151,371.97	$7.730.02	$1.880.26	$39,567.37	$587.972.13	$41.126.13	$962 269.00

TOTAL RECEIPTS OF SANITARY DISTRICT OF CHICAGO FROM FEBRUARY 1ST, 1891, TO DECEMBER 31, 1892.

YEAR.	Engineering Dept.	Loans.	Tax Account.	Bond Account.	Bond Interest and Premium Account.	Law Dept. Land Acct.	Interest Account.	General Account.	Annual Totals.
1890	.....	$75,000 00	.....	.....	.....	.....	$ 100 85	.....	$ 75,100 85
1891	$1,583 33	25,000 00	$ 957,260 78	.....	.....	.....	6,053 79	.....	989,897 90
1892	348 00	.....	1,022,349 75	$1,010,000 00	$ 7,240 63	$1,176 50	26,0_9 18	$20 00	2,077,164 06
Grand totals.	$1,931 33	$100,000 00	$1,979,610 53	$1,010,000 00	$17,240 63	$1,176 50	$32,183 82	$20 00	$3,142,162 81

TOTAL DISBURSEMENTS OF SANITARY DISTRICT OF CHICAGO FROM FEBRUARY 1ST, 1891, TO DECEMBER 31, 1892.

YEAR.	Engineering Dept.	Eng. Dept. Construction Acct.	Clerical Dept.	Treasury Dept.	Interest on Loans.	Loans.	Law Dept.	Law Dept. Land Acct.	General Account.	Annual Totals.
1890	$ 61 407 93	.....	$ 2,912 87	$ 96 00	.....	.....	.....	.....	$ 3,232 59	$ 67,649 33
1891	65,999 07	.....	8,818 97	.....	$2 163 52	$100,000 00	$33,220 72	.....	57,956 44	268,158 72
1892	132,621 12	$151 371 97	7,730 02	1,880 26	.....	.....	39 567 37	$587,972 13	41.126 13	962 269 00
Totals. ..	$260,028 12	$151 371 97	$19 461 80	$1,976 26	$2,163 52	$100,000 00	$72 788 09	$587,972 13	$102 315 16	$1 298 077 05
Balance on hand Dec. 31, 1892										$1 844,085 76
Grand total										$3,142 162 81

ANNUAL REPORT OF ENGINEERING DEPARTMENT FOR 1892.

The Clerk presented the annual report of the Engineering Department for the year 1892; and the same was read.

Mr. Kelly, seconded by Mr, Boldenweck, moved the report be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In conformity to the rules of the Board I beg to submit an annual report of the operations of the Engineering Department, covering the period from January 19, 1892, to January 1, 1893. This report is only intended as a brief summary of the work of this department and a general description of the channel being excavated, a full report accompanied by plans and a detailed description of the work decided upon, however desirable, not being practicable at this time.

WORK OF THE ENGINEERING DEPARTMENT.

Main Channel—During the year the route for the Main Channel has been located from the South Fork of the South Branch of the Chicago River to a point one mile above Lockport, a distance of about twenty-eight miles: the line of the Illinois and Michigan Canal being adopted as far as Summit. In bringing this work to its present stage, a large amount of preliminary work in the way of surveys and soundings, to determine the rock surface, has been necessary. Owing to the unusually heavy floods and the continuous wet weather, extending over several months of the spring and early summer, work was carried on at a great disadvantage. The soundings, however, are now about completed, and the final location of the line made west of Summit, and far the greater part of the cross-sectioning done for both the Main Channel and the river diversions. Sixteen out of twenty-eight (28) miles of this distance is under contract, including nearly all the rock work.

Bids for four miles more will be received on the 25th of January, as will also bids for dredging the Illinois and Michigan Canal from Chicago to Summit.

The total amount of work under contract consists of

11,330,778 cubic yards of rock,

8,625,767 cubic yards of glacial drift,

274,131 cubic yards of dry rubble masonry.

The average prices at which this work has been let is:

78.28 cents for rock,

26.23 cents for glacial drift, and

$1.64 cents for dry rubble masonry.

The work for which bids have been invited consists of 7,200,000 cubic yards of glacial drift; 95,000 cubic yards of rock; 30,000 cubic yards of retaining walls and 1,818,000 cubic yards of dredging.

To provide a channel of 300,000 cubic feet per minute capacity from the Chicago River to the range line near Summit will require the excavation of about 7,600,000 cubic yards of earth, and to carry out the work between the lower end of Section 14 and Dam No. 1 at Joliet will involve the excavation of near 700,000 cubic yards of rock and 300,000 cubic yards of glacial drift; making a total contracted for and yet to be contracted for of 12,125,778 cubic yards of rock and 25,543,767 cubic yards of glacial drift.

The total work done under the various contracts to January 1st consisted of 121,610 cubic yards of rock and 402,275 cubic yards of glacial drift.

The daily average force employed by the various contractors during December 1892, amounted to 1046 men and 204 teams. By the terms of the contracts the work is to be completed in 1896, and a certain rate of progress is required month by month.

The total amount of work in dollars, which should have been done to Jan. 1 to comply with the contract requirements, was $214,175.66. The amount actually done was $199,860.21, which it will be seen is not much below the requirements. On some sections, however, the work was ahead of the contract requirements, and on others it was behind, as will be seen in detail in Appendix 1.

Chicago River Survey—A complete topographical survey, with soundings, has been made of the Chicago River and branches, from the lake to the Western Arm of the South Fork of the South Branch, and the adjacent street lines are

now being located and connected with the same. When this work is fully completed the District will be in possession of a map that will be invaluable for the purpose of river improvement.

Illinois and Desplaines River Floods—Owing to the unusually high floods which occurred in May and June an excellent opportunity was afforded for obtaining the flood discharge of these rivers. This opportunity was well-improved, satisfactory measurements being made of the Illinois River at Morris, and near its mouth above Grafton.

Reliable discharge measurements were also made of both the South and North Branches of the Chicago River. The discharge of the Desplaines River at Riverside and at Joliet was satisfactorily recorded. The results of these measurements will be reported to the Board in detail in a short time.

An investigation of flood heights of the Desplaines and Illinois River Valley, from Joliet to Grafton, was made by a small party under Mr. Ebin J. Ward, Assistant Engineer. This work was undertaken for the purpose of determining and making a record of the extent of the overflowed area of the river bottoms. When fully compiled and recorded it will show the acreage affected by floods above the LaGrange dam and the approximate value of the same, and taken in connection with the measurement of flood volumes it will furnish a basis for estimating the possible damages from any future flood, and may prove of the greatest value to the Sanitary District in defending possible damage suits. Incidentally, also, valuable information regarding sedimentation of the Lower Illinois River was obtained.

Northern Diversion—Surveys are in progress to determine the feasibility and cost of diverting the North Branch and Desplaines River to Lake Michigan via the route known as the "Skokie Cut-off." These will be completed sometime in February.

Miscellaneous Work—A large amount of miscellaneous work has been done by the Department in the way of compiling disease data and representing the same on charts; and in extended calculations to show the cost of channels of various sizes and capacities.

Right of way matters, in and out of court, have also consumed a good deal of time.

Expenses—Appendix 3 is a statement of the Record Clerk, giving the detail expenditures of this Department for 1892, from which it is seen that omitting property and cash on hand, the expenses were as follows:

For Contractors' estimates....	$151,371.97
All other expenditures.....	125,820.01
Total.....	$277,191.98

DESCRIPTION OF THE MAIN CHANNEL.

Prism—From Chicago to Summit the channel is first to bo excavated to a capacity of 300,000 cubic feet per minute, being enlarged by dredging, as the demands of the Sanitary District may require. The exact prism throughout this reach has not been fully determined upon.

From Summit to Lockport the dimensions specified are sufficient to give a discharge of 600,000 cubic feet of water per minute. In fixing these dimensions the requirements of the Sanitary District law have been given first weight; while stability and economy have been next considered.

It was found that twenty (20) feet was the most economical depth for a channel of uniform depth in both clay and rock, that conforms to the requirements of the law. As the law specifies a width of not less than 160 feet in the rock, the prism at low water of the rock section extending from half a mile above Willow Springs road to the Lockport road, has been fixed at 160 feet by 20 feet, giving a velocity of 3.12 feet per second, or a little less than two miles per hour.

In the Earth Section two feet per second, or about one and one-third miles per hour has been taken as the maximum average velocity allowable for stability, with slopes of two horizontal to one vertical. This gives a prism 210 feet on the bottom and 20 feet deep at low water for the 600,000 cubic feet channel from Summit to Willow Springs.

The contracts for the rock prism require that the sides of the channel be made with a channeling machine, and that wherever the surface of the rock is lower than five feet above datum the sides of the channel are to be walled to that height with dry rubble masonry, thus forming a rectangular channel of uniform dimensions.

Slope—In establishing the slope and the grade of the channel, the initial elevation of the water surface at Ashland avenue has been taken at minus two feet, in order to allow for fall in the Chicago River and for low water in the lake,

which, during the winter of 1891 and '92, averaged for two or three months, something over one foot below datum.

The slope for the Earth Section is specified to be 3 in 100,000, and for the rock section 8 in 100,000. The basis for determining these slopes was adopted for the preliminary estimates, before the specifications were made, and was intended to be amply safe whatever the character of the channel.

The contracts were let upon the same basis but with a special proviso that the Board should have the right to change the grade by raising or lowering it. The adoption of the channeling machine for taking out the sides of the rock channel, and the walling of the earth portions of the same, together with the general character of the rock, and the kind of bottom which it will form, insures for the rock section of the work an unusually uniform and smooth channel, perfectly stable in character, which I believe will permit of a reduction of the slope, and result in a saving in the cost of excavation of several hundred thousand dollars. I will, at an early day, recommend the amount of reduction which I consider can be safely made in this direction.

Navigable Elements of Channel—As is seen from the above, the minimum depth which the channel will have with extreme low water in the lake, is 20 feet, and the minimum width 160 feet.

The maximum velocity of current in the rock section will be slightly more than two miles per hour, and in the earth section about 1 1-3 miles per hour. Considering the excellent alignment and the large cross-section of the water prism, 3,200 square feet in rock and 5,000 square feet in earth, it is believed that any kind of craft which will enter this channel will find excellent navigable facilities.

Economical Elements of Channel—In a communication of Dec. 27, 1892, transmitting the report of Mr. T. T. Johnson, Principal Assistant Engineer, relative to the cost of various channels between Ashland avenue and Lockport, I pointed out that the excavation for a channel with a capacity of 600,000 cubic feet per minute, of the dimensions adopted by the Sanitary District, viz.: 20 feet deep and 160 feet wide in rock, with the same depth and 210 feet bottom width in earth, would cost $16,149,700; while the excavation for one having a capacity of 300,000 cubic feet per minute, 14 feet deep throughout, and 160 feet wide in rock and 150.6 feet bottom width in earth, would cost $12,333,100; thus showing that doubling the capacity and adding 6 feet to the depth increases the cost but $3,816,600. Also, that taking all other expenses into consideration, the larger channel from Ashland avenue to Lockport will cost but about 20 per cent more than the smaller one.

WORK FOR THE YEAR 1893.

In a communication to your Honorable Board dated Jan. 4, 1893, it was pointed out that the field work for all preliminary surveys and investigations which have been ordered by the Board, will be through in from one to four months, and that thereafter, except in some special cases that may arise from time to time, I do not consider that further work of this kind will be necessary or desirable, as the main data will then be in hand to enable an intelligent determination of the main questions which the Sanitary District has before it. There is perhaps one exception that should have been made to such statement, which relates to the triangulation survey which has been made by the District from Chicago to Joliet. When the most of this work was done, in the summer and fall of 1890, the land monuments had not been located, and hence have not been referred to the triangulation system which is the basis for an accurate map of the route and right of way of the Main Channel. In order to enable such a map to be made which will become a permanent record of the department, showing correctly the line of the Main Channel, the canal, the river and the tracts of land acquired by the Sanitary District, it is desirable that the land monuments and the line of the Main Channel, as finally located should be connected with the triangulation system. I therefore recommend that the topographical party, when through with the survey for the Northern Division, be put at this work until completed.

From the South Fork to the range line near Summit the manner of conducting the work of excavation, the disposition of the material and the right of way to be acquired has not yet been decided by the Board. The matter has been in the hands of the committee since June, and has received much consideration from time to time. The discussions thus awakened, and the several conferences with parties representing railway interests, has brought to light numerous phases of the question enabling an intelligent rearrangement of details, and a revision of the original estimates to con-

form to those phases. This puts the problem in such shape that the most economical plan and the one which will best contribute to all public and private interest is manifest; and I feel warranted in the statement that by pursuing the proper course this work may be carried out at a cost materially less than the estimate of June 7, and even better results obtained than was then contemplated: and that the Canal line will, in the end, be found to possess even greater merits than were then apparent.

Further delay in putting forward this work is liable to result in increased expenses. In the first place the right of way should all, or nearly all, be acquired before contracts are let for the excavation, and if the work is done in the most economical manner, plants will be needed therefor, requiring at least six months to obtain. If the utmost expedition is used from this time forth, I do not believe that it will be possible that due regard to economy, to have an excavating machine at work in a really effective manner before April 1, 1894; and even to accomplish this, right of way matters must be pushed with the utmost promptness.

The assumption that there need be no hurry in beginning this portion of the work is believed to be as wide of the mark as possible. There is no such thing as carrying out an undertaking of the magnitude which the Sanitary District has in hand, in an economical manner, without the contractors have ample time to procure proper plants. And proper plants are not to be had by going to a manufacturer and ordering them as you would a fifty-horse power steam engine. They are all, or nearly all, subjects of special design, and take months to manufacture and erect after the design is complete. Being necessarily very expensive and adapted to a special work, they will have little if any value on the completion of the channel. Economy hence dictates that after being put into operation they should have time to be as nearly used up in the work, as possible. If a plant costs $50,000, and has four years work before it, the cost for the same per yard will be but half as much as if it had only two years to run. Aside from this, it matters not what may be put into contracts, the impossible will never be accomplished; and it is impossible to do the work on the Main Channel at prevailing prices without the best appliances, and the best appliances are not to be had at once.

The work below the end of Section 14, to and through Joliet, is, in my estimation more important than any work of the same magnitude which the Sanitary District has before it. This arises from the number of problems which it may solve, or render the solution of difficult or impossible. I will in a few weeks, submit plans of the work and estimates for delivering the water at Dam No. 1 in Joliet, leaving the plans below Dam No. 1 for further consideration.

As soon as the plans are decided upon from Chicago to the range line near Summit, and from the end of Section 14 to Dam No. 1, I believe that the matter of a lake connection should be taken up, together with the sanitation of the North Branch and other local sanitary questions.

Outlay for 1893—In Appendix 1 is a statement of the contract requirements for 1893, for Sections 1 to 14 inclusive; and in Appendix 2 is an estimate of the possible contract requirements for Sections A to F inclusive. From these and other considerations the sum of money to be paid out during 1893 on account of the Engineering Department, is estimated to be as follows:

Sections 1 to 14 inclusive	$3,013,800 42	
Sections A to F inclusive	595,765 78	
Dredging Canal	300,000 00	
Work below Section 14	50,000 00	
Total amount of contract work	$3,949,566 20	
Less 12½ per cent reserved	493,695 77	
	$3,455,870 43	
Departmental expenses	140,000 00	
Total		$3,595,370 43

This estimate of expenditures is necessarily approximate, but is as nearly correct as the stage of the work permits. I consider that it is safe, and that the probabilities are in favor of a less amount being spent during the year rather than more.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

APPENDIX 1.

Showing the amount of work done, and that should have been done to January 1st, 1893; also the amount that should be done to January 1st, 1894, to conform to the conditions of the contracts for Sections 1 to 14 inclusive, below Willow Springs road.

By contract the first four months is considered as one month and last two months as one month, so that from September 1st to January 1st, 1893, is taken as one month, and later dates are proportioned on this basis. The total equalized time is forty one months, so that the total amount of contract divided by forty-one gives the monthly rate.

Section.	CONTRACTORS.	Date from which to estimate progress.	Total amount of contract.	Monthly Amt required per contract—Total 41.	Amount required by contract to be done Jan. 1, 1893.	Amount actually done to Jan. 1, 1892.	Total amount required by contract to be done by Jan. 1, 1894.
1	Alfred Harlev	Jan. 1, 1893	$ 754,325 97	$ 18,398 19	.....	.....	$ 165,583 71
2	McArthur Bros	Nov. 1, 1892	646,968 50	15,779 72	$ 7,889 86	$ 6,916 00	181,466 78
3	McArthur Bros.....	Sept. 1, 1892	732,024 44	17,854 25	17,854 25	9,828 00	232,105 25
4	McArthur Bros.....	Oct. 1, 1892	729,841 72	17,801 02	13,350 77	8,505 00	213,612 25
5	Agnew & Co.....	Oct. 15, 1892	522,141 48	12,735 16	7,959 48	6,372 00	146,454 34
6	Agnew & Co.....	Oct. 15, 1892	602,487 81	14,694 82	9,184 26	4,914 00	168,990 44
7	Agnew & Co.....	Oct. 15, 1892	622,791 08	15,190 03	9,493 77	8,155 50	174,685 35
8	Agnew & Co.....	Sept. 1, 1892	896,269 17	21,860 22	21,860 22	23 845 90	284,182 86
9	Agnew & Co.....	Sept. 1, 1892	996,574 82	24,306 70	24,306 70	14,094 16	315,987 10
10	E. D. Smith & Co.....	Sept. 1, 1892	1,002,745 15	24,457 20	24,457 20	27,830 00	317,943 60
11	Mason, Hoge & Co.....	Sept. 1, 1892	820,434 97	20,010 61	20,010 61	17,514 65	260,137 93
12	Mason, Hoge & Co.....	Sept. 1, 1892	812,756 82	19,823 34	19,823 34	22,219 03	257,703 42
13	Mason, Hoge & Co. ...	Sept. 1, 1892	769,094 41	18,758 40	18,758 40	31,481 97	243,859 20
14	McCormick Const. Co..	Sept. 1, 1892	788,298 64	19,226 80	19,226 80	18,184 00	249,948 40
	Totals.....			$260,896 46	$214,175 66	$199,860 21	$3,212,660 63

APPENDIX 2.

Table showing the amount of work to be done on each section between Willow Springs Road and the Range Line at Summit to January 1st, 1894, assuming that the date from which to estimate contracts is April 1st, 1893. The equalized time for completing each section is, on this basis, 33 months, and the total amount of each contract divided by 33 gives the monthly rate.

The prices assumed for those sections that have not been let is, for A, B and C, 80 cents per cubic yard for rock; 32 cents per cubic yard for glacial drift, and $1.75 per cubic yard for retaining walls; and for Section E, $1.00 per cubic yard for rock, and 27 cents per cubic yard for glacial drift.

Section.	NAME OF CONTRACTOR.	Date from which to estimate contracts.	Total amt. of contract estimated.	M'nthly amt required to be done, (estimated)	Total amt. required to be done Jan. 1, 1894, (estimated)
A	Not let.....	April 1, 1893. ...	$801,620.00	$24,291.51	$145,749.06
B	Not let	April 1, 1893.....	440,416.00	13,345.94	80,075.64
C	Not let.....	April 1, 1893.....	606,048.00	18,365.09	110,190.54
D	E. D. Smith & Co....	April 1, 1893.....	479,867 06	14,541 43	87,248.58
E	Not let.....	April 1, 1893.....	495,374.00	15,011 33	90,067.98
F	Ricker, Lee & Co....	April 1, 1893.....	398,337.50	12,070.86	72,424.98
	Totals.....	.....	$3,221,662.56	$97,626.13	$585,756.78

APPENDIX 3.

"CHICAGO, Jan 2, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I herewith render my report of the financial account of the Engineering Department, as shown by my books as Record Clerk for the year 1892.

The total amount received from the Sanitary District is $293.475.76. There has been $277,191.98 of this amount expended under the different orders of the Board, as shown in the December financial report. There remains on hand $1,000 in cash, and property to the amount of $15,283.78, as shown by the inventory of this date. This makes a perfect balance of all accounts, as shown below:

ENGINEERING DEPARTMENT, in account with THE SANITARY DISTRICT OF CHICAGO.

DR.

To property on hand as shown by inventory dated Jan. 22, 1892	$ 11,251.43	
To cash (Emergency Fund)	1,000.00	
To pay rolls	110,503.41	
To Contractors' estimates	151.371.97	
To property, material, etc., furnished to this Department	19,348.95—	
Total received		$293.475.76

CR.

Preliminary work, right of way, plans and specifications for the Main Channel from Ashland ave. to Joliet	$ 44,345.95	
Chicago River Survey, including survey of street lines	17,024.39	
Maps and plans for Board of Trustees and others	994.89	
Investigation of floods in Illinois River below Joliet	2,931.92	
Survey for North Branch diversion	2,017.04	
Measuring Desplaines, Illinois and Chicago Rivers	1,381.37	
Relative cost of channels between Ashland avenue and Lockport	367.25	
General account	34,281.41	
Construction	173 847.76	
By cash on hand (emergency fund)	1,000.00	
By property on hand, as per inventory this date	15,283.78—	
Total accounted for		$293.475.76

Respectfully submitted,

(Signed) ROBERT H. COWDREY,
Record Clerk."

QUARTERLY REPORT OF ENGINEERING DEPARTMENT.

The Clerk presented a report from the Chief Engineer, enclosing return of property, for the quarter ending December 31, 1892; and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be received, printed, and, with enclosure, placed on file:

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit a classified list of property in the hands of this this Department for the quarter ending December 21, 1892.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Enclosing quarterly property return.)

ANNUAL REPORT OF TREASURY DEPARTMENT FOR 1892.

The Clerk presented a report from the Treasurer for the year 1892; and the same was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the report be referred to the Committee en Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Dec. 31, 1892.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit a tabulated statement of the receipts and expenditures of your Treasurer's office, covering a period from the 1st day of December, A. D. 1891, (the date of the last annual report) to January 1st, A. D. 1893. As you will observe, the period covered involves 13 months, and is thus made that it may correspond with the other reports of the Board, the fiscal year now closing with the calender year. The receipts and expenditures for the first two months, December, 1891, and January, 1892, are taken from the books as kept by the late Treasurer, Mr. Byron Smith, and were audited and approved by your Board upon Mr. Smith's retirement from office.

Yours very truly,

(Signed) MELVILLE E. STONE,
Treasurer."

"RECEIPTS.

1891.		
December 1, On deposit in banks, December 1, 1891, with		
Continental National Bank	$ 65,816 69	
Merchant's Loan and Trust Co	114,187 81	
Corn Exchange Bank	66,531 84	
Chicago National Bank	114,880 99	
		$ 361 417 33
December 8, from County Treasurer, Tax Account		339,221 98
From County Treasurer, Tax Account, Interest		53,502 06
From interest on December, 1891, Bank Balances		1,409 87
1892.		
January 31, from interest on January bank balances		1,535 91
February 29, from West Town Collector (taxes 1891)		10,000 00
From interest on February bank balances		1,296 77
March 18, from Town of Jefferson Collector		2,452 56
March 19, from Town of Lake Collector		20 414 75
March 21, from Town of Hyde Park Collector		18,640 06
March 23, from Town of Cicero Collector		4,541 48
March 28, from Town of South Chicago Collector		50,000 00
March 30, from Town of Lyons Collector		913 69
From interest on March bank balances		1 566 82
April 2, from Town of North Chicago Collector		35 309 39
April 2, from Town of South Chicago Collector		115,545 59
April 9, from Town of Jefferson Collector		1 52
April 9, from Town of Lake View Collector		7,806 50
April 14, from Town of West Chicago Collector		59,379 48
April 30, from interest on April Bank balances		1,969 41
May 31, from County Treasurer, tax account		50,000 00
May 31, from interest on May bank balances		2 106 63
June 30, from interest on June bank balances		2 082 41
July 8, from County Treasurer, tax account		25,000 00
July 27, from Western Stone Co., rent account		20 00
July 30, from interest on July bank balances		2 096 46
August 1, from County Treasurer, tax account		175,000 00
August 12, from Engineering Department (maps sold)		260 00
August 31, from interest on August bank balances		2,188 29
September 1, from County Treasurer, tax account		150,000 00
September 30, from interest on September bank balances		2 286 08
October 4, from County Treasurer, tax account		150,000 00
October 27, from Engineering Department (maps sold)		88 00
October 31, from interest on October bank balances		2,386 25
November 1, from Blair & Co. for 500 Sanitary District bonds		500,000 00
November 1, from Blair & Co., premium on the above 500 bonds		7,562 50
November 1, from County Treasurer, tax account		100,000 00
November 30, from County Treasurer, tax account		47,344 73
November 30 from interest on November bank balances		3,006 85
December 1, from Blair & Co. for 500 Sanitary District bonds		500,000 00
December 1, from Blair & Co., premium on the above 500 bonds		7,562 50
December 1, from Blair & Co. accrued interest on the above 500 bonds, 28 days, to November 29, at 5 per cent		1,917 80
December 9, from Law Department, land account (Griffin et al. judgment, money refunded)		1,176 50
December 10, from Blair & Co. for 10 Sanitary District bonds		10 000 00
December 10, from Blair & Co. for premium on the above 10 bonds		151 25
December 10, from Blair & Co. accrued interest on the above 10 bonds, 34 days to December 5, at 5 per cent		46 58
December 31, from interest on December bank balances		3,507 30
Grand total		$2,832,715 39

Also 990 Sanitary District bonds in Treasurer's hands—sold and awaiting delivery as per contract.

EXPENDITURES.

Clerical Department.

December, 1891	$	509 49
January, 1892		520 90
February, 1892		492 78
March, 1892		561 33
April, 1892		648 97
May, 1892		623 88

June, 1892	$ 685 24	
July, 1892	683 24	
August, 1892	659 68	
September, 1892	693 72	
October, 1892	699 83	
November, 1892	758 05	
December, 1892	702 40	
		$ 8,239 51

Treasury Department.

March, 1892	$ 166 67	
April, 1892	343 26	
May, 1892	173 67	
June, 1892	166 66	
July, 1892	166 67	
August, 1892	166 66	
September, 1892	170 67	
October, 1892	166 66	
November, 1892	166 67	
December, 1892	192 67	
		$ 1,880 26

Engineering Department.

December, 1891	$ 2.822 78	
January, 1892	3,228 23	
February, 1892	2 764 04	
March, 1892	8 439 56	
April, 1892	10 216 61	
May, 1892	10.618 73	
June, 1892	11.179 23	
July, 1892	14 023 91	
August, 1892	12 496 57	
September, 1892	16.635 54	
October, 1892	14 019 39	
November, 1892	12 456 10	
December, 1892	16,248 64	
		$ 135,149 33

Engineering—Construction Department.

October, 1892	$ 39,155 03	
November, 1892	47 970 70	
December, 1892	53,921 03	
		$ 141,046 76

Law Department.

December, 1891 (including Land Account)	$ 19.995 87	
January, 1892 (including Land Account)	1.337 15	
February, 1892 (including Land Account)	2.819 89	
March, 1892 (including Land Account)	1 888 75	
April, 1892 (including Land Account)	4,271 55	
May, 1892 (including Land Account)	23,118 45	
June, 1892 (including Land Account)	3 259 68	
July, 1892 (including Land Account)	124 812 75	
August, 1892 (including Land Account)	49 689 26	
September, 1892 (including Land Account)	59.867 35	
October, 1892	8 760 18	
November, 1892	4,914 81	
December, 1892	5,034 23	
		$ 308,499 72

Law Department—Land Account.

(December, 1891, to September, 1892, included in Law Department.)

October, 1892	$ 76 398 10	
November, 1892	115.675 00	
December, 1892	145,968 35	
		$ 338,041 45

General Account.

December, 1891	$ 2 972 70	
January, 1892	4,186 48	
February, 1892	2,594 94	

March, 1892	$ 2,671 31	
April, 1892	4 257 40	
May, 1892	2.660 21	
June, 1892	2 451 30	
July, 1892	5,130 91	
August, 1892	2,293 21	
September, 1892	2,969 14	
October, 1892	4.426 66	
November, 1892	4.978 79	
December, 1892	2,505 78	
		$ 44,098 83
Total expenditures		$ 976,955 86
On deposit with		
Fort Dearborn National Bank	$326.122 08	
Chicago National Bank	330,638 08	
Metropolitan National Bank	327,859 95	
National Bank of Illinois	326,962 61	
American Trust & Savings Bank	544,176 72	
		$1,855,759 44
Grand total		$2,882.715 30

SUMMARY OF REPORT.

Receipts.

From interest on bank balances		$ 27,439 05	
From Western Stone Co., rent account		20 00	
From Engineering Department		348 00	
From Law Department—Land account		1,176 50	
From West Town Collector	$ 69,379 48		
From North Town Collector	35 309 39		
From South Town Collector	165 545 59		
From Town of Hyde Park Collector	18,640 06		
From Town of Lake Collector	20.414 75		
From Town of Lake View Collector	7 806 50		
From Town of Cicero Collector	4.541 48		
From Town of Jefferson Collector	2.454 08		
From Town of Lyons Collector	913 69		
From County Treasurer	1,090,068 77		
		$1.415.073 79	
From Sanitary District Bonds sold		1,027,240 63	
On deposit in banks December 1, 1891, as per Treasurer's annual report of that date		361 417 33	
Grand Total			$2 832.715 30

Expenditures.

Clerical Department	$ 8.239 51		
Treasury Department	1 880 26		
Engineering Department	135,149 33		
Engineering Construction Department	141 046 76		
Law Department	308 499 72		
Law Department—Land account	338 041 45		
General Account	44.098 83		
		$ 976,955 86	
On deposit, as per certificates hereto attached on Dec 31, 1892,			
Fort Dearborn National Bank	$ 326.122 08		
Chicago National Bank	330 638 08		
Metropolitan National Bank	327.859 95		
National Bank of Illinois	326,962 61		
American Trust & Savings Bank	544 176 72		
		$1.855,759 44	
Grand total			$2.832,715 30

Respectfully submitted,

MELVILLE E. STONE,
Treasurer,

CHICAGO, December 31, 1892."

CERTIFICATES.

"CHICAGO, December 31, 1892.

To Melville E. Stone, Treasurer of the Sanitary District of Chicago

I hereby certify that the balance on deposit in the Fort Dearborn National Bank to the credit of the Sanitary District of Chicago, at the close of banking hours this day, December 31, 1892, is $326,122.08.

(Signed)

FORT DEARBORN NATIONAL BANK,

CHARLES H. MCGRATH,

A. C."

"CHICAGO, December 31, 1892.

To Melville E. Stone, Treasurer of the Sanitary District of Chicago:

I hereby certify that the balance on deposit in the Chicago National Bank to the credit of the Sanitary District of Chicago, at the close of banking hours this day, December 31, 1892, is $330,-638.08.

(Signed)

THE CHICAGO NATIONAL BANK,

F. M. BLOUNT,

A. C."

"CHICAGO, December 31, 1892.

To Melville E. Stone, Treasurer of the Sanitary District of Chicago:

I hereby certify that the balance on deposit in the Metropolitan National Bank to the credit of the Sanitary District of Chicago, at the close of banking hours this day, December 31, 1892, is $327,859.95.

(Signed) H. H. HITCHCOCK,

A. C."

"CHICAGO, December 31, 1892.

To Melville E. Stone, Treasurer of the Sanitary District of Chicago:

I hereby certify that the balance on deposit in the National Bank of Illinois to the credit of the Sanitary District of Chicago, at the close of banking hours this day, December 31, 1892, is $326,962.61.

(Signed)

THE NATIONAL BANK OF ILLINOIS,

HENRY D. FIELD,

Second Assistant Cashier."

"CHICAGO, December 31, 1892.

To Melville E. Stone, Treasurer of the Sanitary District of Chicago:

I hereby certify that the balance on deposit in the American Trust & Savings Bank to the credit of the Sanitary District of Chicago, at the close of banking hours this day, December 31, 1892, is $544,176.72.

(Signed) J. R. CHAPMAN,

Cashier."

ANNUAL REPORT OF LAW DEPARTMENT FOR 1892.

The Clerk presented the annual report from the Law Department for the year 1892; and the same was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be printed and referred to the Joint Committee on Judiciary and Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Jan. 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—In accordance with the regulations, I submit the annual report of this Department for the fiscal year ending December 81, 1892. At the beginning of the year the District had not acquired any land for right of way, and although a suit had previously been commenced to condemn certain lands for the use of the District, it was found necessary on account of the change of route of the main channel, to dismiss this suit. As soon as possible after the present route between Willow Springs and Lockport had been established, abstracts and opinions of title were obtained covering the land needed for the corporate purposes of the District between these points.

The first petition under which land was obtained was filed April 11, 1892, in the Circuit Court of Will County. The first case was tried there in June, 1892. The first land to which title was acquired by the District was a tract of about 35 acres in Will County, which was obtained by purchase, June 7th, 1892, from A. S. Alderman.

Eight condemnation suits have been tried during the year, taking in all about ninety-one days in court. One case was

tried in Will county, one in Du Page county, and the remaining six in Cook county. These trials have required the actual presence of at least two lawyers in court during the entire ninety-one days, and much more time has been spent in the preparation of these cases out of court than in the actual trials in court. As to much of the land that has been obtained by purchase, preparations for trial had already practically been completed before the purchase of the same, and settlement reached only a few days before the trial for tracts not purchased was begun. The right of way work since the first of April, both in and out of court, has been pushed without a day's cessation. The following is a classified statement of the lands obtained and now in the possession of the District, showing whether obtained by purchase or condemnation and in what counties:

WILL COUNTY.

	Acres.	*Acres.*
Acquired by purchase.	769.34	
Acquired by condemnation	718.87	
		1,488.21

DU PAGE COUNTY.

Acquired by purchase..	35.10	
Acquired by condemnation	317.24	
		352.34

COOK COUNTY.

Acquired by purchase.	1,354.27	
Acquired by condemnation	444.88	
		1,799.15
Total acreage....		3,639.70
Acquired west of Willow Springs		3,224.12
Acquired east of Willow Springs		415 58
Total		3,639.70
Total acres acquired by purchase		2,158.71
Total acres acquired by condemnation		1,480.99
Total		3,639 70

A portion of the acreage above given is approximate, as the District is not in possession of complete and accurate surveys of a small part of said lands.

A suit involving 213.36 acres of land this side of Willow Springs, reached a verdict the last of December, but the land is not included in the above statement, as motion for new trial has not yet been heard, and final judgment entered.

Besides the work in obtaining land as given above, much time has been given to the preparation of cases not yet tried and to negotiations with property owners for land not yet obtained. On account of the urgent need of the possession of land on the part of the District, upon which contractors could be set at work, great haste was necessary in the trial of condemnation cases and in the purchase of lands, and for that reason, as good results in all cases were perhaps not reached as might otherwise have been the case if more time could have been taken. In connection with the work of securing right of way, this Department has been called upon for a large amount of work in the preparation of ordinances, contracts, orders, deeds and other papers, which duty devolves upon the Department under the rules.

The classified exhibit of the departmental expenditures for the year is as follows:

SALARIES.

Attorneys		$11,069.97
Right of way force.	4,676 54	
Office force	2,269.00	
		$18,015.51

GENERAL EXPENSES.

Right of way		$4,9 2.74
Court costs	4,728.92	
Printing and stationery	463 90	
Furniture	408.15	
Legal services	7,610.00	
Sundries	236.26	
		$18,389.97

LAND ACCOUNT.

Land	$549,618.63	
Abstracts and opinions of title	37,177.00	586,795.63
Total		$623,201.11

This Department will be engaged almost exclusively for the ensuing year in procuring additional right of way for the District. The ordinary current expenses for the year 1893 are estimated at seventy-five thousand dollars. It is impossible to estimate the probable expenditures for lands for right of way with any accuracy until the plans of the District are further perfected. And these, when fully determined upon, may make the current expenses vary materially from the above estimate.

Respectfully submitted,

(Signed) ORRIN N. CARTER.

Attorney."

PRESENTATION OF BIDS ON MAIN CHANNEL.

The President then announced that in conformity with the advertisment of Novemner 25, 1892, published for 60 days as required by the Sanitary District act, inviting proposals for work on the Main Channel between Willow Springs and Summit and the dredging of the Illinois and Michigan Canal, between Summit and the South Fork of the Chicago River, that the Board would now proceed to open bids received in response to the same.

The Clerk then presented bids as shown in the following

SCHEDULE OF BIDS.

NO. OF BIDS.	NAME.	PLACE.	CHECKS DEPOSITED.
1, 2, 3 and 4	John Griffiths	Chicago	$15,000.00
5 and 6	Ricker, Lee & Co	Galveston, Tex	6,000.00
7 and 8	W. S. Carkin	East Saginaw, Mich	3,000.00
9 and 10	Mason, Hoge & Co	Frankfort, Ky	6,000.00
11 and 12	Streeter & Kenefick	Kalamazoo, Mich., and Kansas City, Mo	9,000.00
13 and 14	Lester & Qualey	Chicago	3,000.00
15 and 16	The FitzSimons & Connell Co	Chicago	3,000.00
17 and 18	O. B. Green	Chicago	3,000.00
19 and 20	McArthur Bros	Chicago	12,000.00
21 and 23	L. D. Conner & Co	Harvey, Ill	9,000 00
23 and 24	Rodgers & Clement	Niagara Falls, N. Y	3,000.00
25 and 26	W. S Carkin	East Saginaw, Mich	12,000.00
27 and 28	Hennessy Bros. & Cox	St. Paul, Minn	12,000.00
29 and 30	Western Dredging & Improvement Co	LaFayette, Ind	6,000.00
31 and 32	Elliott & Phin	Chicago	6,000.00

The following are the

BIDS IN DETAIL:

BIDS NOS. 1, 2, 3 AND 4—JOHN GRIFFITHS.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift	2,116,000	$ 40	$ 8 6 40).00
	Rock	90,000	.95	85,500.00
	Retaining walls	30,000	2 25	67,500.00
	Totals			$ 999,400.00
B	Glacial Drift	1,376,300	$.38½	$ 529,875.50
	Rock			
	Retaining walls			
	Total			$ 529,875.50
C	G'acial Drift	1,893,900	$.37½	$ 710,222.50
	Rock			
	Retaining walls			
	Totals			$ 710,212 50
E	Glacial Drift	1,816,200	$.33½	$ 605.427.00
	Rock	5,000	.95	4,750.00
	Retaining walls			
	Totals			$ 613,177.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift	2,116,000	$.40	$ 846,400.00
	Rock	90,000	.95	85,500.00
	Retaining walls	30,000	2.25	67,500.00
	Totals			$ 999,400 00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift	1,376,300	$.38½	$ 529,875.50
	Rock			
	Retaining walls			
	Totals			$ 529,875.50
C	Glacial Drift	1,893,900	$.37½	$ 710,212.50
	Rock			
	Retaining walls			
	Totals			$ 710,212.50

PROPOSITION 1—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

Prop. 1.	Classification.	Quantities	Price	Amount.
	Glacial Drift	1,818,000	$.66	$1,199 880 00
	Lock			99 000.00
	Totals			$1,298,880 00

PROPOSITION 2—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

Prop. 2.	Classification.	Quantities	Price	Amount.
	Glacial Drift	1,818,000	$.54	981,720.00
	Lock			99,000.00
	Totals			$1,080,720.00

BIDS NOS. 5 AND 6—RICKER, LEE & CO.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial drift.....	1,893,900	$.29¼	$ 553,965.75
	Rock.....	.....	.80	.....
	Retaining walls...	.....	.....	.....
	Total.....	.....	.....	$ 553,965.75
E	Glacial drift.....	1,816,200	$.28¼	$ 513,076.50
	Rock.....	5,000	.80	4,000.00
	Retaining walls...	.....	.....	.....
	Totals.....	.....	.....	$ 517,076.50

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial drift.....	1,893,900	$.29	$ 549,231.00
	Rock.....	.....	.80	.....
	Retaining walls..	.....	.....	.....
	Total.....	.....	.....	$ 549,231.00

BIDS NOS. 7 AND 8—W. S. CARKIN.

PROPOSITION 1—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 1	Glacial Drift.....	1,818,000	$.48	$872,640.00
	Lock.....	.....	.....	37,500.00
	Total.....	.....	.....	$910,140.00

PROPOSITION 2—RREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 2	Glacial Drift.....	1.818,000	$.39	$709,020.00
	Lock.....	.....	.....	37,500 00
	Total.....	.....	.....	$746,520.00

BID NOS. 9 AND 10—MASON, HOGE & CO.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$.30¾	$.582,374.25
	Rock.....	.....	2.00	.....
	Retaining walls...	.....	4.00	.....
	Totals.....	.....	.....	$ 582,374.25
E	Glacial Drift.....	1,816,200	$ 30¾	$ 558,481.50
	Rock.....	5,000	2.00	10,000.00
	Retaining Walls..	.....	4.00	.....
	Totals.....	.....	.....	$ 568,481.50

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
	Glacial Drift.....	1,893,900	$.30¾	$ 572,904.75
	Rock.....	.....	2.00	.....
	Retaining Walls..	.....	4.00	.....
	Totals.....	.....	.....	$ 572,904.75

BIDS NOS. 11 AND 12—STREETER & KENEFICK.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$.28½	$ 539,761.50
	Rock..	.....	.....	.....
	Retaining Walls..	.....	.....	.....
	Totals..	.....	.....	$ 539,761.50
E	Glacial Drift.....	1,816,200	$.27⅓	$ 499,455.00
	Rock	5,000	1.00	5,000.00
	Retaining Walls..	.....	.....	.....
	Totals.....	.....	.....	$ 504,455.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift.....	1,376,300	$.32	$ 440,416.00
	Rock	.....	.....	.....
	Retaining Walls..	.....	.....	.....
	Totals.....	.....	.....	$ 440,416.00
C	Glacial Drift.....	1,893,900	$.28	$ 530,292.00
	Rock	.....	.....	.....
	Retaining Walls..	.....	.....	.....
	Totals.....	.....	.....	$ 530,292.00

BID NOS. 13 AND 14—LESTER & QUALEY.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$.26½	$501,882.50
	Rock	.....	.87½	.....
	Retaining Walls..	.....	.....	.....
	Totals	.....	.....	$501,882.50

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$.25½	$482,944.50
	Rock	.....	.85	.....
	Retaining walls..	.....	.....	.....
	Totals	.....	.....	$482,944.50

BIDS NOS. 15 AND 16—FITZ SIMONS & CONNELL COMPANY.

PROPOSITION 1—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 1	Glacial Drift.....	1,818,000	$.40	$836,280.00
	Lock.....	.....	.....	35,000.00
	Total.	.....	.....	$871,280.00

PROPOSITION 2—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 2	Glacial Drift.....	1,818,000	$.40	$727,200.00
	Lock	.....	.....	35,000.00
	Total.....	.....	.....	$762,200.00

BIDS NOS. 17 AND 18—O. B. GREEN.

PROPOSITION 1—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 1	Glacial Drift.....	1,818,000	$.41	$745,380.00
	Lock	.....	.....	32,000 00
	Total.....	.....	.....	$777,380.00

PROPOSITION 2—DREDGING OF THE ILLINOIS AND MICHIGAN CANAL.

	Classification.	Quantities.	Price	Amount.
Prop. 2	Glacial Drift.....	1,818,000	$.35	$636,300.00
	Lock.....	.....	.....	32,000.00
	Total.....	.....	.....	$668,300.00

BIDS NOS. 19 AND 20—MCARTHUR BROS.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift.....	2,116,000	$.48	$1,015,680.00
	Rock.....	90,000	1.00	90,000.00
	Retaining walls...	30,000	2.25	67,500.00
	Totals.....	.....	.....	$1,173,180.00
B	Glacial Drift.....	1,376,300	$.46	$ 633,098.00
	Rock.....	.....	1.00	.....
	Retaining walls...	.....	2.25	.....
	Totals.....	.....	.....	$ 633,098.00
C	Glacial Drift.....	1,893,900	$.38	$ 719,682.00
	Rock.....	.....	1.00	.....
	Retaining walls..	.....	2.25	.....
	Totals.....	.....	.....	$ 719,682.00
E	Glacial Drift.....	1,816,200	$.35	$ 635,670.00
	Rock.....	5,000	1.15	5,750 00
	Retaining walls...	.....	2.25	.....
	Totals.....	.....	.....	$ 641,420.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift.....	2,116,000	$.46	$ 973,360.00
	Rock	90,000	1.00	90,000 00
	Retaining walls..	3 ,000	2.25	67,500.00
	Totals.....	.....	.....	$1,130,860.00
B	Glacial Drift.....	1,376,300	$.44	$ 605,572.00
	Rock.....	.....	1.00	.....
	Retaining walls...	.....	2.25	.....
	Totals.....	.....	.....	$ 605,572.00
C	Glacial Drift.....	1,893,900	$.37	$ 700,743.00
	Rock	.....	1.00	.....
	Retaining walls..	.....	2.25	.....
	Totals	.....	.....	$ 700,743.00

BIDS NOS. 21 AND 22—L. D. CONNER & CO.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift....	2,116,000	$.32	$677,120.00
	Rock	90,000	.80	72,000.00
	Retaining walls	30,000	1.75	52,500.00
	Totals.....	.....	.....	$801,620.00
B	Glacial Drift....	1,376,300	$.29½	$406,008.50
	Rock	.....	.95	.....
	Retaining walls	.....	1 90	.....
	Totals.....	.....	.....	$406,008.50
C	Glacial Drift....	1,893,900	$.26⅞	$508,985.62½
	Rock	.....	.95	.....
	Retaining walls	.....	1.90	.....
	Totals.....	.....	.....	$508,985.62½

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift....	2,116,000	$.30⅝	$648,025.00
	Rock	90,000	.80	72,000.00
	Retaining walls	30,000	1.75	52,500.00
	Totals.....	.....	.....	$772,525.00
B	Glacial Drift....	1,376,300	$.27	$371,601.00
	Rock	.....	.95	.....
	Retaining walls	.....	1.90	.....
	Totals.....	.....	.....	$371,601.00
C	Glacial Drift....	1,893,900	$.24⅝	$466,372.87½
	Rock	.....	.95	.....
	Retaining walls	.....	1.90	.....
	Totals.....	.....	.....	$466,372.87½

BIDS NOS. 23 & 24—RODGERS & CLEMENT.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$ .30	$568,170.00
	Rock	.....	1.50	.....
	Retaining Walls..	.....	6.00	.....
	Totals.....	.....	.....	$568,170.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
C	Glacial Drift	1,893,900	$ .30	$568,170.00
	Rock	.....	1.50	.....
	Retaining Walls..	.....	6.00	.....
	Totals	.....	.....	$568,170.00

BID NOS. 25 AND 26—W. S. CARKIN.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification	Quantities.	Price	Amount.
A	Glacial Drift.....	2,116,000	$ .52	$1,100,320.00
	Rock	90,000	1.25	112,500.00
	Retaining Walls..	30,000	2.50	75,000.00
	Totals.....	.....	.....	$1,287,820.00

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities	Price	Amount.
B	Glacial Drift	1,376,300	$ .53	$729,439.00
	Rock		2.50	
	Retaining Walls			
	Totals			$729,439.00
C	Glacial Drift	1,893,900	$ .55	$1,041,645.00
	Rock		2.50	
	Retaining Walls			
	Totals			$1,041,645.00
E	Glacial Drift	1,816,200	$ .55	$ 998,910.00
	Rock	5,000	3.50	17,500.00
	Retaining Walls			
	Totals			$1,016,410.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial Drift	2,116,000	$.48½	$1,026,260.00
	Rock	90,000	1.25	112,500 00
	Retaining Walls	30,000	2.50	75,000.00
	Totals			$1,213,760.00
B	Glacial Drift	1,376,300	$.48½	$ 67,505.50
	Rock			
	Retaining Walls			
	Totals			$667,505.50
C	Glacial Drift	1,893,900	$.48½	$918,541.50
	Rock			
	Retaining Walls			
	Totals			$918,541.50

BIDS NOS. 27 & 28—HENNESSY BROS. & COX.

PROPOSITION 1,—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
A	Glacial drift	2,116,000	$ .32	$677,120.00
	Rock	90,000	.84½	76,050.00
	Retain'g walls	30,900	1.87½	56,250 00
	Total			$809,420.00
B	Glacial drift	1,376,300	$ .32	$440,416.00
	Rock		1.00	
	Retain'g walls		3.00	
	Total			$440,416.00
C	Glacial drift	1,893,900	$ .28 4-9	$538,709.33⅓
	Rock		1.00	
	Retain'g walls		3.00	
	Total			$538,709 33⅓
E	Glacial drift	1,816,200	$ 31¼	$578.643 50
	Rock	5,00	1 00	5,000.00
	Retain'g walls		3.00	
	Total			$581,643.50

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities	Price	Amount.
A	Glacial drift	2,116,000	.32	$677,120 00
	Rock	99,000	.84½	76,050.00
	Retain'g walls	30,000	1.87½	56,250.00
	Total			$809,420.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Class'fication.	Quantities.	Price.	Amount.
B	Glacial drift	1,376,000	$ .32	$440,416.00
	Rock		1.00	
	Retain'g walls		3.00	
	Total			$440,416 00
C	Glacial drift	1,893,900	$ .28 4-9	$538,709.33⅓
	Rock		1.00	
	Retain'g walls		3.00	
	Total			$538,709.33⅓

BIDS NOS. 29 AND 30—WESTERN DREDGING AND IMPROVEMENT COMPANY.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift	1,376,300	$.28½	$392,245.50
	Rock		1.50	
	Retaining walls		2.50	
	Totals			$392,245.50
C	Glacial Drift	1,893,900	$.23½	$445,066.50
	Rock		1.50	
	Retaining walls		2.50	
	Totals			$445,066.50

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift	1,376,300	$.28½	$392,245.50
	Rock		1.50	
	Retaining walls		2.50	
	Totals			$392,245.50
C	Glacial Drift	1,893,900	$.23½	$445,066.50
	Rock		1.50	
	Retaining walls		2.50	
	Totals			$445,066.50

BIDS NOS. 31 AND 32—ELLIOTT & PHIN.

PROPOSITION 1—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift	1,376,300	$.37	$ 509.231.00
	Rock		1.25	
	Retaining Walls			
	Totals			$ 509.231.00
C	Glacial Drift	1,893,900	$.30	$ 568,170.00
	Rock		1.25	
	Retaining Walls			
	Totals			$ 568,170.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec	Classification.	Quantities.	Price	Amount.
B	Glacial Drift	1,376,300	$.35	$ 481,705.00
	Rock		1.25	
	Retaining Walls			
	Totals			$ 481,705.00

PROPOSITION 2—WILLOW SPRINGS TO SUMMIT.

Sec.	Classification.	Quantities.	Price	Amount.
C	Glacial Drift.....	1,893,900	$.28½	$ 539,761.50
	Rock.....	.....	1.25	.....
	Retaining Walls..	.....	.....	.....
	Totals.....	.....	.....	$ 539,751.00

BOARD TO ADJOURN TO SPECIAL TIME.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that when this Board adjourn, it do adjourn to meet Thursday, January 26, 1893, at 1:30 o'clock P. M.

The motion prevailed unanimously and it was so ordered.

BIDS TO BE COMPILED AND SUMMARIZED.

Mr. Cooley, seconded by Mr. Eckhart, moved that the bids just received be referred to the Chief Engineer, and that he report a compilation and summary of the same at the adjourned meeting to be held Thursday, January 26, 1893, at 1:30 o'clock P. M

The motion prevailed unanimously and the Chief Engineer was so ordered.

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned to Thursday, January 26, 1893, at 1:30 o'clock P. M., pursuant to motion.

THOS, F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JANUARY 26, 1893.

OFFICIAL RECORD.

ADJOURNED MEETING.

The adjourned session of the one hundred and fifty-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Thursday, January 26, 1893, at 1:30 o'clock, P. M. pursuant to motion.

President Wenter called the Board to order.

Upon roll-call Messrs. Boldenweck, Eckhart, Kelly, Russell and Wenter—five (5) and subsequently Mr. Cooley—making a total of six (6) members—were present.

TABULATION OF BIDS ON MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer showing in detail, as presented at the last meeting, the bids for constructing the Main Channel from Willow Springs to Summit and for dredging the Illinois and Michigan Canal from Summit to the Chicago River, with extensions and a tabulation of the same.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report with summary, be printed and referred to the Joint Committee on Engineering and Finance with directions to report at the next meeting of the Board.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT, WITH SUMMARIES:

"CHICAGO, Jan. 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith 28 sheets with the canvass of the 32 bids received yesterday, arranged in the order in which the bids were opened. Also one sheet containing a tabulated statement of these bids in the order of their magnitude.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

WILLOW SPRINGS TO SUMMIT—TABLE OF BIDS IN ORDER OF MAGNITUDE—*Lowest Bid First.*

PROPOSITION 1.

LOWEST BIDDERS.	Sec.	FIRST.		SECOND.		THIRD.		FOURTH.		FIFTH.	
		Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.
L. D. Conner & Co..	A	21	$ 801,626.00	27	$ 809,420.00	1	$ 999,400.00	19	$1173,180.00	25	$ 1,287,820.00
WestDred&ImptCo	B	29	392,245.50	21	406.008.50	27	440,416.00.	31	509,231.00	1	529,875.50
WestDred&ImptCo	C	29	445.066.50	13	501,883.50	21	508.985.62½	27	538.709.33⅓	11	539,761.50
Streeter & Kenefick	E	11	504,455.00	5	517,076.50	9	568,481.50	27	581,643.50	1	613,177.00
Total.....			$ 2,143,387.00		$ 2,234,388.50		.....		.....		.....

SIXTH.		SEVENTH.		EIGHTH.		NINTH.		TENTH.		ELEVENTH.		TWELFTH.	
Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount	Bid	Amount.	Bid	Amount.
.....		.....		.....		.....		.....		.....		.....	
19	$ 633,098.00	25	$ 729,439.00	..	.....	..	.....	..	.....	..	.....	..	.....
5	553,965.75	23	568.170.00	31	$ 568,170.00	9	$ 582,374.25	1	$ 710,212 50	19	$ 719,682.00	25	$1,041 645.00
19	641,420.00	25	1,016,410 00	..	.....	..	.....	..	.....	..	.....	..	.....
..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....

PROPOSITION 2.

LOWEST BIDDERS.	Sec.	FIRST.		SECOND.		THIRD.		FOURTH.		FIFTH.	
		Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.
L. D. Conner & Co.	A	22	$ 772,525.00	28	$ 809,420.00	2	$999,400.00	20	$ 1,130,860.00	26	$ 1,213,760.00
L. D. Conner & Co.	B	22	$ 371,601.00	30	$ 392,245.50	12	$440,416.00	28	440,416.00	32	481,705.00
WestDred&ImptCo	C	30	$ 445.066.50	22	$ 4n6,372.87½	14	$482,944.50	12	530,292.00	28	538,709.33⅓
Total.....			$ 1.589,192.50		$ 1,668,038.37½		.....		.....		.....

SIXTH.		SEVENTH.		EIGHTH.		NINTH.		TENTH.		ELEVENTH.		TWELFTH.	
Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.
.....		.....		.....		.....		.....		.....		.....	
2	$ 529,875.50	20	$ 605,572.00	26	$ 667,505.50	..	.....	..	.....	..	.....	..	.....
32	539,761.50	6	549,231.00	24	568,170.00	10	$ 572,904.75	20	$ 700,743.00	2	$ 710,212.50	26	$ 918,541.50
..	.....	..	.....	..	.....	..	.....	..	.....	..	.....	..	.....

DREDGING OF THE ILLINOIS AND MICHIGAN CANAL—SUMMIT TO BRIDGEPORT—*Lowest Bid First.*

PROPOSITION 1.

LOWEST BIDDER.	FIRST.		SECOND.		THIRD.		FOURTH.	
	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.
O. B. Green.....	17	$ 777,380.00	15	$ 871,280,00	7	$ 910,140.00	3	$1,298,880.00

PROPOSITION 2.

LOWEST BIDDER.	FIRST.		SECOND.		THIRD.		FOURTH.	
	Bid	Amount.	Bid	Amount.	Bid	Amount.	Bid	Amount.
O. B. Green.....	18	$ 668,300.00	8	$ 746,520.00	16	$ 782,200.00	4	$1,080,720.00

INDEX TO SUMMARY OF BIDS.

Bid No.	Prop. No.	CONTRACT BIDDERS.	Bid No.	Prop. No.	CONTRACT BIDDERS.
1	1	John Griffiths.	17	Canal.	O. B. Green.
2	2	John Griffiths.	18	Canal.	O. B. Green.
3	Canal.	John Griffiths.	19	1	McArthur Bros.
4	Canal.	John Griffiths.	20	2	McArthur Bros.
5	1	Ricker, Lee & Co.	21	1	L. D. Conner & Co.
6	2	Ricker, Lee & Co.	22	2	L. D. Conner & Co.
7	Canal.	W. S. Carkin.	23	1	Rodgers & Clement.
8	Canal.	W. S. Carkin.	24	2	Rodgers & Clement.
9	1	Mason, Hoge & Co.	25	1	W. S. Carkin.
10	2	Mason, Hoge & Co.	26	2	W. S. Carkin.
11	1	Streeter & Kenefick.	27	1	Hennessy Bros. & Cox.
12	2	Streeter & Kenefick.	28	2	Hennessy Bros & Cox.
13	1	Lester & Qualey.'	29	1	Western Dredging & Improv'nt Co.
14	2	Lester & Qualey.	30	2	Western Dredging & Improv'nt Co.
15	Canal.	The Fitz Simons & Connell Co.	31	1	Elliott & Phin.
16	Canal.	The Fitz Simons & Connell Co.	32	2	Elliott & Phin.

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 1, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, February 1st, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6) members were present.

MINUTES.

The minutes of the regular meeting held January 25, 1893, and the adjourned session of the same meeting, held January 26, 1893, were approved as printed, on motion of Mr. Cooley, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, January, 1893	$1,650 00
Eng. Dept., Div. No. 1, week ending Jan. 28, 1893	1,252 15
Eng. Dept., Div. No. 1, (Sag Building) week ending Jan. 28, 1893.	68 60
Eng. Dept., Div. No. 2, week ending Jan. 28, 1893	294 60
Eng. Dept., Div. No. 2, (General Surveys) week ending Jan. 28, 1893	166 80
Eng. Dept., Div. No. 3, week ending Jan. 28, 1893	256 50
Eng. Dept., Div. No. 4, week ending Jan. 28;	

1893	49 20	
Eng. Dept., discharged men's roll, January, 1893	141 50	$ 3,879 35
Clerical Dept., Clerk's roll, January, 1893	$ 483 34	
Clerical Dept., office roll, week ending January 28, 1893	39 00	$ 522 34
Treasury Dept., Treasurer's roll, January, 1893		166 67
Law Dept., Attorneys' roll, January, 1893	$1,466 66	
Law Dept., Joliet roll, January, 1893	333 33	
Law Dept., office roll, week ending Jan. 28, 1893	63 00	$ 1,862 99
General account, Sanitary Inspector's roll, January, 1893	200 00	
General account, Trustees' roll, January, '93	2,333 33	$ 2,533 33
Total		$ 8,964 68

ENGINEERING DEPARTMENT.

John Morris Co., (stationery)	$ 69 50	
Keen & DeLang, (stationery)	4 50	
W. A. Olmsted, (mounting maps)	1 75	
Rand, McNally & Co., (maps of Chicago)	10 80	
F. Mayer & Co. (blue prints)	28 29	
James B. Clow & Son, (repairs to boring machine)	1 40	
John Zenk, (repairs to boring machine)	2 25	
Tobin & Hamler Mfg. Co., (repairs to boring machine)	1 35	
Hibbard, Spencer, Bartlett & Co. (hardware, Sag building)	4 80	
Morrisson, Plummer & Co, (sundries)	65	
J. M. Abbitt, (machine oil)	1 10	
H. S. Norton, (coal)	14 51	
H. S. Norton, (coal)	3 98	
McArthur Bros., (coal)	7 80	
Chas. Miller, (rent)	2 00	
John Sherwood, (rent)	3 50	
L. J. Myers, (rent, Mt. Forest)	20 00	
D. C. Dunlap, (horse and buggy)	45 00	
Alex. E. Kastl, (expense)	6 30	
L. J. Myers, (traveling)	22 81	
A. C. Schrader, (emergency)	16 00	$ 268 29

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 10 99	
J. Underwood & Co., (carbon paper)	4 00	
J. B. Taylor & Co., (printing)	3 25	
H. Schultz & Co., (paper boxes)	8 75	
Trevor Spring Water Co., (ice)	3 00	
Warner's Towel Supply, (toweling)	1 20	
Thos. F. Judge, (postage stamps)	25 00	$ 56 19

LAW DEPARTMENT.

Jacobs, Coles & Co. (stationery)	16 85	
Tobey Furniture Co., (furniture)	64 00	
U. S. Desk and Office Fitting Co., (furniture)	15 50	
Joseph Donnersberger, (right of way services)	250 00	
Adams A. Goodrich, (legal services)	1,000 00	
Russell M. Wing, (legal services)	1,050 00	$ 2,396 35
Land Account—		
Orrin N. Carter, (land)		475 00

GENERAL ACCOUNT.

The Chicago Edison Co., (electric light'g)	$ 53 04	
J. Underwood & Co., (paper)	3 96	
The Chicago Times, (advertising Main Channel)	303 78	
The Mail, (advertising Main Channel)	20 00	
The Railway Review, (advertising Main Channel)	99 96	
The Railroad Gazette, (advertising Main Channel)	42 90	
Thos. F. Judge, (payroll and sundry expenses)	63 37	$ 587 01
Grand total		$12,747 52

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above be approved, and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and the vouch-

ers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 287, Engineering Department (pencil pointers)	$ 1.20
No. 288, Engineering Department (repairing transit)	15.00
No. 289, Engineering Department (stationery)	40.00
Total	$ 56.20

Mr. Cooley, seconded by Mr. Kelly, moved that Requisitions Nos. 287 and 289 for the Engineering Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and Requisitions Nos. 287 and 289 for the Engineering Department, as read and shown above, allowed.

Mr. Cooley, seconded by Mr. Kelly, moved that Requisition No. 288 for the Engineering Department, as read and shown above, be referred to the Committee on Engineering for report.

The motion prevailed unanimously and the requisition was so referred.

DIVISION OFFICE AT SUMMIT.

The Clerk presented a report from the Chief Engineer asking authority to rent a division office at Summit, as provided in the report; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be printed, placed on file, and the Chief Engineer authorized to rent a division office at Summit, as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried the report ordered printed, placed on file and the Chief Engineer authorized to rent a division office at Summit, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby make requisition for authority to rent a division office at Summit, at an expense not exceeding $20 per month.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

ADDITIONAL APPROPRIATION FOR OFFICE BUILDING AT SAG.

The Clerk presented a report from the Chief Engineer asking an additional appropriation to complete the office building at Sag; and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be printed, placed on file, and the Chief Engineer authorized to expend, as provided in the report, not to exceed $400 on the Sag Building, in addition to the amount previously appropriated.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file and the Chief Engineer authorized to expend, as provided in the report, not to exceed $400 on the Sag Building, in addition to the amount previously appropriated.

The following is

THE REPORT:

" CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The appropriation of $2,000 for an office building at Sag has been found sufficient to erect the building complete, with the exception of painting and provision for water, and perhaps a few odds and ends about the premises. It is estimated that not to exceed $400 will be required to put it in complete order for occupancy. I hereby respectfully make requisition for authority to expend this amount in addition to the amount previously granted.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

FOOT BRIDGE ACROSS ILLINOIS AND MICHIGAN CANAL.

The Clerk presented a report from the Chief Engineer making requisition to construct a foot bridge across the Illinois and Michigan Canal at Mt. Forest, as provided in the report; and the same was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved the report be referred to the Committee on Engineering.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter and Boldenweck—two (2). Nays—Messrs. Cooley, Eckhart, Kelly and Wenter—four (4).

Upon which result the President declared the motion lost.

Mr. Kelly, seconded by Mr. Eckhart, then moved that the report be printed and placed on file. and the Chief Engineer authorized to construct a foot bridge across the Illinois and Michigan Canal at Mt. Forest, as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, and the Chief Engineer authorized to construct a foot bridge over the Illinois and Michigan Canal at Mt. Forest, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby make requisition for authority to construct a foot bridge across the Illinois and Michigan Canal at Mt. Forest, at an expense not exceeding $200.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending January 28, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending January 28, 1893, as the same have been reported to me:

Engineering Department	95	
Engineering Department (Sag Building)	5	
		100
Clerical Department		3
Treasury Department		1
Law Department		8
Total employes		112

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

BOND OF CHIEF ENGINEER.

The Clerk presented a report from the Chief Engineer transmitting a new official bond as Chief Engineer, in place of the one already filed, with David B. Lyman and James B. Beckett as sureties, in the sum of $20,000; and the same was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be printed, the bond approved and, with the report, be placed on file.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed, the bond approved and, with the report, placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit a personal bond in the sum of $20,000, signed by D. B. Lyman and James B. Beckett, as a substitute for the bond now in force, and request that it be accepted.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Enclosing bond

RIGHT OF WAY MAN FOR WILL COUNTY.

The Clerk presented a report from the Attorney, asking authority to employ a right of way man in Will County, as provided in the report; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be printed and placed on file, and the Attorney be authorized and empowered to employ a right of way man in Will County, as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, and the Attorney authorized to employ a right of way man in Will County, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Our attorneys at Joliet, Messrs. Haley & O'Donnell, inform me that the suit to condemn certain land near Romeo will be on trial the early part of next month, and that in order to have the case properly prepared it will be necessary for them to have the assistance of some man to look up and subpœna witnesses and do other outside work in connection with the preparation of the case. I therefore make a requisition for one man to work on right of way matters in Will County for the months of February and March, to be paid not to exceed $125 per month—the man so employed to furnish his own horse and buggy when needed in performance of his work, without extra charge to the District.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney.

ADDITIONAL OFFICE AT LOCKPORT.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance with reference to a report from the Chief Engineer, requesting permission to rent an additional office at Lockport, presented and referred to that commitee at the meeting held January 4, 1893, (Page 977 of the Proceedings), and recommending that the same be allowed; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be printed and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the recommendations made therein concurred in and the Chief Engineer authorized to rent an additional office at Lockport, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Engineering and Finance, to whom was referred the report from the Chief Engineer of January 4, 1893, making requisition for authority to rent an office at Lockport at rate not to exceed $20.00per month, respectfully return the same with the recommendation that it be allowed.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK.
THOMAS KELLY,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

AWARDING OF BIDS ON SECTIONS A, B, C AND E, OF MAIN CHANNEL, AND COMPLETION OF PART OF CONTRACTS.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, recommending the awarding of contracts to the lowest responsible bidders, under the propositions selected as shown in the report, and returning signed contracts and bonds for Sections C and E of the Main Channel, and recommending that the same be approved and that the checks be returned on all contracts closed, and further recommending that the President and

Clerk be authorized and directed to execute the completed contracts presented; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report just presented be be adopted, printed and placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance, to whom was referred the bids received on January 25th, submit herewith its report in regard to the work between Willow Springs and the range line at Summit, known as Sections A, B, C and E.

The committee has given this work diligent consideration, and the Finance Committee, acting as a sub-committee, has carefully investigated the responsibility of the lowest bidders. The results have been satisfactory, and the committee therefore recommends that the contracts be awarded to the lowest bidders, under propositions 1 and 2, and in conformity to certain stipulations on Section B, all as shown in the following, viz.:

Section A to L. D. Conner & Co. under proposition 2 at their bid amounting to $772,525.00 on the estimated quantities.

Section B to L. D. Conner & Co. at the price bid in proposition 2, it being stipulated that the material excavated is to be disposed in spoil banks in conformity with proposition 1, or spread evenly over the entire right of way, at the option of the contractor, said bid amounting to $371,601.00 on the estimated quantities.

Section C to Western Dredging and Improvement Co. under proposition 1, at their bid of $445.066.50 on the estimated quantities.

Section E to Streeter & Kenefick under proposition 1, at their bid of $504,455.00 on the estimated quantities.

The committee has also considered the question of bonds and find that the said lowest bidders are willing, and have arranged to furnish the bonds of Surety Companies in compliance with the established policy of the Board.

As there seemed no reason for delaying the matter, the Attorney and Engineer have prepared the contracts for signature, and satisfactory bonds have been furnished by the contractors, on Sections C and E, so the committee is able to lay before the Board at this time, the contracts for Sections C and E, as herein recommended for award, complete and ready for the signature of the President and Clerk of this Board. The committee recommends that said contracts be approved and the bonds accepted, and that the President and Clerk be authorized to sign said contracts on the part of the Board.

Section C—Western Dredging and Improvement Co.

Section E—Streeter & Kenefick.

Arrangements for satisfactory bonds are being made by L. D. Conner & Co. for Sections A and B and will be reported at the next meeting of the Board.

The committee recommends further, that the Clerk return all deposits made by bidders on account of bids received and opened on January 25, 1893, on the several sections between Willow Springs and the range line at Summit, as soon as the contracts for said work have been closed.

The District is to be congratulated on the very full competition and the very favorable bids received for this work. The saving of $629,623 50 fully justified the course taken by the Board in readvertising Sections A, B, C and E.

The following table indicates the lowest bids for the several sections, as received on October 19th compared with those received on January 25th, after readvertisement, the figures being based on the Chief Engineer's latest return of quantities:

SECTIONS.	OCTOBER 19.	JANUARY 25.
A.....	$ 949,740 00	$ 772,525 00
B.....	536,759.00	371,601 00
C.....	643,926 00	445,066 50
E.....	602 846.00	504,455.00
Total.....	$2 723,271.00	$2 093,647.50

The work let under the former bids on Sections D and F, aggregates $850,860.55, so that the total for the six miles lying between the range line at Summit and the Willow Springs highway amounts to $2,944,508.05, or less than three million dollars.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
THOMAS KELLY,
JOHN J. ALTPETER,
Joint Committee on Engineering and Finance."

BOARD TO ADJOURN TO SPECIAL TIME.

Mr. Cooley, seconded by Mr. Kelly. moved that pending the completion of satisfactory bonds on Sections A and B, that when the Board adjourn, it do adjourn to meet Thursday, February 2, 1893, at 1 o'clock P. M.

The motion prevailed unanimously and it was so ordered.

RULES FOR SANITARY INSPECTOR.

Mr. Wenter, Chairman for the Committee on Rules, presented a report from that Committee, submitting rules for the government of the Sanitary Inspector, and asking further time with reference to securing additional room; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be printed, laid over until the next meeting, and the Committee be granted more time with reference to securing additional room.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Feb. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On January 4th the Committee on Rules were directed to prepare rules for the guidance of the Sanitary Inspector. We submit herewith the following rules, and recommend the adoption of the same:

Rule 1—The Sanitary Inspector shall devote his entire time to the duties of his office.

Rule 2—He shall be in readiness to hold daily consultations with the Board in reference to all matters pertaining to his department, providing he is not out on the route on duty.

Rule 3—He shall make a thorough inspection of the various camps and hospitals along the route twice a week, and oftener if so ordered by the Board.

Rule 4—He shall be subject to the order of the Board at all times in case of necessity, (such as the occurrence of epidemic in the camps), and in such emergency shall be on the ground in order to give his personal attention to the means of suppressing the same.

Rule 5—He shall make a report to the Board semi-monthly on the sanitary condition of the camps under his supervision.

Rule 6—He shall have an office in the rooms of the Board.

Rule 7—His office hours shall be from 1 to 3 o'clock, provided he is not engaged otherwise in the performance of his duties to the Board.

In reference to additional rooms, referred to the Committee on Rules, we beg leave to report that every endeavor was made to secure an additional room which would place the Board in a position to rearrange the rooms so as to put the Engineering Department in a proper position to have the rooms contiguous to each other, but as yet that could not be accomplished, and the committee would therefore ask for further time.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
B. A. ECKHART,
Committee on Rules."

ADJOURNMENT.

Upon motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned to Thursday, February 2, 1893, at 1 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 2, 1893.

OFFICIAL RECORD.

ADJOURNED MEETING.

The adjourned session of the one hundred and fifty-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Thursday, February 3, 1893, at 1 o'clock, P. M. pursuant to motion.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Cooley Eckhart, Kelly and Wenter—five (5 members were present.

COMPLETION OF CONTRACTS AND BONDS ON SECTIONS A AND B OF MAIN CHANNEL.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance returning completed contracts and bonds for Sections A and B of the Main Channel and recommending that the President and Clerk be authorized and directed to execute the same; and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be printed, adopted and placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance presents here-

with the contracts of L. D. Conner & Co., accompanied by approved bonds, for Sections A and B of the work between Willow Springs highway and the range line at Summit, awarded to said L. D. Conner & Co. by this Board on February 1st, and recommend that the President and Clerk be authorized and directed to execute said contracts on the part of this Board.

With the closing of these contracts, all the work of excavation is let between the Willow Springs highway and the range line at Summit.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOS. KELLY,
B. A. ECKHART,
JOHN J. ALTPETER,
Joint Committee on Engineering and Finance."

STIPULATION IN "PIPER, AMES ET AL." CASE.

Mr. Kelly presented an order authorizing the Attorney to stipulate for dykes in the case of the Sanitary District versus Piper, Ames, et al. as provided in the order; and the same was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly and Wenter—five (5). Nays—none.

Upon which result the President declared the motion carried, the order passed and the Attorney authorized to stipulate in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the Attorney of the District be, and he is hereby authorized to stipulate in the case of the Sanitary District of Chicago vs. Piper, Ames, et al, Gen. No. 106,951, that the District will construct and maintain a dyke or dykes northwesterly of the Des Plaines River Diversions, between the north line of Section twenty-two (22) Township thirty-eight (38), North, Range 12, East of the Third Principal Meridian and the West line of Section thirty-three (33), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, in Cook County, Illinois, of sufficient height and strength to protect from overflow any land or lands lying between the lines aforesaid and between said river diversions and the Chicago, Santa Fe & California Railway."

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Altpeter, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 8, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, February 8th, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members were present.

MINUTES.

The minutes of the regular meeting held February 1st, 1893, and of the adjourned session of the same meeting, held February 2, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Feb. 4, 1893	$1,272 15	
Eng Dept., Div. No. 1, (Sag Building) week ending Feb. 4, 1893.	63 40	
Eng. Dept., Div. No. 2, week ending Feb. 4, 1893	294 60	
Eng. Dept., Div. No. 2, (General Surveys) week ending Feb. 4, 1893	166 80	
Eng. Dept., Div. No. 3, week ending Feb. 4, 1893	256 50	
Eng. Dept., Div. No. 4, week ending Feb. 4, 1893	49 20	
		$ 2,102 65
Clerical Dept., office		

roll, week ending Feb. 4, 1893		$ 39 00
Law Dept. office roll, week ending Feb. 4, 1893		63 00
General account, Trustees' roll, June, 1891		250 00
Total		$ 2,454 65

ENGINEERING DEPARTMENT.

Construction Account—		
McArthur Bros. (Sec. 2, Feb. 1, '93)	$1,592 50	
Agnew & Co. (Sec. 7, Jan. 31 '93)	1,241 24	
Agnew & Co. (Sec. 8, Jan. 31, '93)	3,957 08	
Agnew & Co. (Sec. 9, Jan. 31, '93)	985 92	
E. D. Smith & Co. (Sec. 10, Jan. 31, '93)	5,908 00	
Mason, Hoge & Co. (Sec. 11, Jan. 16, '93)	3,612 72	
Mason, Hoge & Co. (Sec. 11, Jan. 31, '93)	1,900 02	
Mason, Hoge & Co. (Sec. 12, Feb. 1. '93)	3,917 93	
Mason, Hoge & Co. (Sec. 13, Feb. 1, '93)	4 251 40	
		$27,366 81

ENGINEERING DEPARTMENT.

Emil Rudolph, (surveying street corners)	$ 575 00	
F. Mayer & Co. (blue prints)	18 20	
E. Dietzgen & Co. (drafting materials)	64 80	
J. Underwood & Co. (typewriter paper)	16 65	
Henry Gebhardt. (repairing furniture)	1 50	
Chicago Toilet Supply Co. (toweling)	5 40	
Trevor Spring Water Co. (ice)	18 00	
J. M. Abbitt, (machine oil)	80	
H. S. Norton, (rent—Lemont)	18 00	
Wagner Bros., (livery)	8 00	
Chas. L. Harrison, (expense)	71 51	
Hiram A. Miller, (traveling)	29 66	
Hiram A. Miller, (traveling)	21 98	
T. F. Richardson, (traveling)	13 79	
		$ 863 29

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 4 42	
Tobey Furniture Co., (furniture)	7 50	
		$ 11 92

LAW DEPARTMENT.

Wilma M. Roe, (stenographer)	$ 26 80	
Haley & O'Donnell, (court costs)	5 75	
Thos. Hennebry, Sheriff Will Co. (service)	28 50	
Henry Gebhardt, (map rack)	8 00	
		$ 69 05

GENERAL ACCOUNT.

John Naghten & Co. (insurance Sag bldg.)	$ 75 00	
Tobey Furniture Co. (furniture)	33 50	
The Abendpost Co. (advertising Main Channel)	12 00	
The Chicago Daily Globe, (advertising Main Channel)	28 65	
The Engineering Record, (advertising Main Channel)	72 00	
The Engineering News Pub. Co. (advertising Main Channel)	133 00	
John F. Higgins, (printing proceedings, January, '93)	192 53	
		$ 546 68
Grand total		$31,312 40

Mr. Eckhart, seconded by Mr. Russell, moved that the vouchers, as read and shown above be approved, and ordered paid.

Upon roll-call the vote stood. Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

(By unanimous consent Mr. Prendergast's vote was recorded "yea" on all vouchers except those for construction.)

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 290, Engineering Department (maps)	$ 55 00
No. 291, Engineering Department (sponge rubbers)	1 50
No. 292, Engineering Department (printing estimate vouchers)	40 00
No. 293, Engineering Department (drafting materials)	5 60
No. 294, Engineering Department (pine stakes)	30 00
No. 295, Engineering Department (printing form 38)	3 50
No. 296, Engineering Department (tracing paper)	5 00

No. 1041, Clerical Department (stationery)	72 00
Total	$212 60

Mr. Cooley, seconded by Mr. Kelly, moved that Requisitions Nos. 290, 291, 292, 293 (as amended), 294, 295 and 296 for the Engineering Department and 1041 for the Clerical Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried and Requisitions Nos. 290, 291, 292, 293 (as amended), 294, 295 and 296 for the Engineering Department, and 1041 for Clerical Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending February 4, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending February 4, 1893, as the same have been reported to me:

Engineering Department	95	
Engineering Department (Sag Building)	7	
		102
Clerical Department		3
Treasury Department		1
Law Department		9
Total employes		115

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

REPORT OF SANITARY INSPECTOR.

The Clerk presented the regular semi-monthly report from the Sanitary Inspector; and the same was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report be printed and referred to the Committee on Health and Public Order, with power to act aud with directions to report back to the Board.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report of the Sanitary Inspector just read, printed and referred to the Committee on Health and Public Order, with power to act and with directions to report back to the Board.

The following is

THE REPORT:

"CHICAGO, Feb. 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since the last report submitted, in regard to the sanitary conditions in the various camps of the Drainage District, no material changes have occurred. The same fortunate immunity from disease exists, which I have no doubt will continue until the approach of warmer winter, and the addition of a larger working force. I have discovered a few cases of overcrowding in some of the private boarding houses, which, if allowed to continue, would undoubtedly be the source of mischief. But means have been taken to remedy this, and I look for a speedy ratification of these unfavorable conditions. There has been some criticisms published in the papers reflecting rather severely on the reputation of Mr. J. J. Shean, who is the proprietor of one of these places. Upon thorough investigation, the charges were found to be untrue, as his place is not overcrowded, is kept clean and the food served is evidently of a wholesome character.

Before concluding this report, there are several suggestions that I wish to submit for the consideration of the Board. It would be desirable to have a revaccination of all the workmen that will be employed on the canal. And in consideration of the fact that arrangements are to be made for the care of any cases of small-pox that may occur on the line, instead of sending them into the city, and that a number of camps are to be located within the city limits, it would not be an unreasonable request to ask of the Health Department, to donate sufficient vaccine matter to accomplish this mutually desirable purpose. If they

will do this, I will see that the camps are gone through thoroughly, and all danger from this cause and from this quarter will be reduced to a minimum.

I would also request that the various contractors on the new sections would notify me when and where they will locate their camps in order to give me a chance to examine such location before building on the same commences. Also, to submit for my inspection the plan of the sleeping quarters for the men. In this way errors can be avoided which it is difficult to rectify subsequent to their commission.

Trusting that these suggestions will meet with your approval, this report is most

Respectfully submitted,

(Signed) WILLIAM MARTIN, M. D.
Sanitary Inspector."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report from the Engineering Department, accompanied by classified statement, for the month of January, 1893; and the report was read.

Mr. Boldenweck, seconded by Mr. Russell, moved the report be printed and, with enclosure, placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of January; also a classified statement of expenses in the usual form.

Expenses for the month of January were as follows:

Contractors estimates	$46,300.06
Pay rolls	11,193 40
Material, etc	2,947.15
Total	$60,440.61

I estimate that the expenses of the Department for the month of February, including contractors' estimates, will be $60,000.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

"CHICAGO, Feb. 7, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The expenses for February will be about eight hundred ($800) dollars more than for the month of January. Net amount of estimates for January, $46,300.06.

Total amount of estimates paid previous to February 1, 1893, $197,672.03.

Total amount of material moved to February 1:

	Cubic Yards.
Main Channel, Glacial Drift	281,075
Main Channel, Solid Rock	114,620
River Diversion, Solid Rock	65,680
River Diversion, Glacial Drift	149,000

Distribution of material as follows:

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
2, Main Channel	18 900	.....
2, River Diversion	22,100	.....
3, Main Channel	36 400	.....
4, Main Channel	31,500	.....
5, Main Channel	23 600	.....
6, Main Channel	19 700	.....
7, Main Channel	18,200	.....
7, River Diversion	11,800	2,930
8, Main Channel	7,500	1,470
8, River Diversion	47,400	21,130
9, Main Channel	10 400	430
9, River Diversion	37,700	4,430
10, Main Channel	18,900	3,700
10, River Diversion	27 400	32,380
11, Main Channel	32,600	11,920
11, River Diversion	2 600	4,810
12, Main Channel	15 553	31,500
13, Main Channel	32,822	43,100
14, Main Channel	15 000	22,500
Totals	430 075	180,300

FORCE REPORT—DAILY AVERAGE.

SEC.	Men.	Teams	Steam Drills.	Channelers	Steam Hoists	Steam Pum's	Cableway.
Sec. 1.	15	1	....	....	....	....	....
Sec. 2.	118	7	....	....	....	....	....
Sec. 3.	6	....	....	....	....	....	....
Sec. 4.	3	..	....	....	....	....	....
Sec. 5	6	1	....	....	....	....	....
Sec. 6.	12	8	....	....	....	....	....
Sec. 7.	34	2	2	....	....	....	....
Sec. 8.	139	19	3	.3	....	....	....
Sec. 9.	58	4	2	....	....	....	....
Sec 10.	237	26	8	1	2	....	....
Sec. 11.	73	13	4	1	1	2	....
Sec. 12.	84	9	2	1	....	....	1
Sec. 13.	99	11	2	1	....	....	....
Sec. 14.	23	6	....	....	....	....	....
Total.	907	107	23	4.3	3	2	1

The work of the division has been cross-sectioning, making estimates and copying notes for Chicago office.

The Summit Division has been organized by transferring men from Mt. Forest, Sag, Lemont and Lockport Divisions; also men from Division 2.

The work for February will be practically the same as for January.

The boring party at Sag working on Section 4 will be dispensed with February 8th. The other party at Summit working for the Law Department since January 18th may consume the month of February, possibly longer.

Yours truly,

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

"CHICAGO, Feb. 8, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—During the month of January, 1893, the work done by Division 2 was, in general, as follows:

Continuation of survey of head waters of North Branch.

Reduction of notes pertaining to examination of Illinois River Floods.

Continuation of survey of street lines adjacent to the Chicago River.

Maps and plans pertaining to disease data for use of the Board of Trustees.

Maps and plans pertaining to disease data for use of the State Board of Health.

A small amount of tabulation pertaining to floods of 1892.

The expenses attending this work are accounted for by Division 4.

The expenses for February, unless affected by new instructions, will be somewhat less than for January, because the force has been somewhat reduced.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

"CHICAGO, Feb. 7, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Herewith I submit the report for Division 3, for the month of January. 1893.

The maps of the Chicago River Survey are platted from Harrison street to the North Branch.

The platting and inking of the sewerage map of Chicago and suburbs was continued during the month, the platting being nearly finished.

Work was commenced on the large scale topographical map of the Sanitary District and the territory included within eight miles of its boundaries.

A map between Summit and Ashland avenue, based on the "C" line on the towpath of the Illinois and Michigan Canal, and showing the lands included within the boundaries of the right of way, was finished.

Platting was also done on the general right of way work between Summit and Sag.

Work will be continued this month on the maps of the Chicago River Survey, the topographical map, sewerage map and the general work of the division.

Work will be commenced on the second topographical map as soon as some information is received, which is being collected from outside sources for that purpose.

Very respectfully,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

(Endlosing classified statement).

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of January, 1893; and the same was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved the report be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I report herewith the total amount paid out on account of the

Law Department, during the month of January, 1893, classified as follows:

Salaries.

Attorneys	$1,425 00	
Right of way	479 17	
Office force	192 00	
		$2,096 17

General Expenses.

Right of way	$ 690 09	
Court costs	1,804 25	
Legal services	450 00	
Printing and stationery	38 05	
Sundries	24 23	
		$3,006 62

Right of Way.

Land Account	$6,019 30	
Abstract Account	10 00	
		$6,029 30
Total		$ 11,132 09

The current expenses will not vary greatly from those of January, but the amount paid out for land will doubtless be much larger this month than last.

The suit to condemn about four hundred and thirty acres of land between Willow Springs and Summit, which was referred to in my last report, is still on trial. It is expected that the case will be finished in a few days. Several small pieces of land have been settled for during the last month, and negotiations are pending for the land still needed at Romeo, in Will County, and also for a number of pieces of land near Summit, in Cook County, for which it is hoped settlement may be made.

Considerable time has been spent by this department during the past month considering legal questions connected with the taking possession by the District of the Illinois and Michigan Canal between Summit and Willow Springs.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of January, 1893; and the same was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the report be printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

Balance on hand at date of last report	$1,855,759.44	
Received from Blair & Co. for 490 Sanitary District Bonds	490,000.00	
Received from Blair & Co., premium on the above 490 bonds	7,411.25	
Received from Blair & Co., accrued interest on the above 490 bonds	3,960.28	
Received from Law Department, land acct. Murphy, Tiedt, et al., case, money returned	150.00	
Received from American Trust and Savings Bank, interest for January	1,246.48	
Received from Metropolitan National Bank interest for January	867.76	
Received from Ft. Dearborn National Bank, interest for January	863.63	
Received from National Bank of Illinois, interest for January	865.45	
Received from Chicago National Bank, interest for January	845.80	
Total cash received for month		$2,261,970.09
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 641.98	
Treasury Department	166.67	
Engineering Departm't.	13,331.72	
Engineering—Construction Department	47,887.68	
Law Department	4,834.41	
Law Department—Land Account	6,019.30	
General Account	4,837.34	77,719.10
Balance this date, in banks as per schedule endorsed hereon		$2,284,250.99

(Signed) MELVILLE E. STONE,
Treasurer.

CHICAGO, February 2, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 426,122.08
Chicago National Bank	430,638.08
Metropolitan National Bank	427,859.95
National Bank of Illinois	426,962.61
American Trust and Savings Bank.	572,668.27
Total	$2,284,250.99

RULES FOR SANITARY INSPECTOR.

Under the head of "Unfinished Business" the report from the Committee on Rules submitting rules for the government of the Sanitary Inspector, presented and ordered printed at the meeting held February 1, 1893, (page 1034 of the Proceedings), was called up and again read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted and placed on file, and the rules for the government of the Sanitary Inspector recommended therein, be adopted as rules of the Board.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted and ordered placed on file, and the rules for the government of the Sanitary Inspector recommended therein, adopted as rules of the Board.

The following are

THE RULES:

Rule 1—The Sanitary Inspector shall devote his entire time to the duties of his office.

Rule 2—He shall be in readiness to hold daily consultations with the Board in reference to all matters pertaining to his department, providing he is not out on the route on duty.

Rule 3—He shall make a thorough inspection of the various camps and hospitals along the route twice a week, and oftener if so ordered by the Board.

Rule 4—He shall be subject to the order of the Board at all times in case of necessity, (such as the occurrence of epidemic in the camps), and in such emergency shall be on the ground in order to give his personal attention to the means of suppressing the same.

Rule 5—He shall make a report to the Board semi-monthly on the sanitary condition of the camps under his supervision.

Rule 6—He shall have an office in the rooms of the Board.

Rule 7—His office hours shall be from 1 to 3 o'clock, provided he if not engaged otherwise in the performance of his duties to the Board.

FOOT BRIDGE ACROSS ILLINOIS AND MICHIGAN CANAL.

With reference to authority granted the Chief Engineer at the meeting held February 1, 1893, (page 1031 of the Proceedings) to construct a bridge over the Illinois and Michigan Canal at Mt. Forest, Mr. Cooley called attention to the fact that consent of the Commissioners of said canal was necessary before proceeding with said work.

Mr. Eckhart, seconded by Mr. Kelly, therefore moved that the President of the Board be directed to apply to the Commissioners of the Illinois and Michigan Canal for proper permission to build a bridge over the said canal at Mt. Forest.

The motion prevailed unanimously and it was so ordered.

APPROVAL OF ANNUAL REPORTS OF CLERK AND TREASURER.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, returning the annual reports of the Clerk and Treasurer for the year ending December 31, 1892, presented and referred to that Committee at the meeting held January 25, 1893 (pages 1003 and 1012 of the Proceedings), and recommending the approval of the same; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the report be adopted, the recommendations made therein be concurred in and the report, with enclosures, be placed on file

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Commitee on Finance to whom was referred the annual reports of the Clerk and Treasurer for the year ending December 31, 1892, which were presented to your Honorable Body on January 25, 1893, respectfully report that they have examined and compared the same and find them to be correct; and your Committee return the same with the recommendation that said reports be approved and placed on file.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman,
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance."

PURCHASE OF "SCHIEL, HAHN, SAVAGE, PANTKE AND HEINTZ LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Du Page and Cook Counties, owned by Joachin Schiel, August Hahn, Mary E. Savage, Hermann Pantke, and Magdalena Heintz, and directing the Clerk to pay, on the voucher of the Attorney, for said lands as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adapted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay said Joachin Schiel, August Hahn, Mary E. Savage, Hermann Pantke and Magdalena Heintz for said lands as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, the report adopted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay Joachin Schiel, August Hahn, Mary E. Savage, Hermann Pantke and Magdalena Heintz for said lands as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committe on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons at the prices here stated, to-wit:

From Joachin Schiel, the land hereinafter described for the sum of seven hundred and eleven and seventy-five one hundredths ($711.75) dollars.

From August Hahn, the land hereinafter described for the sum of eight hundred and seventy and seventy-five one-hundredths ($870.75) dollars.

From Mary E. Savage, the land hereinafter described for the sum of two hundred and fifty ($250) dollars.

From Hermann Pantke, the land hereinafter described for the sum of seven hundred and fifty ($750) dollars.

From Magdalena Heintz, the land hereinafter described for the sum of two hundred and fifty-two ($252) dollars.

Your committee recommend that the Clerk of this District be authorized and directed to pay on the vouchers of the attorney to said Joachin Schiel the sum of seven hundred and eleven and seventy-five one-hundredths ($711.75) dollars in full payment for the following described land, to-wit:

All that part of the east half (½) of the north fraction of the southwest quarter (¼) of Section eleven (11), Township thirty-seven (37) north, Range eleven (11) east of the Third Principal Meridian, lying southeasterly of the prolongation of a line drawn southwesterly from a point in the north line of the southeast quarter (¼) of said Section eleven (11) 2547.6 feet east of the center of said section to a point in the north and south center line of said section 1627.7 feet south of the center of said section, and produced to its intersection with the west line of said east half (½) of said north fraction of said southwest quarter (¼), together with the riparian rights thereof, containing nine and forty-nine one-hundredths (9.49) acres, more or less, said land lying and being situate in the County of DuPage, in the State of Illinois.

To August Hahn the sum of eight hundred and seventy and 75-100 ($870.75) dollars in full payment for the following described land, to-wit:

All that part of the north fraction of the southeast quarter (¼) of Section eleven (11), Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian, bounded and described as follows:

Beginning for a point of commencement, at the point where a line drawn southwesterly from a point in the north line of said north fraction 2547.6 feet east of the center of said section, to a point in the west line of said north fraction 1627 7 feet south of the center of said section intersects a line parallel with said west line and 871.2 feet east thereof, measured along the north line of said north fraction; and from said point of commencement running south on said line parallel with said west line to the

northwesterly margin of the Des Plaines River; thence southeasterly at right angles with the general course of said river there to the center thread of the current of said river; thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the west line of said north fraction with the northwesterly margin of said river and at right angles with the general course of said river there; thence northwesterly along said line to said northwesterly margin; thence north on said west line to a point 1627.7 feet south of the center of said section; thence northeasterly in a straight line to the point of beginniug, containing eleven and 61-100 (11.61) acres, more or less. Said land lying and being situate in the County of Du Page, in the State of Illinois.

To Mary E. Savage the sum of two hundred and fifty ($250) dollars in full payment for the following described land, to-wit:

That part of the northeast quarter (¼) of Section thirty-two (32), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the east line of said Section thirty-two (32) 2200 feet south of the northeast corner of said section; thence south along said east line to the northwesterly margin of the Desplaines River; thence southeasterly at right angles with the general course of said river there to the center thread of the current of said river; thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the south line of said northeast quarter (¼) with the northwesterly margin of said river and at right angles with the general course of said river there; thence northwesterly along said line to said northwesterly margin; thence west along said south line of said northeast quarter (¼) to a point 2250 feet east of the center of said section thirty-two (32), thence northeasterly, in a straight line to the point of beginning. Said land lying and being situate in the County of Cook in the State of Illinois.

To Hermann Pantke the sum of seven hundred and fifty ($750) dollars in full payment for the following described land, to-wit:

That part of Lot four (4) of the subdivision of the south half (½) of Section one (1), Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian made by Horace Brooks lying south of the Chicago, Santa Fe and California Railway Company, more particularly described as follows

Beginning at the intersection of the southerly boundary line of the right of way of said Chicago, Santa Fe and California Railway Company with a line parallel with the east line of the southeast quarter (¼) of said Section one (1) and 9.40 chains west thereof measured along the north line of said southeast quarter (¼) and running thence south along said parallel line with the east line of said southeast quarter (¼) to the northerly margin of the DesPlaines River, thence southerly at right angles with the general course of said river there to the center thread of the current of said river, thence westerly along said center thread to its intersection with a line drawn s utherly from the point of contact of a line parallel with the east line of said southeast quarter (¼) and 14.70 chains west thereof measured along the north line of said southeast quarter (¼) with the northerly margin of the Des Plaines River and at right angles with the general course of said river there; thence northerly along said line to said northerly margin; thence north on said line parallel with said east line to the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company; thence easterly along said boundary line to the point of beginning; containing ten (10) acres, more or less. Said premises lying and being situate in the County of DuPage, in the State of Illinois.

To Magdalena Heintz the sum of two hundred and fifty-two ($252) dollars in full payment for the following described land, to-wit:

That part of a tract of land in the north fraction of the southeast quarter (¼) of Section eleven (11), Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian lying southeasterly of a line drawn from a point in the north line of said north fraction 2547.6 feet east of the center of said Section to a point in the west line of said north fraction 1627.7 feet south of the center of said Sec-

tion. Together with the riparian rights thereof; containing 3.36 acres, more or less. The entire tract of which the above described land is a part is described as follows:

Beginning at a point in the north line of said north fraction 871.2 feet east of the center of said Section and running thence south along a line parallel with the west line of said north fraction to the center thread of the current of the Desplaines river or the boundary line between Dupage and Cook Counties; thence northeasterly along said center thread to a line parallel with said west line of said north fraction and 1070.52 feet east thereof; thence north along said line parallel with said west line to the north line of said north fraction; thence west along said north line 199.32 feet to the point of beginning. Said premises lying and being situate in the County of DuPage in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL
L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
THOMAS KELLY,

Joint Committee on Finance and Engineering."

REPORT ON REQUISITION 288 AND HARLEV LETTER.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Fiannce, returning requisition No. 288 with approval, and also a communication from Alfred Harlev, referred to said Committee at previous meetings; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, printed and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your committee to whom was referred the letter from Mr. Alfred Harlev, contractor for Section 1 of the Main Channel, presented at the meeting held January 11, 1893, respectfully return the same without recommendation.

Your committee also returns Requisition No. 288 from Engineering Department for repairs to transit, presented and referred at the meeting held February 1st, 1893, with the recommendation that the same be allowed.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK.
WM. H. RUSSELL,
THOS. KELLY,
JOHN J. ALTPETER,

Committee on Engineering."

TRIANGULATION SURVEY CONTINUED.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, recommending the continuation of triangulation survey as indicated in the annual report of the Fngineering Department for 1892; and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be printed, adopted and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein, concurred in.

The following is

THE REPORT:

"CHICAGO, Feb. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on

Engineering and Finance have considered that part of the annual report of the Chief Engineer (referred to said Committee on January 25th), which pertains to the location of the Main Channel and other works of the District, the land monuments and other objects with reference to the triangulation system as the basis of an accurate and final map, and the Committee recommend that said survey work be authorized as proposed.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
W. H. RUSSELL,
THOMAS KELLY,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

ENFORCEMENT OF EIGHT-HOUR DAY.

President Wenter presented a communication to the Board of Trustees from Geo. F. Rohrbach, Secretary of the Political Assembly of Chicago, with reference to the enforcement of the eight-hour clause of the Sanitary District law; and the communication was read.

President Wenter then stated that a Committee as named in the communication, and representing the Political Assembly, were present and desired to appear before the Board.

By unanimous consent the Committee appeared before the Board and Mr. Robert Swallow, of the Committee, spoke in their behalf. Messrs. Cowdrey, Rohrbach and Morahan, of the Committee, also addressed the Board.

After a general discussion Mr. Prendergast, seconded by Mr. Kelly, moved the adoption of the resolution presented in the communication.

The President then called Mr. Kelly to the Chair and spoke in favor of the resolution.

After further discussion, upon roll-call, on the adoption of the resolution, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Cooley—one (1).

(By unanimous consent Mr. Cooley explained his vote as follows: "I vote 'no' for the reason that I do not believe that it can be enforced and that no enforceable provisions can be introduced into the contracts.")

Upon which result the Chairman declared the motion carried, the resolution as presented adopted, and the Clerk directed in accordance with the same.

The following is

THE COMMUNICATION:

"CHICAGO, Feb. 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—A committee consisting of the following gentlemen, R. H. Cowdrey, P. W. Nilsson, Swallow, Morahan, and Rohrbach were appointed to a meeting of the Political Assembly, to appear before your Honorable Body and request the passage of the following resolution, to-wit:

WHEREAS, It is the earnest desire of the Trustees of the Sanitary District of Chicago, that eight hours shall constitute a day's labor for all persons engaged in the work of excavating the Drainage Channel, therefore, be it

Resolved, That the Clerk be instructed to notify each one of the contractors that it is our desire to have them conform to this rule, whether their men are paid by the hour or by the day, and that another set of men shall be employed to fill out the extra time in all cases, where more than eight hours work is needed.

Respectfully yours,

(Signed) GEORGE F. ROHRBACH,
Secretary."

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 15, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, February 15th, 1893, at 2 o'clock P. M

President Wenter called the Board to order.

Upon roll-call Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell, Wenter —six (6)—and subsequently Messrs. Altpeter and Prendergast—making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held February 8th, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Feb. 11, 1893	$1,174 80	
Eng. Dept., Div. No. 1, (Sag Building) week ending Feb. 11, 1893	35 70	
Eng. Dept., Div. No. 2, week ending Feb. 11, 1893	294 60	
Eng. Dept., Div. No. 2, (General Surveys) week ending Feb. 11, 1893	156 00	
Eng. Dept., Div. No. 3, week ending Feb. 11, 1893	255 38	
Eng. Dept., Div. No. 4, week ending Feb. 11, 1893	49 20	
		$ 1,965 68
Clerical Dept., office		

roll, week ending Feb. 11, 1893.....	$ 39 00
Law Dept., office roll, week ending Feb. 11, 1893.....	48 00
Total.....	$ 2,052 68

LAW DEPARTMENT.

O. N. Carter, (expense)	35 51
Grand total.....	$ 2.088 19

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above be approved, and ordered paid.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 447, Law Department, (printing).....	$40 00
No. 448, Law Department, (envelopes).....	40 00
Total.....	$80 00

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisitions Nos. 447 and 448, for the Law Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and Requisitions Nos. 447 and 448, for the Law Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending February 11, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending February 11, 1893, as the same have been reported to me:

Engineering Department.....	96	
Engineering Department (Sag Building).....	6	
		— 102
Clerical Department.....		3
Treasury Department.....		1
Law Department.....		8
Total employes.....		114

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of January, 1893; and the same was read.

By unanimous consent the report was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 15, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of January was $641.98, divided as follows:

Salaries.....	$ 636 33
Stationery.....	4.25
General expenses.....	1.40
Total.....	$ 641.98

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $800.

The total amount expended and charged to the General Account during the month of January was $4844.49, divided as follows:

Salaries.....	$ 2533.34
Printing.....	116.35
Advertising.....	307.55

Rent and janitor service	$1,850.00
General expenses	37.25
Total	$4,844.49

There are outstanding liabilities against the General Account amounting to about $700.00 for advertising, and the expenses for the present month will be under $4,000.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

VACCINATION OF EMPLOYES AND LOCATION OF CAMPS.

Mr. Boldenweck, on behalf of the Committee on Health and Public Order, presented a report with reference to the recommendations made in the semi-monthly report of the Sanitary Inspector, presented and referred to that Committee at the meeting held February 8th, 1893, (page 1040 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed, and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Feb. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Health and Public Order, to whom was referred the semi-monthly report of the Sanitary Inspector, presented at the meeting held February 8, 1893 (page 1040 of the Proceedings), respectfully report after conference with the Sanitary Inspector, that the work of revaccinating all the workmen on the canal will begin as soon as considered proper by the Sanitary Inspector, and that the Commissioner of Health has agreed to furnish the necessary vaccine points to the Sanitary District at actual cost of $44.50 per thousand, and that the Sanitary Inspector was authorized to purchase same as he may need them, the Health Commissioner agreeing to aid our inspector in every way possible.

The Clerk has also been requested to notify each of the contractors who have not already located their camps to consult with the Sanitary Inspector before determining such location.

Respectfully submitted,

(Signed) WM. BOLDENWECK.
JOHN J. ALTPETER,
Committee on Health and Public Order."

REVISED ESTIMATES ON COST OF WORK FROM SUMMIT TO LOCKPORT.

Mr. Cooley presented an order directing the Chief Engineer to submit revised and more exact estimates of the cost of excavation for each section of the work between Summit and Lockport; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer instructed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, Borings and cross-sections have been made in detail since the contracts between Willow Springs and Lockport were let and since the contracts between Willow Springs and Summit were first advertised and along the lines of channels as finally located, thus enabling more exact estimates to be made of the amount of work to be done; therefore, be it

Ordered, That the Chief Engineer is hereby directed to submit at the earliest date practicable, and from the latest data, the amount, character, price and cost of excavation for each section of work between the Range line at Summit and the middle of Section 14 of Lockport Township, and said estimates to exhibit the river diversion as separate items, said information to be so compiled as to exhibit for each section, and as a whole, the several items of the contracts and the character of the work."

AMENDMENTS TO RULES NOS. 33 AND 34.

Mr. Kelly presented amendments to

Rules Nos. 33 and 34, with reference to the appointment of Assistant Engineers.

The same were read, and, under the rules, ordered printed and laid over until the next meeting.

The following are

THE AMENDMENTS:

Insert in Rule 33 before the last paragraph:

"Assistant Engineers at the rate of $1,800 to $2,400 per year, and in such number as may from time to time be authorized."

In Rule 34 strike out line beginning with "Assistant Engineers."

JUDICIAL DECISION ON THE 8-HOUR LAW.

Mr. Russell presented an order directing the Attorney to take the necessary steps to obtain a judicial decision with reference to the enforcement of the eight-hour clause of the Sanitary District law; and the order was read.

Mr. Russell, seconded by Mr. Altpeter, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney instructed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the Attorney be directed to take the necessary steps to obtain a judicial decision upon the power of this Board to restrain contractors in doing work for the district from requiring or permitting their employees to work more than eight hours per day."

OFFICES TO BE CLOSED FEBRUARY 22ND, 1893.

Mr. Russell presented an order directing the closing of the District offices on February 22nd, 1893, (Washington's Birthday); and the same was read.

Mr. Russell, seconded by Mr. Altpeter, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the offices ordered closed February 22nd, 1893, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the offices of the Sanitary District be closed Wednesday, February 22, 1893, the same being a legal holiday."

CONFERENCE WITH REFERENCE TO MAINTENANCE OF PUBLIC ORDER.

Mr. Boldenweck presented an order directing the President to communicate with the various village, city and county officials along the line of the Main Channel, in relation to a conference for devising ways and means for maintaining public order on and along the right of way; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Excused and not voting—Mr. Prendergast—one (1). Nays—None.

Upon which result the President declared the motion carried, and the order adopted, and the President directed in accordance with same.

The following is

THE REPORT:

"WHEREAS, Within the next four months from 6,000 to 10,000 men will be employed on the work of our Main Channel.

WHEREAS, We believe the facilities for keeping good order are not sufficient at this time along and off our right of way.

WHEREAS, Complaints of disorder are frequently made to this Board; it is therefore

Resolved, That the President of the Board communicate with the various village, city and county officials along the line of the Main Channel in relation to a conference with the Board of Trustees for the purpose of devising ways and means to maintain good order during the coming year."

INVESTIGATION OF FLOODS.

Mr. Cooley presented an order directing the Chief Engineer to make an investigation of the floods in the Des Plaines and Chicago River basins; and the same was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—Mr. Prendergast—one (1).

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer instructed as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be instructed to ascertain the volume and distribution of flood waters in the Desplaines and Chicago River basins, that may occur in the present and following months, and that there be included in said measurements the Desplaines River in the Town of Maine, and the North Branch in the Town of Niles."

BRIDGE OVER THE ILLINOIS AND MICHIGAN CANAL AT MT. FOREST.

The President stated that as directed by the Board at the meeting held February 8th, 1893, (page 1044 of Proceedings) he had requested from the Commissioners of the Illinois and Michigan Canal, permission to construct a foot bridge across the canal, in the vicinity of Mount Forest, as shown by the following

COMMUNICATION:

"CHICAGO, Feb. 14, 1893.

Hon. W. S. Graham, Secretary Canal Commissioners, Chicago:

DEAR SIR—The Sanitary District asks the permission of your Honorable Board to construct a foot bridge across the Illinois and Michigan Canal, somewhere in the vicinity of Mount Forest, to serve the purposes of our corps of engineers to cross and re-cross at that point. Trusting that you will acquiesce in this request, we will construct the same and have it high enough from the surface of the water so as not to interfere in any way with the navigation of the canal.

Yours very truly,

(Signed) FRANK WENTER,

President Board of Trustees."

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 22, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-eighth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, February 22d, 1893, at 1:30 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Cooley, Eckhart, Russell and Wenter—four (4) members were present. No quorum.

ADJOURNMENT TO SPECIAL TIME.

Mr. Cooley, seconded by Mr. Russell, moved that the Board adjourn until Thursday, February 23, 1893, at 2 o'clock P. M.

The motion prevailed unanimously and the President declared the board adjourned, to meet Thursday, February 23, 1893, pursuant to motion.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

FEBRUARY 23, 1893.

OFFICIAL RECORD.

ADJOURNED MEETING.

The adjourned session of the one hundred and fifty-eighth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Thursday, February 23, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6) members were present.

MINUTES.

The minutes of the regular meeting held February 15th, 1893, were amended as follows:

By unanimous consent the word "regulations" was inserted in place of the word "rules" where the word "rules" occurs in the first, eighth and fourteenth lines in the first column, Page 1053 of the Proceedings.

On motion of Mr. Kelly, seconded by Mr. Russell, the minutes of the regular meeting held February 25th, 1893, were then approved as printed and amended.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending Feb. 18, 1893	$1,192 05	
Eng. Dept., Div. No. 1, (Sag Building) week ending Feb. 18, 1893	94 65	
Eng. Dept., Div. No. 2, week ending Feb. 18, 1893	276 60	
Eng. Dept., Div. No. 3, week ending Feb. 18, 1893	413 70	
Eng. Dept., Div. No. 4, week ending Feb. 18, 1893	49 20	
		$ 2,026 20
Clerical Dept., office roll, week ending Feb. 18, 1893		39 00

Law Dept., office roll, week ending Feb. 18, 1893		58 00
Total		$2,123 20

ENGINEERING DEPARTMENT.

Construction Account.

Alfred Harlev, (Sec. 1, Feb. 15, '93)	$ 236 25	
McArthur Bros. (Sec. 2, Feb. 16, '93)	1,176 00	
Agnew & Co. (Sec. 7, Feb. 15, '93)	855 35	
Agnew & Co. (Sec. 8, Feb. 15, '93)	1,975 27	
Agnew & Co. (Sec. 9, Feb. 15, '93)	645 96	
E. D. Smith & Co. (Sec. 10, Feb. 15, '93)	3,696 00	
Mason, Hoge & Co. (Sec. 11, Feb. 15, '93)	2,420 10	
Mason, Hoge & Co. (Sec. 12, Feb. 15, '93)	2,010 96	
Mason, Hoge & Co. (Sec. 13, Feb. 15, '93)	1,635 16	
		$14,651 05

ENGINEERING DEPARTMENT.

Henry M. Shabad, (blocking pads)	$ 1 25	
A. H. Abbott & Co. (drawing ink)	4 50	
E. Dietzgen & Co. (drafting material)	14 71	
The Polygraph Print Co. (polygraphs)	13 28	
Edwin Milner, agent (maps)	53 00	
F. C. Austin Manufacturing Co. (repairs, boring machine)	5 02	
Gottlieb Schroeder, (repairs, boring machine)	6 80	
Otis Graves, (coal, boring machine)	12 71	
H. S. Norton, (coal, boring machine)	10 22	
J. M. Abbitt, (coal, boring machine)	6 48	
J. H. Banks, (coal)	11 61	
Pouliot & Goulette, (repairing canal boat)	99 49	
Chas. L. Harrison, (rent—Lockport)	20 00	
Geo. Brainard, (gauge reading)	10 00	
Wm. Kirkham, (gauge reading)	10 00	
A. C. Schrader, (expense)	9 06	
D. C. Dunlap, (traveling)	22 20	
Wm. Gleeson, (traveling)	2 35	
Wm. Gleeson, (emergency)	10 11	
Wm. Gleeson, (emergency)	2 70	
A. C. Schrader, (emergency)	39 50	
A. C. Schrader, (emergency)	$12 65	
Alex. E. Kastl, (emergency)	3 10	
		$380 74

CLERICAL DEPARTMENT.

Trevor Spring Water Co., (ice)		3 00

LAW DEPARTMENT.

Chicago Eve. Journal, (legal notices)	$ 131 84	
O. N. Carter, (expense)	100 07	
U. W. Weston, (expense)	258 00	
U. W. Weston, (expense)	442 50	
U. W. Weston, (expense)	460 00	
U. W. Weston, (expense)	1,775 00	
		$3,167 41

GENERAL ACCOUNT.

Chicago Edison Co., (electric lighting)	47 86	
The Rialto, (janitor services)	80 00	
		$127 86
Grand total		$20,453 26

Mr. Eckhart, seconded by Mr. Russell, moved that the vouchers, as read and shown above be approved, and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 297, Engineering Department (sundry supplies)	$281 95
No. 298, Engineering Department (map cases)	10 00
No. 299, Engineering Department (cross section paper)	17 00
No. 300, Engineering Department (sundry supplies)	363 45
Total	$672 40

Mr. Kelly, seconded by Mr. Altpeter, moved that Requisitions Nos. 297 and 300, for the Engineering Department, as read and shown above, be referred to the Joint Committee on Engineering and Finance, with directions to report back at the next meeting.

The motion prevailed unanimously, and it was so ordered.

Mr. Cooley, seconded by Mr. Kelly, moved that requisitions Nos. 298 and 299, for the Engineering Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried and Requisitions Nos. 298 and 299, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending February 18, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending February 18, 1893, as the same have been reported to me:

Engineering Department	87	
Engineering Department (Sag Building)	12	
		99
Clerical Department		3
Treasury Department		1
Law Department		9
Total employes		112

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk.'

AMENDMENTS TO REGULATIONS NOS. 33 AND 34.

Under "Unfinished Business" the amendments to regulations Nos. 33 and 34, presented, ordered printed and laid over at the meeting held February 15, 1893 (page 1052 of the Proceedings), were again brought up. The amendments and the regulations as amended were again read.

Mr. Kelly, seconded by Mr. Cooley, moved the adoption of the amendments.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and amendments to Regulations Nos. 33 and 34 adopted.

The following are

REGULATIONS NOS. 33 AND 34 AS AMENDED:

"REGULATION 33—The Chief Engineer shall select the following assistants as needed by him, subject to confirmation by the Board: One Assistant Chief Engineer at a salary not exceeding the rate of $3,600 per annum; one Principal Assistant at a salary not exceeding the rate of $3,000 per annum; one Principal Assistant at a salary not exceeding the rate of $2,700 per annum; one Record Clerk at a salary not exceeding $1,500 per annum; Assistant Engineers at the rate of $1,800 to $2,400 per year and in such number as may from time to time be authorized. Said assistants to be in charge of such operations as may be assigned by the Chief Engineer. The Assistant Chief Engineer shall be Acting Chief Engineer when authorized by the Chief Engineer and in his absence."

"REGULATION 34—The Chief Engineer shall appoint, as authorized by the Board, such employes as the needs of the service may require, who shall be men of technical competence and training for the duties assigned them as engineers or draftsmen. Sub-Assistant Engineers at the rate of $125 to $150 per month; instrument men at the rate of $100 to $125 per month; recorders at the rate of $75 to $100 per month; draftsmen at the rate of $75 to $150 per month."

APPROVAL OF ANNUAL REPORT OF ATTORNEY.

Mr. Kelly, Chairman, presented a report from the Joint Committee on Judiciary and Finance, returning the annual report of the Attorney, for the year ending December 31, 1892, presented and referred to that committee at the meeting held January 25th, 1893, (page 1016 of Proceedings) and recommending the approval of the same; and the report was read.

Mr. Kelly, seconded by Mr. Altpeter, moved that the report be adopted, the recommendations made therein concurred in, and the report, with enclosure, placed on file.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, the recommendations made therein concurred in, and the report, with enclosure, ordered placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Judiciary and Finance to whom was referred the annual report of the Law Department, presented at the meeting held January 25, 1893, after examination respectfully return the said report herewith, with the recommendation that it be approved and placed on file.

Respectfully submitted,

(Signed) THOMAS KELLY,
Chairman.
JOHN J. ALTPETER,
B. A. ECKHART,
W. H. RUSSELL,

oint Committee on Engineering and Finance."

PURCHASE OF "BEDER AND ELFELD LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Du Page County, owned by Jacob Beder and Charles Elfeld, and directing the Clerk to pay, on the voucher of the Attorney, for said lands, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay said Jacob Beder and Charles Elfeld for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay said Jacob Beder and Charles Elfeld for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Feb. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons at the prices here stated, to-wit:

From Jacob Beder, the land hereinafter described, for the sum of $1,364.25.

From Charles Elfeld, the land hereinafter described, for the sum of $385.00.

Your committee recommend that the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to said Jacob Beder the sum of $1,364.25 in full payment for the following described land, to-wit:

All that part of the north fraction of the southeast quarter (¼) of Section eleven (11), Township thirty-seven (37) north, Range eleven (11), East of the Third Principal Meridian, lying east of a line parallel with and 1220.34 feet east of the west line of said north fraction of said southeast quarter (¼), measured along the north line of said north fraction, and lying southeasterly of a line drawn southwesterly from a point in the north line of said north fraction 2547.6 feet east of the center of said section to a point in the west line of said north fraction 1627.7 feet south of the center of said section, together with the riparian rights thereof; containing 18.19 acres more or less.

Said land lying and being situate in the County of DuPage, in the State of Illinois.

To Charles Elfeld the sum of $385.00 in full payment for the following described land, to-wit:

That part of Lot six (6) of a subdivision of the South half (½) of Section one (1), Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian, made by Horace Brooks, lying south of the Chicago, Santa Fe and California Railway, more fully described as follows;

Beginning at the intersection of the southerly boundary line of the right of

way of said Chicago, Santa Fe and California Railway with a line parallel with the East line of the Southeast quarter (¼) of said Section one (1) and 1,320 feet west thereof, measured along the North line of said Southeast quarter (¼); thence south along said line parallel with the East line of said Southeast quarter (¼) to the center thread of the current of the Desplaines River, or the boundary line between DuPage and Cook counties; thence easterly along said center thread to a line parallel with said east line of said southeast quarter (¼) and 1148.48 feet west thereof, measured along the north line of said southeast quarter (¼); thence north along said line parallel with said east line to the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway; thence westerly along said southerly boundary line to the point of beginning. Said land being a part of said Lot six (6) which was conveyed to said Charles Elfeld by Anthony Rohmer and wife by warranty deed dated April 23, 1890, and recorded in Book 64 of deeds of Du Page County, page 425.

Said land lying and being situate in the the County of Du Page, in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
L. E. COOLEY,
JOHN J. ALTPETER,
Joint Committee on Finance and Engineering."

SANITARY INSPECTOR TO BE MADE OFFICER OF STATE BOARD OF HEALTH.

President Wenter suggested that the Committee on Health and Public Order be directed to take the necessary steps toward having the Sanitary Inspector sworn in as an officer of the State Board of Health.

Thereupon by unanimous consent the Committee was directed to take the necessary steps toward having the Sanitary Inspector sworn in as such officer.

OVERFLOW MAP OF THE DESPLAINES VALLEY TO BE PREPARED.

Mr. Cooley presented an order directing the Chief Engineer to prepare and lay before the Board a map and profile showing the overflow in the Desplaines Valley as provided in the order; and the same was read

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order passed, and the Chief Engineer so instructed.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer prepare and lay before this Board as soon as practicable a map and profile showing extent and height of overflow in the Desplaines Valley below the Riverside dam, and throughout the territory between Bridgeport and Lake Joliet, for the floods of May and June, 1892, and that he show on said map any restraining works and river changes now authorized or proposed, and the location of the right of way of the District as now determined."

INVESTIGATION OF OVERFLOW AND REMOVAL OF DAMS IN THE ILLINOIS RIVER.

Mr. Cooley suggested, in view of a resolution recently introduced into the Illinois House of Representatives by Representative Tice, with reference to the overflow of the bottom lands and the removal of dams in the Illinois River, that the Committee on Federal Relations should take cognizance of the matter

Mr. Eckhart, seconded by Mr. Kelly, then moved that the Committee on Federal Relations be directed to take cognizance of, and recommend such action as they might deem proper with reference to the resolution introduced into the State Legislature, concerning the overflow of the bottom lands and the removal of dams in the Illinois River.

The motion prevailed unanimously and the Committee on Federal Relations was so instructed.

ADJOURNMENT.

Upon motion of Mr. Kelly, seconded by Mr. Altpeter, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MARCH 1, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and fifty-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, March 1, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7)—and subsequently Mr. Prendergast, making a total of eight (8) members were present.

MINUTES.

The minutes of the regular meeting held February 22, 1893, and of the adjourned session of the same meeting held February 23, 1893, were approved as printed on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, February, 1893	$1,650 00
Eng. Dept., Div. No. 1, week ending Feb. 25, 1893	1,195 80
Eng. Dept., Div. No. 1, (Sag Building) week ending Feb. 25, 1893	14 40
Eng. Dept., Div. No. 2, week ending Feb. 25, 1893	276 60
Eng. Dept., Div. No. 3, week ending Feb. 25, 1893	413 70
Eng. Dept., Div. No. 4, week ending Feb. 25, 1893	49 20

Eng. Dept., discharged men's roll, February, 1893	98 30	
		$ 3,698 00
Clerical Dept., Clerk's roll, February, 1893	483 33	
Clerical Dept., office roll, week ending Feb. 25, 1893	39 00	
		522 33
Treasury Dept., Treasurer's roll, February, 1893		166 66
Law Dept., Attorneys' roll, February, 1893	1,508 33	
Law Dept., Jollet roll, February, 1893	458 34	
Law Dept., office roll, week ending Feb. 25, 1893	63 00	
		2,029 67
General account, Sanitary Inspector's roll, February, 1893	200 00	
General account, Trustees' roll, February, 1893	2,333 33	
		2 533 33
Total		$ 8,949 99

ENGINEERING DEPARTMENT.

Robt. H. Cowdrey, (sundries)	$ 12 55	
Robt. H. Cowdrey, (Linn tree claim)	175 00	
A. C. Schrader, (emergency)	29 00	
		216 55

LAW DEPARTMENT.

Jos. Donnersberger, (right of way services, expert)	$ 250 00	
M. C. Covell & Sons, (livery)	80 00	
U. W. Weston, (expense, expert witnesses)	725 00	
W. D. Barge, (traveling)	12 65	
		$ 1,067 65

CLERICAL DEPARTMENT.

Waukesha Hygeia Mineral Springs Co. (water)	$ 5 00	
Jacobs, Coles & Co. (stationery)	1 00	
		6 00

GENERAL ACCOUNT.

Thos. F. Judge, (payroll and sundry expenses)	$ 11 17	
John F. Higgins, (printing February Proceedings)	82 72	
		93 89
Grand total		$10.334 08

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above be approved, and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Excused and not voting—Mr. Prendergast—one (1). Nays—None.

(Mr. Cooley voted "aye" on all vouchers except for salaries for Assistant Engineers.)

Upon which result the President declared the motion carried and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 301, Engineering Department (carbon paper)	$ 12 00
No. 302, Engineering Department (printing form 11)	12 00
No. 303, Engineering Department (ruled paper)	50 00
No. 304, Engineering Department (lithographed letter heads and envelopes)	88 00
No. 305, Engineering Department (Transit and Level Books)	97 00
No. 306, Engineering Department (tracing paper)	9 00
No. 307, Engineering Department (document boxes)	10 00
Total	$278 00

Mr. Kelly, seconded by Mr. Cooley, moved that Requisition No. 304, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering.

The motion prevailed unanimously and it was so ordered.

Mr. Kelly, seconded by Mr. Cooley, then moved that Requisitions Nos. 301 to 303, inclusive, and Nos. 305 to 307, inclusive, all for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried and Requisitions Nos. 301 to 303, inclusive, and Nos. 305 to 307, inclusive, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report in accordance with the rules showing the number of persons in the employ of the District for the week ending February 25, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Feb. 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending February 25, 1893, as the same have been reported to me:

Engineering Department	87	
Engineering Department (Sag Building)	1	
		88
Clerical Department		3
Treasury Department		1
Law Department		9
Total employes		101

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

CHANGE OF GRADE IN MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer with reference to proposed change of grade in Main Channel; and same was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the report be referred to the Joint Committee on Engineering and Judiciary, with instructions to report back to the Board.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT.

"CHICAGO, March 1, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In my annual report in speaking of the slope given to the Main Drainage Channel, I stated that

"The slope for the Earth Section is specified to be 3 in 100,000, and for the Rock Section 8 in 100,000. The basis for determining these slopes was adopted for the preliminary estimates, before the specifications were made, and was intended to be amply safe whatever the character of the channel.

The contracts were let upon the same basis but with a special proviso that the board should have the right to change the grade by raising or lowering it. The adoption of the channeling machine for taking out the sides of the rock channel and the walling of the earth portions of the same, together with the general character of the work and the kind for bottom which it will form, insures of the rock section of the work an unusually uniform and smooth channel, perfectly staple in character, which I believe will permit of a reduction of the slope, and result in a saving in the cost of excavation of several hundred thousand dollars. I will, at an early day, recommend the amount of reduction which I consider can be safely made in this direction."

The provisions of the contracts for the rock portion of the Main Channel, Sections 1 to 14 inclusive, provide in Article 3 as follows:

"3. *Grade.*—The grade line of the bottom of said Main Channel at the station designated 740 shall be at an elevation of 24 feet below the datum established by the Illinois and Michigan Canal Trustees in 1847, and shall slope thence uniformly at the rate of 0.08 of a foot vertical to 1,000 feet horizontal to the end of the standard excavation at Station 1480, where it shall have an elevation of 29.92 feet below datum.

The Sanitary District reserves the right to change said grade by raising or lowering it, or by increasing or decreasing the slope, thereby increasing or decreasing the amount of excavation; *provided*, that said change shall in nowise affect the terms of this contract as to price or entitle the said contractor to any compensation additional to the rate fixed by this contract, or render the Sanitary District liable for any damages whatsoever, direct or indirect. *Provided*, further, that the said change shall in no place affect the grade by an amount exceeding four feet; and that the Sanitary District shall notify the said contractor of any such change before any portion of said channel shall have been finished in conformity to the grade as hereinbefore specified."

On further consideration of this subject I now recommend that the part of the foregoing article of the contract

relative to the slope be made to read, 0.053 of a foot vertical to 1,000 feet horizontal instead of 0.08, and that 29.92 be made 27.92. This will make a saving in the Main Channel of 504,100 cubic yards of rock excavation between Willow Springs and the proposed regulating works, which at the average price of 78.28 cents amounts to $394,600, and a difference of 438,500 cubic yards of rock or $319,280 between Willow Springs and Station 1480, the end of Section 14.

The estimates for the extension of the Main Channel this day submitted are based upon this change.

In making the change proposed we will take no risk of reducing the channel below the capacity required by law. As stated in the annual report, the slope first used was adopted for the preliminary estimates and was intended to be safe for a very rough and irregular channel and with the intention of reviewing the whole question carefully as soon as the general character of the channel was determined and time could be found to fully consider the subject.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

MAPS FOR BOARD ROOM.

The Clerk presented a report from the Chief Engineer, accompanied by ten (10) maps, prepared and presented in compliance with an order passed November 16, 1892, (page 884 of the proceedings;) and the report was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report be printed, and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

" CHICAGO, March. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the order of your Honorable Board, passed November 16, 1892, (page 884 of Proceedings,) I beg to submit herewith ten maps and charts as follows:

Map showing location and size of sewers, 1892.

Map showing location and size of water pipes, 1892.

Map showing distribution of population, 1880, 1886, 1892.

Map showing contours from topographical chart made in 1889 by Drainage and Water Supply Commission.

Map showing location of deaths by zymotic diseases, 1890.

Map showing location of deaths by zymotic diseases, 1891.

Map showing location of deaths by zymotic diseases, 1892.

Map showing location of deaths by typhoid fever, 1890.

Map showing location of deaths by typhoid fever, 1891.

Map showing location of deaths by typhoid fever, 1892.

Which cover items 1, 2, 4, 5 and 9 of said order.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(*Accompanied by ten (10) maps.*)

COMPARISON OF FLOOD WATERS.

The Clerk presented a report from the Chief Engineer, accompanied by tables, being an investigation and comparison of previous and the recent floods in the basins of the Chicago, Desplaines and Illinois Rivers, made in response to an order passed June 1, 1892, (page 535 of the proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be printed and referred, with enclosures, to the Committee on Engineering, with instructions to report back to the Board.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, March 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the order dated June 1, (page 535 of Proceedings), with reference to flood measurements, I hereby submit a communication of Mr. T. T. Johnston, Principal Assistant Engineer, transmitting the records of the measurements referred to. All the documents mentioned by Mr. Johnston are submitted, except the plats

and diagrams, which are retained in this office to be copied.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer.

(Accompanied by communication and eighteen (18) appendices.)

"CHICAGO, Feb. 7, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The following statement of the results of the flood observations, pertaining to the flood period of May and June, 1892, is made in conformity with your instructions.

(1). *Morris, Ills.*—

Morris is located on the Illinois River a few miles below the confluence of the Desplaines, Kankakee, and Du Page Rivers. There is submitted herewith:

(a) Plat of the vicinity and observations of the flood measurements. (Plat No. 1, enclosure No. 1.)

(b) Plats of the individual measurements of flow, including cross sections at all stages of the river, also variations of velocity and of flow throughout the width of the sections. (Plat No. 2, enclosure No. 2.)

(c) Plat showing the variations of flow (discharge), velocity and area with gauge readings, both for main channel of river and for overflow section in flood times. (Plat No. 3, enclosure No. 3.)

(d) Tabulation of the various flow measurements, together with the several elements involved. (Enclosure No. 4.)

The period of observations extended through portions of May, June and July, 1892, as indicated in the tabulations.

The velocity measurements in the Main Channel of the river were made by use of mid-depth floats. The measurements of overflow sections were made by use of weighted rod floats run "log" fashion, but carefully timed and oriented by compass. The profiles of cross-sections were determined at stage of low water, the river bed not being of a changeable character.

The flows measured were purely rain waters, uninfluenced by cold weather or ice. Plat No. 3 speaks for the accuracy of measurements which were conducted by a party fully experienced in such work. It may not be out of place to say that, after the examinations and construction of very many plats similar to No. 3, applying to other rivers, that this plat is instructive in a peculiarly rare degree, not only as to the capacity of this part of the Illinois River, but in a general hydraulic sense.

Mr. C. L. Harrison, Assistant Engineer, had immediate charge of the field operations.

(2). *South Branch Chicago River*—

The measurements of flow were made immediately south of Eighteenth street, opposite the elevator on east side of the river, and where the sections were favorable for such work. There is submitted herewith:

(a) Plats of individual measurements of flow similar to those pertaining to Morris. (Plat No. 4, enclosure No. 5.)

(b) Plat showing (1) variation of flow, area and velocity at Eighteenth street, with the total fall of water surface between Bridgeport and Lake street, and (2) the variation of flow with the total fall of water surface between other points as indicated on the plat. (Plat No. 5, enclosure No. 6.)

(c) Tabulation of the various flow measurements, together with the several elements involved. (Enclosure No. 7).

The period of observation of flow was confined to the May flood, the data obtained then being so comprehensive that the available forces were assigned to other important observations in June.

All the flow measurements were made by means of rod floats immersed to as near full depth as practicable.

As at Morris the flow was not influenced by ice or cold weather.

This work affords the rare opportunity to correlate flow in one and the same large channel with a wide variation of slope or fall of water surface, varying from nothing to six feet in a distance of about 20,000 feet. Of this more will appear further on in the report.

Mr. Ebin J. Ward, Assistant Engineer, had immediate charge of the field operations.

(3). *North Branch Chicago River*—

The measurements of flow were made just above Clybourn place. There is submitted herewith:

(a) Plats of the individual measurements of flow similar to those pertaining to Morris. (Plat No. 6, enclosure No. 8).

(b) Tabulation (1) of the measurements of flow and attendant elements, and (2) of the estimated flow, fall of water, surface, etc., June 20th to 27th, inclusive. (Enclosure No. 9).

The measurements were made in June, the May flood having passed so quickly that parties could not then be organized for the work. Measurements were necessarily few in number because the flood passed so quickly and because the force was not available for continuous work.

The measurements were made by use of rod floats, as in the South Branch.

Mr. A. E. Kastl, Assistant Engineer, had immediate charge of the field operations.

(4.) *Grafton, Ills.*—

The measurements were made in the Illinois River 1½ miles above its mouth. There is submitted herewith:

(a) Plats of the individual measurements of flow similar to those pertaining to Morris. (Plat No. 7, Enclosure No. 10.)

(b) Tabulation of the measurements of flow and attendant elements. (Enclosure No. 11.)

These measurements were made in May, the flood of which month was higher than the June flood in the Lower Illinois River.

The measurements were made by use of mid-depth floats in Main Channel and in overflow section by means of weighted rod floats run "log" fashion, but carefully timed and oriented by compass.

The flow of the river at this point, it must be remembered, is largely dependent on the condition of the Upper Mississippi River. The data bearing on this matter will be found in the work now being done by Mr. Ebin J. Ward, with reference to floods in the Illinois River.

Mr. C. L. Harrison, Assistant Engineer, had immediate charge of the field operations, he having made similar measurements at this same place some years since for the United States Government.

(5.) *Desplaines River at Joliet.*—

A special examination of the flood volume at time of highest water May 5th, 1892, at the upper dam over the Desplaines at Joliet was made.

It forms the subject of a report by H. A. Miller, Sub. Asst. Engineer, and is submitted herewith as enclosures Nos. 12 and 13.

The flow at this time appears to be the largest of which there is any record, and seems to have been due from a local "cloud burst".

In addition to the above direct measurements, of flow there is submitted the following pertinent matter.

(1). *Hourly flow of Chicago River*—

This table contains:

(a) Hourly flow of the South Branch of the Chicago River during the June flood, deduced by means of recorded gauge readings and curves in plat No. 5.

(b) Hourly flow of North Branch as recorded in enclosure No. 9, herewith.

(c) Hourly flow for same period, from the main river into Lake Michigan, being a combination of the simultaneous quantities in enclosure No. 14, (a and b).

(2). *Hourly flow of the Desplaines River at Riverside*—

This table contains the hourly flow, in cubic feet per minute at Riverside, deduced from the curves established by the measurements made in 1887, mostly by the writer of this report, under direction of the Chicago Drainage and Water Supply Commission. Enclosure No. 15.

(3). *Hourly flow of the Desplaines River at Joliet*—

This table is self explanatory. The flow was computed by use of the weir formula from head on the upper dam. The co-efficient 3.33 was chosen so as to indicate the largest possible flow. The smallest possible flow would probably follow by using co-efficient 3.10. Corrections can readily be made. (Enclosure No. 16.)

(4). *Velocities of Flow in the South Branch of Chicago River*—

These tables pertain to floods of both May and June. They were compiled by taking flow as established in other enclosures, and thence computing the velocities of flow at various hours through certain measured cross-sections at the points indicated. (Enclosures No. 17 and 18.)

(5). *Gauge Readings*—

These tables are a record of the various

gauges maintained during the May and June floods, and extend to August 1, 1892.

(6). *High Water Marks*—

Enclosures No. 20, 21 and 22 pertain to high water marks in Kankakee River.

Enclosure No. 23 pertains to high water marks at Joliet.

(7). *Rain-fall Record*—

Enclosure No. 24 is a record of the rain-fall at Chicago for the years 1871-1892, inclusive, taken from the United States Signal Service records.

(8.) *Hydraulic Elements of South Branch Measurements.*

These are submitted as Enclosure No. 25 because they add a new and important fund of information to hydraulic science in as much as a measure of resistance is determined in a long and obstructed channel like the South Branch of the Chicago River.

The slopes are based on levels of precision. The flow was measured by means of rod floats. The wide variation of slope constitutes a peculiar feature. This enclosure should be studied in connection with Plat No. 5.

It is proper to suggest in this connection that, in case this report is published, the measurements of flow at Riverside in the Desplaines River, now on file in your office, be also published, together with the curves showing the variation of flow, area and velocity, with gauge readings.

Also, that all the plats forming parts of this report, except those giving graphical representations of individual flow measurements, be published, together with all the enclosures.

Very truly,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

REPORT ON TAIL RACE—LOCKPORT TO JOLIET.

The Clerk presented a report from the Chief Engineer, accompanied by five (5) maps, submitting plans for tail race from the end of the Main Channel near Lockport to the upper basin at Joliet, on three routes; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be printed, and with maps accompanying, referred to the Committee on Engineering and Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg to report hereby upon the extension of the Main Drainage Channel below the end of Section 14, one mile above Lockport, and the necessary work to conduct the water discharged by the said channel and the Desplaines River to the lower end of the upper basin at Joliet at what is known as Dam No. 1 of the Illinois and Michigan Canal improvements.

The report contains no recommendations regarding Dam No. 1 and embraces none of the work needed below said dam, through the City of Joliet, for the reason that I have not been able to give sufficient study to this question to enable a plan to be properly submitted.

The work above the dam is, however, not dependent upon that below, since whatever is done, all water flowing through the City of Joliet must pass through the upper basin and at a level not materially different from the present water level of said basin.

PROBLEM STATED.

The reach covered by this report, as above described, is about 28,600 feet, or 5.4 miles long.

The level of the ground at Station 1480, the lower end of Section 14, is 7.5 feet below datum, and the level of the water in the upper basin is ordinarily 41 feet below.

The work divides itself into two main branches, which are quite dissimilar in the purposes to be accomplished.

1. The extension of the Main Channel, which will be subject to the influence of the level of the water in Lake Michigan, and the works necessary to regulate the discharge therefrom, and,

2. The channels and works necessary to conduct and constrain the water discharged by the Main Channel and the Desplaines River, from the regulating works to Dam No. 1.

The first branch of the subject involves the extension of the Main Channel to a point 1000 feet above the Lockport road

where the ground is sufficiently low to admit of a free discharge therefrom under the least favorable conditions, and where regulating works can be erected that will limit and control the amount of discharge. In explanation of this it should be said, that in proportioning the Main Channel and fixing the grade thereof it has been necessary to use low water in Lake Michigan as the initial level, and to provide for such a slope and cross section of channel as will allow the required amount of water to pass through it. Conditions suited to a lake level below datum would be illy suited to a level four or five feet higher, unless there was some way to regulate the discharge of water from the lower end of the channel.

Records kept by the City of Chicago of the fluctuations of Lake Michigan, extending over a period of 39 years, from 1854 to 1892 inclusive, show that the monthly average heights of the lake have varied from minus ¾ of one foot to plus 3¾ feet a total variation in monthly averages of 4½ feet, and that under the influence of winds and other transitory causes its level has at times been 4½ feet above datum, and has frequently fluctuated over a range of 3 feet and sometimes as much as 4 feet in one month. A channel properly connected with the Lake and giving a minimum discharge of 600,000 cubic feet of water per minute, would, under high water conditions give a maximum discharge of 900,000 cubic feet per minute, if the outlet at the lower end were unrestrained.

Again, provisions must be made to stop all flow through the channel if necessary, and indeed to so regulate the flow that any quantity of water less than the maximum may be discharged at will. Provisions must also be made for the free passage of ice. To fulfill these conditions it is necessary that the lower end of the Main Channel shall be so constructed and provided with regulating works, that the surface of the water may assume any level from eight feet below datum to five feet above, giving a total possible fluctuation at the regulating works of thirteen feet. To do this the banks of the channel below Fitzpatrick's Mound must be made water tight, and should be built to a grade of eight feet above datum, and the regulating works must be so constructed as to be under perfect and ready control.

While a general design of these works has been made which permits an approximate estimate of cost, it has not yet been perfected in detail so as to allow plans therefor to be submitted.

The Second Branch of the subject involves a consideration of the total amount of water from each and every source which must be carried off through a waste channel, and delivered at dam No. 1; the relation which such waste channel sustains, or may sustain to any navigable channel which may be provided below Lockport; its relation to the navigability of the Illinois and Michigan Canal; its relation to existing structures in the way of railroads and manufacturing establishments, and particularly the facilities for future commercial development which special locations of such waste channel may afford.

Amount of Water. In my report of June 7, 1892 (pp. 550 to 552 of proceedings) I pointed out that the combined capacity of the Desplaines River and the Main Drainage Channel from Summit to Lockport with the lake at mean height, will be upwards of 1,200,000 cubic feet per minute, and also that if the combined flood waters of the Desplaines and Chicago River basins should be permanently disposed of without a diversion north of the city; that to prevent any outflow from the Chicago River into the lake would require that 300,000 cubic feet per minute from the Chicago River basin, and 810,000 cubic feet per minute from the upper Desplaines basin, making 1,110,000 cubic feet per minute in all, would, during the largest floods of which we have the record, need to be carried southwestward from Summit.

Making an allowance for drainage areas between Summit and Lockport, it may be said that in case this method of disposing of flood waters is finally adopted, the works below Lockport should be designed to carry off, say, 1 260 000 cubic feet per minute, or 21 000 cubic feet per second. In case a northern diversion should be made and the flood waters of the Desplaines River should be excluded from the Main Channel at Summit, nearly, if not quite, as much capacity will be needed in the works below Lockport. I have therefore, in the plans submitted, taken 21,000 cubic feet per second as the total combined flood discharge; and have so designed the works that if, in an ordinary case, the discharge

should be materially greater, it would still be disposed of without damage.

RELATION TO A NAVIGABLE CHANNEL.

The law under which the Sanitary District is organized sets certain limitations as to width, depth and velocity of water in the Main Channel, and proposes (Section 209) that "when such channel shall be completed, and the water turned therein to the amount of three hundred thousand cubic feet of water per minute, the same is hereby declared a navigable stream, and whenever the general government shall improve the Desplaines and Illinois rivers for navigation to connect with this channel, said general government shall have full control over the same for navigation purposes, but not to interfere with its control for sanitary or drainage purposes." A joint resolution passed by the same General Assembly that enacted the Sanitary District law avows "That it is the policy of the State of Illinois to procure the construction of a waterway of the greatest practicable depth and usefulness for navigation from Lake Michigan via the Desplaines and Illinois rivers to the Mississippi river, and to encourage the construction of feeders thereto of like proportions and usefulness."

This action of the State Legislature, and a resolution pending before the present General Assembly pledging the State in similar terms and to like effect, are indicative of a purpose on the part of the State to promote the improvement of the Desplaines and Illinois Rivers for navigation. The building of the Hennepin Canal by the general government, which is now in progress, will also necessitate the improvement of the said rivers, including the reach of the Desplaines River now under consideration, before that canal can be utilized—all of which point to an early utilization of the Sanitary District channel for navigation. The wording of the Sanitary District law is a distinct recognition that the incidental creation of a navigable channel in connection with the drainage channel, is an important feature of the drainage project upon which the Sanitary District has embarked. Indeed it may be said that this is the main consideration rendered by the Sanitary District to the remainder of the State for the privilege of disposing of its sewage in the manner proposed. Hence, whether the law is regarded in the nature of a contract, or otherwise, it is imperative upon the Sanitary District, and any channel constructed thereunder must be made so as to subserve the purposes of navigation, whenever the proper agencies are ready to turn it to such use. This being the case, nothing should be done by the Sanitary District in any of its work which will impede or render more expensive the full development of a navigable channel throughout the Desplaines and Illinois River Valleys; and, so far as practicable, that plan should be carried out which most contributes to this incidental purpose. It is possible, under the conditions existing, to so construct the work under consideration as to greatly facilitate navigation, and on the other hand it may be so done as to greatly impede it, and that without any corresponding loss or gain to the Sanitary District. Indeed there is no middle course in this case, as it is impossible to conduct the water from the proposed regulating works at the end of the Main Channel, without either greatly facilitating or greatly impeding the future creation of a navigable channel throughout this reach, I have hence made comparisons of the several projects with this in view.

The preservation of the navigability of the Illinois & Michigan Canal through the upper basin has also been kept in view in each of the proposed plans.

Existing structures have also been considered in making such comparisons, as well as the extensions or enlargement of such structures that are imminent.

Regard has been given to future commercial developments in the way of the possible extension of manufacturing industries, and railroads to serve such industries, in the river valley below Lockport, and the various locations for the waste channel have been considered in their relation to a future development of a water power in this locality.

PROPOSED PLANS.

An estimate and comparison has been made on two wholly distinct projects, represented on the accompanying plans as Proposition 1 and Proposition 2, as also upon a third project exhibited as Proposition 3, which is a combination to a certain extent of the upper part of Proposition 1, and the lower part of Proposition 2.

The extension of the Main Channel and the Regulating Works do not differ for the

several propositions, except that the present line of the Channel above the end of Section 14 is continued on a straight line from Station 1480 to Station 1529 for Proposition 2, while for Propositions 1 and 3 the line curves to the right, its prolongation passing to the west of the Wire Mills.

It is proposed to excavate this portion of the channel on the regular grade and with the standard width, except that at Station 1520 it begins to widen on the west side and spreads to an extreme width of 450 feet in order to make room for the regulating works as shown on the plans. It is to be walled above the rock with dry rubble masonry as provided in the specifications for the portion of the channel under contract. This wall is to be backed up with broken rock with a core of water-tight material between, a rib of concrete being used underneath the core to form a tight joint with the bed rock. The waste channel and collateral works below the end of the Main Channel being distinct and different under the various propositions, are described more in detail as follows:

PROPOSITION 1.

The waste channel, after crossing the river above the Lockport road, is to follow the west side of the river valley all the way to the upper basin just above Ruby street. It is to be formed mainly by restraining the water with a single bank. An excellent alignment is obtained for a navigable channel, partly within and partly without the waste channel. It also forms a channel of ample capacity to carry off the maximum amount of water, 21,000 cubic feet per second. It is proposed that in floods, a portion of the water, say one-fourth of the total amount, or thereabouts, shall be discharged into the Desplaines River at a point 2,000 feet above the Elgin, Joliet and Eastern Railway crossing, and that the remainder, as well as the ordinary flow of the channel, shall be conducted to the upper basin just above the Ruby street bridge in Joliet. By thus limiting, in flood times, the amount of water which the river has to carry to a less amount than ordinary high floods, and not increasing the ordinary flow, no improvement of the river is necessary. The flood records show as having passed through Joliet 10,600 cubic feet, and 6,200 cubic feet per second for the May and June floods of 1892, respectively. This quantity of the May flood, however, is believed to be too great and that something more than 9,000 cubic feet would more accurately represent it, and that a material part of this amount found its way into the river just above the Elgin, Joliet & Eastern Railway bridge, so that the amounts passing the Wire Mills in the two cases did not differ so widely as would appear.

To describe the proposed waste channel and works more in detail: From Station 1529 above the Lockport road to the dam opposite the Pitts Manufacturing Company's works the embankment is to follow approximately the line shown on the plan. It is to be 24 feet wide on top with a slope of 1¼ to 1, with a central core of earth under which is a rib of concrete to render the whole water tight. All of the bank except the central core to be made of broken rock or gravel. Below the Pitts Manufacturing Company's works the earth core will give place to concrete and the width on the top will be 14 feet.

From Station 1529 to 1581 at the Wire Mills road the bank is to be located west of what is to be the ultimate navigable channel. The Desplaines river is to be excluded from the waste channel above the Lockport road by means of a guard bank. The only excavation which it is proposed to make in this section is the removal of the top soil from portions of the right of way to obtain the necessary material for a water tight core, and the scalping of the rock for a foot or two for a distance of 1,000 feet below the waste works, with the exception of the earth core all excavation necessary for a navigable channel is to be made only when navigation is provided for.

From Station 1581, at the Wire Mills road to the dam at or about Station 1708 the earth core for the bank is also to be obtained from the right of way, the rock portion of the bank to come from what is ultimately to be the navigable channel. Such excavation being made only to the amount needed to complete the bank. In doing this the channel will be left 20 feet deep from Station 1581 to Station 1615; 18 feet deep from Station 1615 to Station 1660; and 19 feet deep from Station 1660 to 1709. To make it 20 feet deep all of this distance, and for the increased width from Station 1670 to 1709, will require the excavation of 80,000 cubic yards of rock in excess of that required for the embankment. At Station 1640 a dam and flumes are provided to

allow a portion of the flood waters or a part of the regular flow when so desired, to escape into the Desplaines River; and at Station 1708, opposite the Pitts Manufacturing Co.'s Works the main weir dam between the higher and lower level of the channel is located. At Ingalls street a bridge is to be provided across the channel connecting with Broadway on the west side. Between this dam and the upper basin the restraining bank is to be built of material taken out of the channel, and to such height only as is necessary to restrain the water, allowing a much higher velocity than will obtain above the dam. It is to be rendered water tight by a concrete core two feet in thickness through its middle as before stated.

On the margin of the upper basin a rock and timber dam is to be provided, which is intended to be used only until such time as the channel may be made navigable. When this time comes it will be necessary to build a new dam to a higher level, to raise and strengthen the embankment, and to make the necessary excavation in the channel. A tow path bridge is also provided at this point.

PROPOSITION 2.

The Main Channel is continued south by the prolongation of its line through Sections 12, 13 and 14, to the regulating works at Station 1529; thence the navigable channel is to continue in the same straight line crossing the Desplaines River twice, once just above the Lockport road and once at the Wire Mills road. At this point it deflects to the westward taking a course parallel with and 400 feet from the west bank of the Illinois and Michigan Canal to the E., J. & E. Ry.; thence it deflects eastward into the line of the upper basin.

The waste channel is located west of and parallel with the navigable channel to a point one-quarter of a mile above the dam at the Wire Mills, thence it runs to the position of the old dam, where a weir dam is proposed. The waste channel is formed of two parallel retaining banks, and the Desplaines river is taken into it at the Lockport road. The drainage from Long Run and the Illinois & Michigan Canal being provided with an escape east of the proposed dam. On building the navigable channel the drainage from these sources will have to be taken under the same. Below the Wire Mills the water is allowed to follow the course of the river, being kept off of the Santa Fe Railway by means of an embankment, the road being raised for a distance of about one mile. The river is to be kept out of the Illinois & Michigan Canal below the E. J. & E. Railway by means of a dry wall and bank. This work, as a whole, is so designed that the Lockport Mills will not be interfered with at any time, and the Wire Mills will be left intact. To prevent the loss of water power to these Mills during construction, it is proposed to build a channel across the waste channel connecting with the fore bay of the water wheels, passing under the banks with flumes, by means of which water from the river is to be uninterruptedly supplied to the wheels. In lieu of this it will be necessary to supply from 400 to 500 horse power by a new steam plant to tide the mills over the time of construction. Below the Mills the river is to be sufficiently excavated to prevent interference with the tail race.

The water from the river is admitted into the upper basin at the present point of entrance for the Desplaines River, a much wider opening being provided and a tow path bridge built, so as not to interfere with the present navigation of the basin.

PROPOSITION 3.

Except as to the dam, the work under this proposition above the E. J. & E. Railway is the same as for Proposition 1. Just above this railway the water is to run into the river and from thence takes the same course, restrained by the same class of improvements, as for Proposition 2. The navigable channel would leave the waste channel at the E. J. & E. Railway and follow substantially the same course along the west side of the valley to the upper basin, as that taken by the waste channel under Proposition 1.

COMPARISON OF PROJECTS.

In Appendix 1, 2 and 3, are estimates of the cost of the work to be done under corresponding propositions, by the Sanitary District.

The total cost from the end of Section 14 to Dam No. 1, including the right of way, but not including consequential damages to railways or manufacturing industries, is as follows:

Proposition 1.

Main Channel and regulating works..	$694,193 85	
Waste Channel, etc..	509 806 50	
Right of way.....	286 000 00	
		$1,490,000 35

Proposition 2.

Main Channel and regulating works..	$698,189 10	
Waste Channel, etc..	492,779 70	
Right of way.....	305.000 00	
		$1,495,968 80

Proposition 3.

Main Channel and regulating works..	$694,193 85	
Waste Channel, etc..	379,365 50	
Right of way.....	284,000 00	
		$1,357,559 35

The mere statement of these sums, however, conveys no adequate idea of the relative merits of the various projects, when considered from all points of view, and only an approximate idea of their relative costs. To such an extent is this true that even in the first outlay the Sanitary District may very likely spend less money in carrying out the work under Proposition 1, which by the estimates is apparently more expensive than Proposition 3, than for the latter proposition. These statements will appear more forcible by a detailed comparison.

RAILWAYS.

Chicago, Santa Fe & California Railway.—As is well-known, the Chicago, Santa Fe & California Railway is inadequately furnished with track service through Joliet, and between Joliet and Chicago, and that as it is impossible to improve this service sufficiently on the line now operated through that city, the company has acquired a new right of way and laid a new track from the south to the east side of the upper basin, just below the steel works, with a view of crossing the basin and following the line of their new right of way, joining their present tracks above the Elgin, Joliet & Eastern Railway, as shown on the accompanying plans. Waiving all questions of a navigable channel, and considering only the waste works of the Sanitary District as proposed under the several propositions, it is seen that this right of way will be largely flooded by the escaping water under Propositions 2 or 3, and the District would undoubtedly have to pay large damages or condemn the same because of this flooding. The railway company would present as a measure of damage their necessity for a new line crossing the basin below the steel works, and that if deprived of this right of way they would be put to a large expense to provide a line elsewhere.

Proposition 1 leaves this right of way intact and interferes in no manner with it or with the present alignment of this railway. In this alone, since it is not included in the estimates, possibly lies much more than the difference of cost between Proposition 1 and Proposition 3.

The proposed line of the navigable channel for Proposition 2 crosses the operated line of this road twice between Lockport and Joliet in such manner as to render it wholly impracticable to operate the road in its present alignment after such a channel is provided. This would necessitate a removal to some other location thereby throwing a heavy expense upon the improvement.

Elgin, Joliet & Eastern Railway.—On a hasty examination the impression is left that Proposition 2 crosses this railway in a more favorable position than Proposition 1, but closer scrutiny renders it evident that such is not the case. The high elevation of the main line of the road over the Desplaines River valley renders it necessary that the Company should maintain a branch track for the manufacturing industries, which are developing below the railway. To this end a branch line leaves the main line east of the Illinois and Michigan Canal and crosses the Desplaines River at a low grade, thus making two lines cross the river within a few hundred feet of each other. This same branch line also connects with the main line on the west side of the valley.

On Propositions 2 and 3 the Sanitary District will have to provide a bridge for this branch line and raise the grade of the same, which is largely an off set to the bridge and track raising which, on Proposition 1 must be provided for the main line. The branch line on Proposition 1 is easily provided for by building a regular grade for the same adjacent to the bank of the main line. This new grade, as designed and estimated upon, is a great improvement on the present grade.

When it comes to the question of a navigable channel, Propositions 1 and 3 would

have one swing bridge, and Proposition 2, two swing bridges to accommodate this road.

Chicago, Alton & St. Louis Railroad.—The only conflict with the interests of this company is in the case of Proposition 2, and the branch line leading to the Wire Mills. Without this branch and the mills that it serves, are done away with, a bridge will be necessary. But even if this should be done and a navigable channel should be built as shown on Proposition 2, the industries which will inevitably locate on the west side of that channel in order to utilize the water power, will still demand connections with this road, necessitating a bridge therefor.

To sum up the railway problem, having in view a navigable channel, it may be said to be the simplest on Proposition 1, much more complicated for Proposition 3, and so complicated for Proposition 2 as to become prohibitory in the face of other alternatives. If we have in view only the waste works of the Sanitary District the railway facts are still as strongly in favor of Proposition 1.

HIGHWAYS.

But two continuous highways are crossed by either of the proposed lines, and in this respect there is no material choice to be made, with the single exception that for Proposition 1 it will be necessary to provide form the first, a bridge at Ingalls street, to give access from Broadway to the Pitts Manufacturing Works, and the Phœnix Horse Shoe Works, though ultimately a bridge will be needed at this point across any line, one having already been begun over the Desplaines river.

Considering the matter of railway and highway bridges as a whole and not only for the present but for the future, it may be said that a channel on the west side of the valley can undoubtedly be kept much freer of bridges than one on the east side. Along the river will grow up, indeed are now growing up, without the stimulus of water power in all cases, large manufacturing industries which will demand access to the railways on the east side of the valley. A channel which separates these industries from the main lines of travel, and the more thickly populated town will inevitably be crossed frequently by branch railways and highways. By keeping the channel on the west the business will grow up east of it, along the river, and have uninterrupted access to the railways, to Lockport, and to the electric road running between Lockport and Joliet.

COMMERCIAL INTERESTS.

With neither of the proposed plans is it necessary to consider the matter of expense in relation to the creation of water power, since no expense is proposed to that end; it being now only a question of selecting that route which affords the readiest facilities for a future utilization of such power as the situation may afford.

Do what we may, the Sanitary District cannot turn so large a volume of water down the valley between Lockport and Joliet without someone, at some time, finding a way to render at least a part of it available for power. Whatever plan may be adopted some portion of the benefit which may be made to accrue so largely by the proper selection of a route will ultimately be realized. The only question being, as to the degree of benefit and the cost of securing the same. By taking the western route as set forth by Proposition 1, the best possible facilities for utilizing this water power are afforded. Stretching over a distance of two and one half miles, from the Wire Mills to the works of the Pitts Manufacturing Company, on the right will be the waste channel of the Sanitary District, and on the left the bed of the Desplaines River ready to act as a tail race, the latter being from 22 feet to 30 feet below the former; while between the two and along the east side of the river, are some 400 acres of land admirably adapted for manufacturing sites, having connections with the main trunk lines of railway and with the Elgin, Joliet & Eastern Belt Railway. Across the river within 3,000 feet of the first dam is the Illinois Steel Works, using many thousand horse power now supplied by steam.

Though Proposition 1 affords opportunity for utilizing the future water power most fully and most economically, it may be done to a considerable extent with Proposition 3, and to a small extent with Proposition 2.

CONTRIBUTION TO NAVIGATION.

As has hereinbefore been suggested the ease with which the work can be taken up, where the Sanitary District leaves it, and the reach from the regulating works to

Dam No. 1, made navigable, should have weight in selecting a route. For the purpose of disposing of the water delivered by the Sanitary District channel and the Desplaines River, the plans on each of the proposed routes have been carried out for the cheapest possible results for the immediate purpose of getting rid of the water. It now remains to inquire what will be the cost of creating a navigable channel on each of the several propositions, taking the work as left by the Sanitary District. In doing this it is not proposed to enter into the expense of such work only so far as is necessary to obtain approximately the relative cost; those items which are small and immaterial, and those which are alike in each case, being ignored.

In Appendix 4 is a summary in detail of such a comparison which shows the cost of obtaining a navigable channel under Proposition 1, to be $1,700,186 00 less than for Proposition 2, and $225,543.00 less than for Proposition 3.

The basis of these results may be explained, and the questions involved better understood by the following considerations:

Right of Way.—The least amount of right of way which it is possible to get along with satisfactorily has been included in the estimates for each project. It will be noticed that for Proposition 1, the right of way is complete both for a navigable channel and the waste channel, but such is not the case for Propositions 2 and 3. To obtain sufficient lands for a navigable channel would increase the estimate for each case as follows:

Proposition 1	Nothing.
Proposition 2	$206,000 00
Proposition 3	$148,000 00

Locks.—The descent from datum to the level of the upper basin is 41 feet; it is accomplished with three locks, corresponding ones having the same lift in the several cases respectively. To construct these locks, leaving out the question of excavation, will cost the same in each case.

Excavation.—The amount of excavation and embankment required to supplement the work of the Sanitary District, and form a navigable channel, is dependent upon the depth of water provided. Without passing an opinion as to the depth which it is feasible to obtain in the improvement of the rivers below Joliet it may be desirable that the lake level depth, or thereabouts, should be carried as far as Joliet.

The profiles accompanying this report show 18 feet as the minimum depth and for each proposition the additional excavation is based upon this depth. The estimate of cost is based upon the assumption that this additional work will not be undertaken until the Sanitary District channel is in operation, in which event the greater part of the material to be removed between the Elgin, Joliet & Eastern Railway and Dam No. 1 for Proposition 2, would have to be done in the wet at a largely increased cost.

For Propositions 1 and 3 only that portion of the additional excavation falling in the upper basin would need to be removed in the wet. The excavation between the dam at Station 1708 and the upper basin can be dry work, since provisions are made for turning a sufficient amount of water into the river above the Elgin, Joliet & Eastern Railway to enable the water to be shut off from the channel below the dam at Station 1708. The approximate cost of making this additional excavation and embankment as shown by Appendix 4 is, for

Proposition 1	$ 359,100 00
Proposition 2	1,794,900 00
Proposition 3	412,200 00

The estimate for the excavation of the navigable channel for Proposition 2, below the E., J. & E. Railway, is based upon wet work, but the price used ($1 50 per cubic yard) is believed to be too low. Should this work be done before the Sanitary District channel is put into operation, the cost of the same might be reduced about $450,000, though as it would be in the bed of the Desplaines river, and the upper basin, it would still be very expensive. The rock in the upper basin is overlaid with 300,000 cubic yards of sludge and sedimentary deposit, no account of which has been taken, but it will cost a great deal to remove if it cannot be done by the erosion of a water current.

If the comparison was made upon a deeper channel than 18 feet, it would show still more markedly for Proposition 1, but if made upon a channel of less depth, the actual difference would not be so great, though the percentage of difference would be greater.

It may be possible to secure a somewhat cheaper navigable channel along the line of Proposition 2, below the E., J. & E. Railway by building the channel partly above the level of the river and the upper basin, thereby reducing the excavation, though as it would introduce another lock, or greatly increase the work above the E., J. & E. Railway, and would necessitate another channel for the river, it is doubtful whether there would be any material saving. It certainly would not be sufficient to warrant any one in recommending such a plan.

The character of the Channel which would be secured by the several propositions so far as relates to the movement of vessels, would be excellent; and will certainly be as good with Proposition 1 as with Proposition 2. The channel will be roomier in the former case taken as a whole, and the curvature in the alignment is so gentle, the two principle curves being respectively 19 minute and 26 minute curves, that to all practical purposes they cannot be distinguished from a straight line.

It has been found necessary in this report to make navigable features more prominent than they otherwise would have been, owing to the fact that it was presumably such considerations that dictated the location of the Main Channel from the Romeo bend to the lower end of Section 14, and to the farther fact that in my report to the Joint Committee on Engineering and Finance, dated October 25th, 1892, with reference to a change of this location it was incumbent to consider the present proposed routes for the waste channel with relation to that part of the Main Channel. The pertinence of that report to the present discussion is justification for quoting from it as follows:

"There are two points of view from which we may consider the location of this waste channel at and below the wire mills, from either of which the common conclusion is reached that it should be on the west.

1. That of securing a channel to carry the required amount of water down the slope and through the City of Joliet; all questions of navigation now, or in the future being ignored

2. That of securing a channel that will void the water without damage, and aid as far as practicable in the creation of, or in furnishing a right of way for a navigable channel which may in the future be built by the General Government.

From the first point of view, it should be said that economy dictates that the line should pass to the west of the wire mills, following either the bed of the river below the mills, or keeping west of or out of the river entirely. It has been shown that the work above this point will cost no more in keeping to the west than to the east.

In considering the work below and at the wire mills, it is found that there is an unobstructed line to the west, the right of way for which can be easily acquired and the work constructed without interfering with the mills, the railroad tracks leading thereto, or with the dam upon which the mills are dependent for power; thus avoiding the innumerable and expensive complications which will arise if an effort should be made to pass east of them.

From the second point of view there is still less question of the propriety of locating the channel west of the wire mills. To construct a navigable channel through the strip of land east of the river lying between the Illinois and Michigan Canal and the Chicago, Santa Fe & California Railway, from the wire mills to Joliet, will cost more than double as much as it will on the location west of the river, omitting all questions of railway damage or complications growing out of the interference with the track, dam, and water power upon which the mills are dependent. This arises from the fact that the surface of the ground is broken and irregular east of the river, the line passing through quarries, and descending irregularly; or if regular in descent it is too precipitate, necessitating a large amount of excavation to acquire a proper grade; and from the further fact that two retaining banks must be built to form the channel.

On the west side of the river exactly the opposite conditions obtain; here the ground is comparatively smooth and unbroken. An even and gradually sloping bottom can be obtained, requiring the least possible amount of excavation to bring it to a true grade; the amount of rock to be excavated in preparing such a channel being insignificant.

With a comparatively unimportant exception, but one embankment will be needed to form the channel, and this can best be built of the soil and loose stone on top the

solid rock, thus avoiding rock excavation almost entirely. On the west side of the river there will be no complications with the Wire Mills property, no interference with the alignment of any railroad, and only one railroad to be crossed and that in the easiest possible manner.

A more complete contrast was never presented between any two lines than between the east and west lines from the Wire Mills to Joliet. One full of complications and the most expensive in construction that can be selected, the other free of complications and costing for construction less than half that of the other. It needs no detailed plan or estimate to rule the eastern line out as untenable.

That this question has presented itself in a similar manner to other engineers is evinced by the fact that the United States Government Engineers chose the western route in laying plans for a 14-foot water way to the Mississippi River; (see report of Capt. W. L. Marshall, entitled "Survey of Water-way from Lake Michigan to Illinois River at LaSalle") and that W. E. Worthen, when Chief Engineer of the Sanitary District, and Gen. John Newton, Consulting Engineer, located the Main Channel through this territory. That men as able as these should have chosen the western route is certainly worthy of your consideration."

That the statements of the report of October 25th were well within the bounds of truth has been fully demonstrated by the detailed estimates herewith presented. These show that taking into consideration the expenses shown in Appendix 4, and the cost to the Sanitary District of doing the work proposed for each of the three propositions, given in Appendices 1, 2 and 3, that to convey the water to dam No. 1 from the end of Section 14, and to make a navigable channel, 18 feet deep, this last work being done after the drainage channel goes into operation, that Proposition 1 costs $1,706,012.45 less than Proposition 2, and $92,101.50 less than Proposition 3. These figures, however, take no cognizance of the new Santa Fe right of way for either Propositions 2 or 3, and include nothing for the destruction of at least three miles of track for the same railroad by the work under Proposition 2; nor do they include any consequential damages arising out of these conditions. If everything of this character is taken into account there can be but little doubt that the differences above shown would be increased several hundred thousand dollars.

CONCLUSIONS.

In light of the foregoing, it may be said that the work carried out under one or another of the three plans, will furnish facilities for the development of water power to a greater or less extent, and it may be extended on the lines shown for the purposes of navigation; and it appears from the estimates that leaving out damages to railroad and manufacturing property there is not much choice between them regarding the first cost of construction to the Sanitary District. But in the light of the purposes of the Sanitary District act, viz: The development of water power and navigation incidental to the creation of the drainage channel, it is important to consider which of these plans will attain these purposes most perfectly and with the least expense. I therefore present the following summary of reasons favoring Proposition 1:

1. First, but not the least, it is the one upon which there are the fewest complications. There is not a building upon the proposed right of way above the City of Joliet except two small ice houses. It does not conflict with the line or right of way of any railroad, except to cross the Elgin, Joliet & Eastern Railway in such a manner as to do the least damage thereto and to leave the Desplaines Valley Branch Line intact. Negatively, it is to the credit of this plan that it does not interfere with any manufacturing industry or injure any water power rights.

2. It traverses the reach from Lockport to Joliet in such a manner as to make it possible to utilize the water power most fully and with the least subsequent outlay.

3. It follows the only route upon which a navigable channel can be economically constructed, and it contributes largely without expense to the creation of such a channel.

4. If the work is carried out in this manner it will exclude all railroad lines from the west side of the valley and keep them on the east side, where they now are, and where they will have access to all industries without crossing the channel; hence it will be freer of bridges than any other line that can be chosen.

5. Construction is simpler and less subject to complications by reason of floods, or interference with other interests; hence there is less contingency in the execution of the work.

6. The right of way will be complete for a navigable channel, which by being procured and the waste channel built, fixes the limits for commercial growth so as not to interfere with subsequent developments for navigation.

7. Allowing for contingencies, it is the cheapest of the three plans to the Sanitary District and will save large sums to the general government when a navigable channel is made; hence it will greatly aid in procuring the necessary legislation to that end.

8. Because it contributes the most to navigation and to other public interests, without detracting from its usefulness for drainage, or adding to the cost thereof, it is the only one of the plans that, in a broad and generous way, conforms to the spirit of the Sanitary District Law.

9. Exclusive of the right of way, the estimate of cost for building the waste channel and collateral works, between the regulating works and Dam No. 1, a distance of 4.5 miles, is $509,806.50, a sum so small as to leave but little margin within which to practice economy.

10. This plan is submitted in the full belief that in all essential particulars, it is in accordance with sound engineering, and fully in harmony with every public interest; and also with the profound conviction that it is within the province of the Engineer to point out (as far as they are apprehended) the ultimate consequences which may flow from the execution of any plan devised by him. To render remote effects apparent is as much engineering as measuring and calculating.

In advocating a location along the west side of the valley as the best one for the waste channel, that we all hope is ultimately to be made a navigable one. I am, as has heretofore been pointed out, not only in harmony with the facts, but am in line with the recommendations of the United States Government Engineers, upon whom will doubtless devolve the carrying out of all works specially designed for navigation purposes. It is to be hoped that on the completion of the Sanitary District Channel, they will receive a legacy which will advance rather than retard the great work, the execution of which will be committed to them.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer.

CHICAGO, March 1st, 1893."

(*Accompanied by three (3) maps and two (2) profiles.*

APPENDIX 1.

Estimate of the cost of work between the end of Section 14 and Dam No. 1 in Joliet.

PROPOSITION 1.

MAIN CHANNEL AND REGULATING WORKS.

Station 1480 to 1529—		
32,800 cubic yards earth excavation at 20c.....	$ 6,560 00	
583,000 cubic yards rock excavation at 70c.....	375,100 00	
152,000 cubic yards earth filling at 30c.....	45,600 00	
44,500 cubic yards dry rubble retaining walls, at $1.75.....	77,875 00	
1,445 cubic yards concrete under embankment at $4.50.....	6,502 00	
10,000 lineal feet of trench for same at 15c	1,500 00	
Regulating Works.....	150,000 00	
	$661,137 00	
5 per cent for Supt., etc.	33,056 85	
		$ 694,193 85

WASTE WORKS.

Station 1529 to E., J. & E. Railway—		
110,500 Cubic yards earth embankment, Station 1529 to 1581 at 22c.. ...	$ 24,310 00	
105,000 cubic yards earth filling, 1581 to 1660 at 25c	26,250 00	
210,000 cubic yards rock embankment, 1581 to 1660 at 40c.....	84,000 00	
42,000 cubic yards in roadways at 25c.....	10,500 00	
2,000 cubic yards of concrete under embankment at $4.50.....	9,000 00	
13,000 lineal feet of trench for same at 15c	1,950 00	
Bridge at Lockport road	21,600 00	
Bridge at Wire Mills road...	19,800 00	
Masonry dam and flume at Station 1640.....	24,600 00	
	$222,010 00	
5 per cent for Supt.. etc.	11,100 50	
		$ 233,110 50
E., J. & E. Railway to Station 1708—		
76,000 cubic yards earth filling at 27c. .....$	20,520 00	
152,000 cubic yards rock embankment at 40c...	60,800 00	
710 cubic yards of concrete at $4.50..... ...	3,195 00	

4,800 lineal feet trench for same at 15c.....	720 00	
80,000 cubic yards to raise tracks of E., J. & E. Ry. at 25c.....	20,000 00	
Raising and relaying track E., J. & E. Ry....	2,500 00	
Temporary trestle and track, E., J. & E. Ry...	9,000 00	
Bridge for E., J. & E. Ry.	30,000 00	
Dam at Station 1708.....	36,500 00	
	$183,235 00	
5 per cent for Supt., etc.	9,161 75	
		$ 192,396 75
Station 1708 to Dam No. 1—		
Bridge at Ingalls street.	$ 16,800 00	
81,000 cubic yards embankment at 35c.....	28,350 00	
5,100 cubic yards concrete at $4.50.....	22,950 00	
3,800 feet of lineal trench for same at 20c	760 00	
2,500 cubic yards of rock filled dam at $1.75....	4,375 00	
70,000 feet B. M. grillage for dam at $25,.....	1,750 00	
Tow path bridge.....,..	5,300 00	
	$ 80,285 00	
5 per cent for Supt., etc.	4,014 25	
		$ 84,299 25
Right of way.....		286,000 00
Total.....		$1,490,000 35

APPENDIX 2.

Estimated cost of work between the end of Section 14 and Dam No. 1 in Joliet.

PROPOSITION 2.

MAIN CHANNEL AND REGULATING WORKS.

Station 1480 to 1529.		
30,200 cubic yards earth excavation at 20c.....		$ 6,040 00
540,000 cubic yards of rock excavation at 70c		378,000 00
153,000 cubic yards of earth filling at 30c....		45,900 00
44,000 cubic yards dry rubble retaining walls at $1.75.....		77,000 00
1,445 cubic yards concrete under embankment at $4.50.....		6,502 00
10,000 lineal feet of trench for same at 15c		1,500 00
Regulating works.....		150,000 00
	$664,942 00	
5 per cent for Supt., etc.	33,247 10	
		$ 698,189 10

WASTE WORKS.

Station 1529 to E., J. & E. Ry.		
249,000 cubic yards in embankment above proposed Lockport dam at 24c.....		$ 59,760 00
257,000 cubic yards excavation at and below dam at 50c.....		128,500 00
1,581 cubic yards concrete in embankment at $4.50.....		7,114 00
10,700 lineal feet trench for same at 15c.....		1,605 00
Bridge at Lockport road		20,400 00
Masonry dam at wire mills.....		45,000 00
Railroad bridge at wire mills.....		27,120 00
Temporary trestle for track at wire mills....		6,400 00
Bridge at wire mills road		18,720 00
Crib dam, flume and channel for temporary water power at wire mills.....		36,000 00
30,500 cubic yards earth in embankment below wire wills at 20c.....		6,100 00
15,000 cubic yards riprap at 40c.....		6,000 00
Raising one mile of C., St. Fe. & C. Ry.....		7,800 00
	$370,519 00	
5 per cent for Supt., etc.	18,525 95	
		$ 389,044 95

BELOW ELGIN, JOLIET AND EASTERN CROSSING.

Bridge for switch track E., J. & E. Ry.....		$ 34,800 00
32,500 cubic yards to raise tracks E., J. & E. Ry. at 25c.....		8,125 00
4,700 cubic yards dry rubble retaining walls at $2.00.....		9,400 00
10,000 cubic yards earth filling at 50c.....		5,000 00
11,000 cubic yards rock backing at 25c.....		2,750 00
46,600 cubic yards rock excavation, entrance to upper basin at 70c..		32,620 00
Tow path bridge.....		6,100 00
	$ 98,795 00	
5 per cent for Supt., etc.	4,939 75	
		$ 103,734 75
Right of way.....		305,000 00
Total.....		$1,495,968 80

APPENDIX 3.

Estimate of the work between the end of Section 14 and Dam No. 1 in Joliet.

PROPOSITION 3.

MAIN CHANNEL AND REGULATING WORKS.

As per Proposition 1....	$ 694,193 85

WASTE WORKS.

Station 1529 to E., J. & E. Ry.—		
110,500 cubic yards embankment, Station 1529 to 1581 at 20c.....		$ 24,310 00
103,000 cubic yards earth, filling, 1581 to 1660, at 25c.....		25,750 00
207,000 cubic yards rock embankment, 1581 to 1660, at 40c.....		82,800 00
42,000 cubic yards in roadways, at 25c.....		10,500 00
2,100 cubic yards concrete under embankment, at $4.50.....		9,450 00
13,700 lineal feet trench for same, at 15c.....		2,055 00
Excavation and embankment below dam... ..		7,450 00
Bridge at Lockport road		21,600 00
Bridge at Wire Mills road.....		19,800 00
Masonry dam above E., J. & E. Ry.....		45,000 00
15,000 cubic yards riprap along C., St. Fe & C. Ry. at 40c...		6,000 00

Raising one mile of C., St. Fe & C. Ry. tracks.	7,800 00	
	$262,515 00	
5 per cent for Superintendence, etc.....	13,125 75	
		$ 275,630 75
Below E., J. & E. Railway crossing, items as per Proposition 2....		103,734 75
Right of way.....		284,000 00
Total.....		$1,357,559 35

APPENDIX 4.

Estimate of the additional cost for each of the several propositions required to furnish a navigable channel 18 feet deep from the Regulating Works to Dam No. 1, omitting items common to all propositions.

PROPOSITION 1.

130,000 cubic yards rock excavation, Station 1529 to 1581, at 70c.....	$ 91,000 00	
40,000 cubic yards earth filling, Station 1529 to 1581, at 30c.....	12,000 00	
293,000 cubic yards excavation, Station 1708 to upper basin, at 70c ...	205,100 00	
34,000 cubic yards rock excavation in upper basin, at $1.50.....	51,000 00	
New dam at upper basin	50,000 00	
3,000 cubic yards concrete, at $4.50.....	13,500 00	
Swing bridge, E., J. & E. Ry., superstructure only.....	33,320 00	
Swing bridge, Ingalls street, including pivot pier.....	16,000 00	
		$ 471,920 00

PROPOSITION 2.

210,000 cubic yards earth filling, Station 1529 to 1670, at 25c.....	$ 52,500 00	
567,000 cubic yards rock excavation, Station 1529 to 1670, at 70c.....	396,900 00	
625,000 cubic yards rock excavation, Station 1670 to upper basin, at $1.50.....	937,500 00	
272,000 cubic yards rock excavation in upper basin, at $1.50.....	408,000 00	
Drainage culvert for long run at Lockport	30,000 00	
4,200 cubic yards concrete, at $4.50.....	18,900 00	
Railway swing bridge at Wire Mills.....	43,230 00	
Swing bridge for E., J. & E. Ry., main line....	45,656 00	
Swing bridge for E., J. & E. Ry., branch line, superstructure only..	33,320 00	
Additional right of way	206,000 00	
		$2,172,006 00

PROPOSITION 3.

130,000 cubic yards rock excavation, Station 1529 to 1581, at 70c.....	$ 91,000 00	
40,000 cubic yards earth filling, Stations 1529 to 1581, at 30c.....	12,000 00	
70,000 cubic yards earth filling, Stations 1660 to 1708, at 27c	18,900 00	
140,000 cubic yards rock embankment, Station 1660 to 1708, at 40c.....	56,000 00	
16,000 cubic yards rock excavation, Station 1660 to 1708, at 65c.....	10,400 00	
266,000 cubic yards excavation (mostly rock) Station 1708 to upper basin, at 65c.....	172,900 00	
34,000 cubic yards rock excavation in upper basin, at $1.50.....	51,000 00	
10,000 cubic yards concrete, at $4.50.....	45,000 00	
Raising track of E., J. & E. Ry.....	22,500 00	
Temporary trestle and track.....	4,500 00	
Swing bridge for E., J. & E. Ry.....	49,263 00	
Swing bridge for Ingalls street.....	16,000 00	
Additional right of way	148,000 00	
		$ 697,463 00

PURCHASE OF "SWIFT & COMPANY LAND.'

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of certain right of way lands in Cook County, Illinois, owned by Messrs. Swift & Company, and directing the Clerk to pay, on the voucher of the Attorney, for said lands, as provided therein; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay said Swift & Company for said lands as provided in the report.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, the recommendations made therein concurred in, and the Clerk directed, on the voucher of the Attorney, to pay said Swift & Company for said lands, as provided in the report.

The following is

THE REPORT

"CHICAGO, March 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with Swift & Company, a corporation, for the purchase from it of all its lands falling within the right of way of this District, for the sum of one

hundred and ten thousand ($110,000) dollars. Said Swift & Company is to sell and convey to this district all its interests to and in the premises lying within the Town of Lyons, Cook County, Illinois, to sell and convey to this District all its buildings, improvements, railroad tracks, railroad bridge over the Illinois & Michigan Canal, loading platforms and fixed machinery located on said premises, or any part thereof, or on the Illinois & Michigan Canal Reserve, or any part thereof, and all rights of way, easements and ice privileges whatsoever connected with said premises.

Your Committee would therefore recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to Swift & Company, the sum of one hundred and ten thousand ($110,000) dollars in full payment of all its rights, title and interest in and to any interest it may have in the premises described as follows:

All that part of Lot two (2) lying west of the Illinois & Michigan Canal, containing fifty-two and seventy-six hundredths (52 76-100) acres, more or less, of the owner's division of that part of the southwest quarter (¼) of Section twelve (12), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian, lying south of the Desplaines River, together with the right of way for a single railroad track through that piece of land in said Lot two (2) lying east of the Illinois & Michigan Canal and west of the St. Louis & Alton Railroad, and said track to connect with said St. Louis & Alton Railroad.

Also the northeast fraction of the northeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) north, Range twelve (12) East of the Third Principal Meridian

Also, Blocks one (1), two (2) and fourteen (14) in Spaulding's Family Subdivision, of the southeast fraction of the northwest quarter (¼), the southeast fraction of the northeast quarter (¼), and the northeast fraction of the southwest quarter (¼), and the west half (½) of the southeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian.

Also, that part west of Canal, of the northwest quarter (¼) of Section thirteen (13), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian (excepting and reserving therefrom a strip of land ninety (90) feet in width on the west side of the Canal).

Also, all that piece or parcel of land in Section fourteen (14), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian, lying between a line drawn in the center of the Desplaines river and west and north or northwest of a line beginning at a point on the north line of the southeast quarter (¼) of the northeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian, eight hundred and thirty (830) feet west of the east line of Lot one (1) in Levi Spaulding's Family Subdivision aforesaid, running thence south seven (7) degrees thirty (30) minutes west, seven (7) chains to the dividing line between Lots one (1) and two (2) of said Subdivision, thence south fifty-four (54) degrees fifty (50) minutes west, eight and twenty-six hundredths (8 26-100) chains to the dividing line between Lots two (2) and three (3) of the same Subdivision, being five hundred and forty (540) feet north of the south line of said Lot two (2) of said subdivision, thence south sixty-two (62) degrees and fifty (50) minutes west nine and fifty-six hundredths (9 56-100) chains to a point two (2) feet south of an angle of the government meander line three and fifty-six hundredths (3 56-100) chains north of the south line of the southwest fraction of the northeast quarter (¼) of above described section, thence parallel with the government meander and two (2) feet south of it nine and seventy-nine hundredths (9 79-100) chains, thence southwesterly on a line fifty (50) feet distant from the southeasterly bank of the Desplaines River to the west line of the northeast quarter (¼) of the southwest quarter (¼) of the above described section, thence north to the center of the Desplaines River, thence northeasterly along the center thread of the Desplaines River to the north line of the southwest quarter (¼) of the northeast quarter (¼), thence east to the place of beginning.

Also, the fraction lying east of the Desplaines River of fractional southeast quarter (¼) of Section eleven (11), Township thirty-eight (38) North, Range twelve (12) east of the Third Principal Meridian.

Also, the fractional northeast quarter (¼) of the northeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, except that part conveyed by Ossian Guthrie and wife and Wardell Guthrie and wife to John Welbourn by deed recorded Jun seventh (7th), eighteen hundred and seve enty-nine (1879), in book six hundred an seventy-three (673), page four hundred

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and sixty-seven (467) of the records of Cook County.

Also, all that part of the southeast fractional quarter (¼) of Section fifteen (15), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian lying east of the Desplaines River, containing one and fifty-nine hundredths (1 59-100) acres, more or less, together with the buildings, improvements, railroad tracks, railroad bridge over the Illinois and Michigan Canal, loading platforms and fixed machinery located on said premises, or any part thereof, or on the Illinois and Michigan Canal reserve, or any part thereof, all rights, rights of way, easements and ice privileges whatsoever connected therewith.

All of the lots, tracts, pieces and parcels of land hereinbefore described, are situated in the County of Cook in the State of Illinois.

There is reserved to Swift & Company the right to remove from the ice houses situated upon the premises, all the ice now stored therein, and the privilege of using the boarding house, railroad tracks (excepting the spur running west into the ice pond), bridges, and machinery thereon for the purpose of so moving the ice, providing the ice shall be removed in such a manner as to avoid all unnecessary interference with the work of this District or its contractors; and said ice to be removed on or before the first day of September, 1893.

Swift & Company reserve the right to remove from the premises all tools, implements and machinery which are not fixed or attached to the premises or the buildings thereon.

Very respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
JOHN J. ALTPETER,
WM. BOLDENWECK,
W. H. RUSSELL,
Joint Committee on Finance and Engineering."

COMMUNICATION.

The Clerk presented a communication from L. D. Conner & Co., with reference to securing the use of the Piper building and side tracks, on Sections A and B of the Main Channel; and the same was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the communication be referred to the Joint Committee on Finance and Engineering, with instructions to report back to the Board.

The motion prevailed unanimously and it was so ordered.

The following is the

COMMUNICATION:

"CHICAGO, Feb. 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We are desirous of securing the use of certain buildings and side tracks located on Sections "A" and "B" of the Sanitary District of Chicago, formerly used by the Piper Ice Company and others, and hereby offer you for the use of the same the sum of twenty ($20) dollars per month during the life of our contract. We furthermore agree to keep such buildings as we occupy in good condition.

Yours respectfully,

(Signed) L. D. CONNER & CO.
By L. D. CONNER."

POSSESSION OF THE ILLINOIS AND MICHIGAN CANAL.

The President announced that the Attorney was in receipt of the opinion of the Attorney General of the State, the Board of Canal Commissioners, with reference to the request from this Board for the possession of the Illinois and Michigan Canal, the receipt and disposition of which was acknowledged by a communication from the Canal Commissioners, presented to the Board December 14, 1892 (page 947 of the Proceedings).

ADJOURNMENT.

Upon motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MARCH 8, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixtieth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, March 8, 1893, at 2 o'clock P. M.

President Wenter called the Board to order

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter— eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held March 1, 1893, were approved as printed on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending March 4, 1893	$1,167 05	
Eng. Dept., Div. No. 1, (Sag Building) week ending March 4, 1893	14 40	
Eng. Dept., Div. No. 2, week ending March 4, 1893	276 60	
Eng. Dept., Div. No. 3, week ending March 4, 1893	431 70	
Eng. Dept., Div. No. 4, week ending March 4, 1893	49 20	
		$ 1,938 95
Clerical Dept., office roll, week ending March 4, 1893		39 00

Law Dept., office roll, week ending March 4, 1893		63 00
Total		$ 2,040 95

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 2, March 1, '93)	$710 50	
McArthur Bros. (Sec. 3, March 1, 1893)	425 25	
Agnew & Co. (Sec. 6, March 1, '93)	212 63	
Agnew & Co. (Sec. 7, Feb. 28, '93)	1,376 29	
Agnew & Co. (Sec. 8, Feb. 28, '93)	1,929 49	
Agnew & Co. (Sec. 9, Feb. 28, '93)	282 61	
E. D. Smith & Co. (Sec. 10, Feb. 28, '93)	1,092 00	
Mason, Hoge & Co. (Sec. 11, Feb. 28, '93)	3,377 04	
Mason, Hoge & Co. (Sec. 12, March 1, '93)	6,102 26	
Mason, Hoge & Co. (Sec. 13, March 1, '93)	2,943 28	
		$18,451 35

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 32 62	
F. Mayer & Co. (blue prints)	8 70	
F. Mayer & Co. (blue prints)	18 09	
The Polygraph Print Co. (polygraphs)	10 05	
Warren Ewen, Jr. & Co. (blue prints)	10 29	
Goodwillie Bros. & Co. (pine stakes)	38 26	
Emil Rudolph (surveying street ends)	550 00	
Trevor Spring Water Co. (ice)	9 00	
McArthur Bros. (coal-boring machine)	7 50	
J. A. Banks (sundries)	8 40	
Chicago Toilet Supply Co. (toweling)	5 40	
L. J. Myers (rent, Mt. Forest)	20 00	
H. S. Norton (rent, Lemont)	18 00	
Chas. L. Harrison (rent, Lockport)	20 00	
D. C Dunlap (horse and buggy—Feb.)	45 00	
John T. Allison (sundries)	13 50	
Morrisson, Plummer & Co. (paint, Sag bldg.)	26 00	
Jones & Laughlins, limited (iron, Mt. Forest bridge)	29 22	
Chas. Greene (express sage, Mt. Forest bridge)	2 00	
Hiram A. Miller (traveling)	20 36	
Hiram A. Miller (traveling, Sag bldg.)	5 35	
Hiram A. Miller (traveling)	29 74	
E. R. Shnable (traveling)	16 71	
L. J. Myers (traveling—Mt. Forest bridge)	2 16	
T. F. Richardson (traveling)	18 98	
Chas. L. Harrison (expense)	25 73	
A. R. Benson (expense)	3 29	
Alex. E. Kastl (expense)	25 89	
Alex. E. Kastl (emergency)	15 43	
Alex. E. Kastl (emergency)	5 00	
Alex. E. Kastl (emergency)	9 00	
A. C. Schrader (emergency	24 91	
A. R. Benson (emergency	23 85	
		$ 1,098 43

CLERICAL DEPARTMENT.

Trevor Spring Water Co. (ice)	$ 3 00	
Warner's Towel Supply (toweling)	1 50	
		$ 4 50

LAW DEPARTMENT.

Henry Gebhardt (vault fittings)	$ 8 50	
E. G. Christoph Lith. Co. (envelopes)	34 80	
John P. Wilson (legal services, Dec. 1, 1892, to Feb. 28, 1893, inclusive)	1,250 00	
Frederic J. Squibb (court stenographer)	1,285 25	
U. W. Weston, (expense, expert witnesses)	115 00	
U. W. Weston (expense).	118 60	
Haynie R. Pearson (expense)	17 22	
		$ 2,829 37
Grand total		$24,424 60

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

(Mr. Cooley voted "aye" on all vouchers except for salaries for "Assistant Engineers," and Mr. Prendergast voted "aye" on all vouchers except those for "Construction.")

Upon which result the President declared the motion carried and the vouch-

ers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 707, Treasury Department, (stationery).....$ 3 50

Mr. Eckhart, seconded by Mr. Boldenweck, moved that Requisition No. 707, for the Treasury Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 707, for the Treasury Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules showing the number of persons in the employ of the District for the week ending March 4th, 1893.

The same was read and by unanimous consent was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending March 4, 1893, as the same have been reported to me:

Engineering Department	88	
Engineering Department (Sag Building)	1	
		89
Clerical Department		3
Treasury Department		1
Law Department		9
Total employes		102

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of February, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of February was $710.45, divided as follows:

Salaries	$ 639.34
Stationery	31.41
Furniture	7.50
General expenses	32.20
Total	$710.45

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $750.

The total amount expended and charged to the General Account during the month of February was $4,044.88, divided as follows:

Salaries	$2,783.33
Printing and Stationery	196.49
Advertising	712.29
Furniture	33.50
Insurance	75.00
Janitor service	80.00
General expenses	164.27
Total	$4.044.88

There are no outstanding liabilities against the General Account, and the expenses for the present month will be under $3,500.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of February, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I report herewith the total amount paid out on account of the

Law Department, during the month of February, 1893, classified as follows:

Salaries.

Attorneys	$1,383 33	
Right of way	476 66	
Office force	172 00	
		$2,031 99

General Expenses.

Right of way	$1,043 41	
Court costs	2,457 15	
Legal services	2,050 00	
Stationery	20 10	
Furniture	79 50	
Sundries	18 16	
		$5,668 32

Land Account.

Right of way	$4,436 75
Total	$12,137 06

The ordinary expenses for the month of March, so far as can be estimated, will be practically the same as those of February.

The suit referred to in my last report to condemn about 430 acres of land between Willow Springs and Summit, took five weeks for trial in court, and was finished Saturday, February 18. The motion for new trial in this case and in the Cook-Yore case, will be argued this week Saturday.

Settlement was made for Swift & Co.'s ice plant the early part of this month, and negotiations are now pending for about 275 acres of land not yet purchased between Willow Springs and Summit.

The trial to condemn all this land for which settlement cannot be made out of court, will be had as soon as arrangements can be made with one of the judges to hear the case.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of February, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

Balance on hand at date of last report	$2,284,250.99	
Received from Blair & Co. for 250 Sanitary District Bonds	250,000.00	
Received from Blair & Co., premium on the above 250 bonds	3,781.25	
Received from Blair & Co., accrued interest on the above 250 bonds, 84 days to Jan 24, at 5 per cent	2,876.70	
Received from Tax Account, West Town Collector	20,000.00	
Received from General Acct., Warrants No. 908 and 959 ordered re-deposited	750.00	
Received from Tax Acct., Town of Lake View Collector	1,000 00	
Received from Tax Account, South Town Collector	25,000.00	
Received from American Trust and Savings Bank, interest for February	1,035.04	
Received from Chicago National Bank, interest for February	938.82	
Received from National Bank of Illinois, interest for February	904.45	
Received from Metropolitan National Bank, interest for February	907.19	
Received from Ft. Dearborn National Bank, interest for February	902.53	
Total cash received for month		$2,592,346.97
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 710.45	
Treasury Department	166.67	
Engineering Departm't.	13,302.46	
Engineering—Construction—Department	37,144.26	
Law Department	7,965.03	
Law Department—Land Account	4,436.75	
General Account	4,499.17	
		$68,224.79
Balance this date, in banks as per schedule endorsed hereon		$2,524,122.18

(Signed) MELVILLE E. STONE,
Treasurer.

CHICAGO, March 4, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 476,122.08
Chicago National Bank	500,638.08
Metropolitan National Bank	478,859.95
National Bank of Illinois	476,962.61
American Trust and Savings Bank	591,539.46
Total	$2,524,122.18

SEMI-MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented the semi-monthly report from the Sanitary Inspector; and the same was read.

Mr. Eckhart, seconded by Mr. Altpeter, moved that the report be printed and referred to the Committee on Health and Public Order.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT:

"CHICAGO, March 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—There has been no material change in the sanitary condition of the various camps throughout the Sanitary District, since submitting my last report. There has been an increase of sickness in some of the camps that have been flooded, but nothing serious enough to have proved fatal, yet sufficient to make apparent the necessity of a hospital service for the laborers on the work This, I am pleased to report, is assuming definite shape, and by the 15th of March the arrangements will be completed for the care of forty patients, and by the 1st of April for one hundred and fifty. This will be at the main Hospital, which is situated between Willow Springs and Mount Forest, in a most admirable situation. It will be thoroughly equipped with all the requisites of a first class hospital in every particular, and it is safe to assert that when the system is completed, which contemplates the erection of two others, one at Lemont and one at Lockport, that the most thorough provision will have been made for the comfort and welfare of the employes on the Main Channel than was ever attempted on any work of a similar character.

I have not gone through the camps and vaccinated them all as I designed doing, from the fact that owing to the wretched weather that prevailed during the winter the contractors are working with diminished forces, and some of them shutting down, from inability to contend with these unfavorable conditions.

I have deemed it best, therefore, to defer this until they are working their full force, when a much more thorough vaccination can be accomplished.

Before closing my report, there is a matter that I would like to call the attention of the Board to. Upon investigation I have discovered that the legislature of Illinois have never passed a law that defines what amount of space in cubic feet shall be allotted to each occupant of a sleeping room. There is a law that applies to operatives in factories in regard to this matter. But on the regulation of space in sleeping apartments, and the proper ventilation of same, the law is silent. And I should deem it most appropriate that the Sanitary Board which was organized for sanitary purposes, and is so thoroughly representative of the people of Chicago, should take action in regard to state legislation on this, in my opinion, very important matter. The passage of such a law would serve as a guide to regulate the camps in the Sanitary District, and would be a sanitary measure of great benefit to the city at large. As the matter now stands, I see no legal barrier to the rankest kind of over-crowding in rooms designed for sleeping purposes.

Trusting, that the the Board will take action on this suggestion, this report is most respectfully submitted.

(Signed) WM. MARTIN, M. D.,
Sanitary Inspector."

APPOINTMENT OF ASSISTANT ENGINEERS.

The Clerk presented a report from the Chief Engineer, transmitting the names of persons appointed as Assistant Engineers and requesting the concurrence of the Board in the same; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be referred to the Joint Committee on Engineering and Finance, with directions to report back at the next meeting.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the regulations of the Board, I hereby appoint the following named persons to the position

of Assistant Engineer, and respectfully request your concurrence in the same.

H. B. Alexander,
Chas. L. Harrison,
L. J. Myers,
H. A. Miller,
T. F. Richardson,
E. R. Shnable,
Alexander E. Kastl,
Ebin J. Ward.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

REPORT ON REQUISITIGN NO. 304.

Mr, Cooley, Chairman, presented a report from the Committee on Engineering returning Requisition No. 304, for the Engineering Department—referred to that Committee at the meeting held March 1, 1893, (page 1065 of the Proceedings)—with the recommendation that the same be allowed; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the requisition allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the requisition allowed.

The following is

THE REPORT:

" CHICAGO, March. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Engineering, to whom was referred at the meeting held March 1, 1893, (page 1065 of the Proceedings), requisition No. 304, for lithographed letter heads and envelopes for the Engineering Department, herewith return the same with the recommendation that it be allowed.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
W. H. RUSSELL,
WM. BOLDENWECK,
THOMAS KELLY,
JOHN J. ALTPETER,
Committee on Engineering."

(Accompanied by one (1) requisition.)

REPORT ON REQUISITIONS NOS. 297 AND 300.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, returning requisitions Nos. 297 and 300, for the Engineering Department, referred to that Committee at the meeting held February 23, 1893 (page 1059 of the Proceedings), with the recommendation that the same be allowed; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the requisitions allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the requisitions allowed.

The following is

THE REPORT:

"CHICAGO, March 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Engineering and Finance, to whom were referred at the meeting held February 23, 1893, (page 1059 of the Proceedings) requisitions Nos. 297 and 300, for sundry supplies for the Engineering Department, respectfully return the same herewith, with such amendments as they deem proper, and

recommend that they be allowed as amended.

Respectfully submitted,

(Signed) L. E. COOLEY, *Chairman.*
W. H. RUSSELL,
WM. BOLDENWECK,
THOMAS KELLY,
B. A. ECKHART,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

(Accompanied by two (2) requisitions.)

REPORT ON TICE RESOLUTION.

Mr. Boldenweck. for the Committee on Federal Relations, presented a report, with reference to action on the resolution (copy to which was attached) introduced into the General Assembly of Illinois by Representative Tice. concerning the removal of dams in the Illinois River, which matter was referred to that Committee at the meeting held February 23, 1893 (page 1062 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be adopted, with the accompanying resolution, ordered printed, and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result tha President declared the motion carried, the report adopted, and, with accompanying resolution ordered, printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, March 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the resolution introduced into the House of Representatives of the General Assembly of Illinois, by the Hon. Homer J. Tice, said resolution reciting the existing conditions in respect to overflow of the bottom lands of the Illinois River below Utica, and calling for the removal of certain dams, with a view of ameliorating the condition of said lands, and in anticipation of an increased water supply through the works of this district, your committee reports as follows:

The subject matter is essentially the same as referred to this committee in order of September 21 last (page 759 of the Proceedings), viz:

"*Ordered*, That the Committee on Federal Relations be instructed to consider and recommend such action as should be taken by this Board in regard to procuring the removal of locks and dams on the Illinois River below Utica, and in conformity with the letter and spirit of the Sanitary District Act, the act for the improvement of the Illinois and Desplaines Rivers, and the joint resolution passed by the Thirty-sixth General Assembly in 1889—all of which is a matter of concern to the Sanitary District and to the people of the Illinois Valley."

This report will therefore cover the above order, as well as that of February 23.

The full spirit and purpose of what are known as "The Chicago Drainage and Waterway Laws," passed by the General Assembly of 1889, are embraced in two (2) enactments and a joint resolution as follows:

1. "An act to create Sanitary Districts and to remove obstructions in the Illinois and Desplaines Rivers."

Under this act the Sanitary District of Chicago has been organized and is now engaged in projecting and carrying out works in harmony with its provisions.

2. "An act in reference to the improvement of the Illinois and Desplaines Rivers, and to repeal and act," etc.

This was designed to secure the removal of the State dams at Henry and Copperas Creek, for the better protection of the bottom lands from overflows, and in view of the water to be sent down by the proposed Sanitary District.

3. The joint resolution, which recited at length the physical conditions of the lower Illinois Valley, and defined the policy of the State of Illinois "To procure the construction of a waterway of the greatest practical depth and usefulness for navigation," and, among other things, requested the United States to change its policy in regard to the construction of locks and dams at LaGrange and Kamps-

ville, and apply its funds to the improvement of the channel from LaSalle to the mouth, "in such manner as to develop progressively all the depth practicable by the aid of a large water supply from Lake Michigan at Chicago."

The theory of this legislation may be stated as follows:

1. An enabling act which will permit Chicago to solve its sanitary problem, but in harmony with certain limitations which shall incidentally cause the works to be so designed and executed as to contribute to a great waterway between Lake Michigan and the Mississippi River.

2. That the large volume of water provided for makes practicable a waterway of magnitude from the point where the works of the district terminate through the State to the Mississippi, but that in the present condition of the Desplaines and Illinois Rivers, and with the works heretofore constructed and projected, serious injury may occur through overflow. Therefore, the State has made such provisions as seemed expedient to secure the removal of obstructions, protect the interests of riparian owners, and provide for an open channel below Utica.

This Board is elected for the purpose of putting into effect so far as lies within its province, the spirit of the entire legislation of 1889, all of which is part of the implied understanding arrived at by the parties in interest as the basis of action by the State.

The investigations made under authority of this Board in 1890 and 1892 of the overflows and effects of the dams throughout the river below Joliet, have fully supported the propriety of all the legislation of 1889, and the evil effects of the dams below LaSalle are shown to be greater than was anticipated four years ago. This matter is not yet worked up so as to enable it to be fully presented and properly reported.

In view of all knowledge thus far received there seems no reason to suggest any policy different from that covered by the legislation of 1889.

As the resolution introduced by Representative Tice seems to be in full accord with this policy, and as the action proposed cannot be too often or too urgently insisted upon, your Committee believes that the Board may properly express its interest in the matter and urge its adoption. Indeed, such a course is not only in the interest of a National Waterway Development, but is also calculated to diminish any liability of the district, on account of the water contributed to the valley.

Your committee therefore recommends that this report be adopted as the sense of this Board, and that the President be instructed to advise the Speaker of the House of the action taken.

Very respectfully,

(Signed) WM. BOLDENWECK,
Chairman.
L. E. COOLEY,
JOHN J. ALTPETER,
W. H. RUSSELL,
Committee on Federal Relations."

RESOLUTION:

"WHEREAS, The Illinois River from St. Louis to Gratton, is the remnant of an ancient stream bed, bordered by wide and low bottom lands, much cut by lake, bayou and marsh, an alluvial stream of small, low water volume and sluggish current, with a declivity of only twenty-six feet in 225 miles—a declivity so small as to require a large volume of water to maintain an effective channel, a stream which in its natural condition is able to maintain but a small depth through the deposits with which the tributaries constantly tend to choke the channel; and

WHEREAS, The erection of dams with a view to the creating of slack water for the purpose of navigation diminishes the scouring force of the current at medium and low stages, promotes channel decay, causes deposits in the mouths of the tributaries, and the more ready overflow of the bottom lands, resulting in the repeated destruction of property and damage to the growing crops, together with a continued increase of unhealthfulness—a tendency already exhibited in a notable degree from the conditions created by the dams erected by the State of Illinois at Henry and Copperas Creek in 1872 and 1877 respectively; and

WHEREAS, The completion by the United States of the dams at Lagrange and Kampsville will raise the general level of the river below Copperas Creek by several feet, and increase the already alarming tendencies to channel decay and destructive overflow and unhealthfulness, already ex-

hibited through the agency of the State works at Henry and Copperas Creek; and

WHEREAS, Works now projected by the City of Chicago and in process of construction, will in a few years, add immense volumes of water to the already overburdened waterway, thereby increasing the damage from overflow rendering much valuable land useless, not only injuring the people of the valley but the interests of the whole state; and

WHEREAS, It is believed to be, and has been satisfactorily demonstrated, that the present waterway from the Mississippi River and via the Illinois and Desplaines Rivers can be, by proper dredging and leveeing, made to form a part of a great natural waterway, of which the dams and locks upon the alluvial section can form no part, and which, if allowed to remain, will only increase the disastrous overflows; therefore be it

Resolved by the House of Representatives of Illinois:

First—That it is the policy of the State of Illinois to procure the construction of a waterway of the greatest practicable depth and usefulness for navigation from Lake Michigan via the Desplaines and Illinois Rivers to the Mississippi River and encourage the construction of feeders thereto of like proportion and usefulness.

Second—That the members of Congress and the United States Senators from Illinois are requested to use their influence to stop work upon the locks and dams at Lagrange and Kampsville, and to apply all funds and future appropriations to the improvement of the channel from LaSalle to the mouth, of such a depth as will be of present utility, and in such manner as to develop progressively all the depth practicable by the aid of a large water supply from Lake Michigan at Chicago.

Third—That the Secretary of State is requested to forward a copy of this resolution to each Congressman and Senator from Illinois."

EXHIBIT AT "WORLD'S FAIR."

Mr. Boldenweck, for the Committee on Federal Relations, presented a report with reference to an exhibit at the World's Fair, which matter was referred to that Committee at the meeting held August 24, 1892 (page 707 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved the report be adopted, ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, March 6th, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—On August 24th (page 707 of the Proceedings) this Committee was instructed "to consider and report such action as it deems wise for this Board to take, with a view of making an exhibit at the World's Fair." The reasons for such an exhibit were set forth at length in the preamble of the resolution. The members of the Committee considered the matter informally at the time, and with much regret considered that the proposed exhibit was impracticable. It seems proper to report upon the question, as the works of the District are of such character and magnitude as to attract general attention, and the failure to present the same is sure to awaken inquiry.

To properly prepare such an exhibit would have required the undivided attention of several men for months and cost many thousands of dollars, besides distracting attention from matters of moment to the success and rapid prosecution of the work of the District. Although the data, maps and plans are made available as rapidly as possible for determining upon the work of the District, they are not yet in shape to determine all matters of primary importance, nor can all such questions be determined for some time to come. In no sense has matter been prepared of a character which would illustrate to the public the general features of the enterprise, nor have maps and plans of a comprehensive character been yet completed.

The work of the District for the past year has been pushed largely through exigency and through the personal familiarity of members with the problem and the policy to be followed.

It is needless to say that this condition of matters is a source of regret, but that it has been unavoidable, and that therefore an exhibit at this time does not seem practicable or expedient. A year later it will no doubt be possible to present comprehensive

charts and plans showing the conditions to be met and the solution aimed at, which will be of great public interest.

Very respectfully submitted.

(Signed) WM. BOLDENWECK,
Chairman.
L. E. COOLEY,
JOHN J. ALTPETER,
W. H. RUSSELL,
Committee on Federal Relations."

FEDERAL CO-OPERATION IN THE CHICAGO RIVER.

Mr. Boldenweck, for the Committee on Federal Relations, presented a report with reference to a communication from Capt. W. L. Marshall, U. S. A., concerning federal aid in the construction of the Main Channel, presented and referred to that Committee at the meeting held August 31, 1892, (page 713 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that he report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, March 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On August 31 last (page 713 of the Proceedings), there was referred to this Committee a communication of W. L. Marshall, Captain, Corps of Engineers, U. S. A., calling the attention of the Board to an item in the River and Harbor Act of July 13, 1892, directing the Engineer in charge "to submit what, if any, improvement should be made by the Government in the Chicago River, and the cost of same," and inviting the views of the Board upon this question; and, incidentally, suggesting that he would be pleased to receive any views that the Board might be disposed to offer in regard to Federal co-operation upon the general subject of a waterway.

Your Committee desires fully to reciprocate the courtesy shown in this communication, but has felt that it was inexpedient for the Board to explain itself upon the subject matter at the time. Very accurate surveys were then in progress, and have not yet been completed, covering the main river, the South Branch and its two forks, upon which the Board expects to base its conclusions upon the treatment which may be proper for so much of the Chicago River as may require improvement for the purposes of the Sanitary District. Until said surveys have been completed and matters of prior moment disposed of, it will not be practicable to indicate any conclusions in regard to the Chicago River, further than the general policy of this Board in all its works to impose the conditions in respect to navigation so far as practicable.

Much the same reasons render any statement of policy inexpedient in regard to the general enterprise of a waterway farther than that this Board is acting under the law passed by the General Assembly of Illinois in 1889, and in full harmony with the spirit of the several acts of legislation and the full purpose of the State, as expressed at that time.

The Committee trusts that this Board, as representing the interests of the people in this community in matters of vital moment, and in its necessary concern jointly with the people of the Desplaines and Illinois Valley in regard to waterway development through this State, can rely on the cordial co-operation of the United States Government in works that will be in harmony with the interests that are most vitally and directly affected.

Very respectfully submitted,

(Signed) WM. BOLDENWECK,
Chairman.
L. E. COOLEY,
JOHN J. ALTPETER,
Committee on Federal Relations."

LEASE OF EXTRA OFFICES.

The President, for the Committee on Rules, presented a report from that Committee, accompanied by a plat, recommending the leasing of three additional rooms, and the relocation of the rooms as provided in the report; and the same was read.

Mr. Eckhart, second by Mr. Altpeter, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Cooley—one (1).

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Rules to whom was referred the question of additional rooms for the Engineering Department, have considered the matter and recommend that three additional rooms be leased at a rental of $75.83 per month, and the committee be empowered to have the rooms of the Board relocated as per annexed sketch.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
Committee on Rules."

(Accompanied by tracing.)

SANITARY INSPECTOR TO BE MADE OFFICER OF THE STATE BOARD OF HEALTH.

Mr. Boldenweck, for the Committee on Health and Public Order, presented a report directing the President to communicate with the State Board of Health, asking that the Sanitary Inspector be given such authority as that Body may be able to confer; and the report was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, March 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Health and Public Order, to whom was referred, at the meeting held February 23d, 1893 (page 1062 of the Proceedings), the matter of taking the necessary steps toward having the Sanitary Inspector sworn in as an officer of the State Board of Health, respectfully report that they have duly consided the matter, and recommend that the President of the Board be directed to communicate with the State Board of Health, asking that such authority be given to the Sanitary Inspector of the District as that body may be able to confer.

Respectfully submitted.

(Signed) WM. BOLDENWECK,
JOHN J. ALTPETER,
Committee on Health and Public Order."

INSURANCE PREMIUM ON PIPER BUILDINGS RETURNED.

The Clerk presented a report from the Attorney, accompanied by two checks, returning the insurance premium on the Piper Buildings on the right of way; and the report was read.

Mr. Eckhart, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, and that the Clerk be directed to deposit the accompanying checks with the Treasurer to the credit of the Sanitary District.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the Clerk directed to deposit the accompanying checks with the Treasurer to the credit of the Sanitary District.

The following is

THE REPORT:

"CHICAGO, March 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I enclose two checks payable to the order of the Sanitary District, one for $33.61, and the other for $23.26, being the amount of unearned premiums on policies turned over to us on the Piper ice-

houses and buildings purchased by the Sanitary District.

At the time the settlement was made with A. S. Piper & Co., they assigned their insurance policies, covering the buildings situated on the property purchased, to the Sanitary District. The insurance companies holding these risks refuse to allow the policies to stand on the buildings, except one on a boarding house. All of the other policies were cancelled, and the above checks given us for unearned premiums.

Respectfully,

(Signed) ORRIN N. CARTER,
Attorney."

(*Accompanied by two (2) checks.*)

RENEWAL OF LEASE OF OFFICES.

Mr. Altpeter presented an order directing the President to notify the Chicago Deposit Vault Company of intention to renew the lease of the present offices with that company, and authorizing and directing the President and Clerk to execute said lease, as provided in the order; and the same was read.

Mr. Altpeter, seconded by Mr. Eckhart, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—none.

Upon which result the President declared the motion carried, the order adopted, and the President and Clerk authorized and directed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the President notify the Chicago Deposit Vault Company of Chicago, of the election of this District, under the terms of its lease with said company, to renew said lease from May 1, 1893, to April 30, 1894, as to all premises now occupied by it, and that the President and Clerk be and they are hereby authorized and directed to execute on the part of the District a written extension of said lease in accordance herewith."

CONTRACTORS NOTIFIED TO BEGIN WORK.

Mr. Cooley presented an order directing the Clerk to notify Contractors to begin work on the Main Channel on all sections between Willow Springs and Summit, as provided in the order; and the same was read.

Mr. Cooley, seconded by Mr. Russell, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—none.

Upon which result the President declared the motion carried, the order adopted, and the Clerk directed to notify the Contractors to begin work on all sections of the Main Channel between Willow Springs and Summit, as provided in the order.

The following is

THE ORDER:

"WHEREAS, The contracts let for the contract sections of the work of this District between Willow Springs and Summit, provide for the beginning of work by the contractors on the main levee and the river diversion channel in said sections, within 15 days after the execution of their respective contracts, or as soon after the expiration of the 15 days as the Sanitary District shall have acquired title to and possession of the necessary right of way, and shall have notified said contractors to begin, and to begin work on the main channel within 30 days after the execution of their respective contracts, subject to said limitations, and

WHEREAS, Sufficient right of way to commence work on Sections A, B, C, D and E is now, or will be in possession of the District on or before April 1st, 1893, and whereas it is confidently expected that the District will be entitled to possession of sufficient right of way on Section F to begin work on that section on or before April 1, therefore be it

Ordered, That the Clerk notify each contractor to begin work on his contract section on or before April 1st, 1893, and that the Board proposes April 1, 1893, as a uniform and convenient date from which to make estimates and reckon progress for the work on said respective contract sections."

ADJOURNMENT.

Upon motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

OF THE

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MARCH 15, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, March 15, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Cooley, Eckhart, Kelly, Russell and Wenter—five (5) and subsequently Mr. Prendergast, making a total of six (6) members, were present.

MINUTES.

The minutes of the regular meeting held March 8, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending March 11, 1893.....	$1,086 90	
Eng. Dept., Div. No. 1, (Sag Building) week ending March 11, 1893	14 40	
Eng. Dept., Div. No. 2, week ending March 11, 1893.....	259 00	
Eng. Dept., Div. No. 3, week ending March 11, 1893.....	431 70	
Eng. Dept., Div. No. 4, week ending March 11, 1893.....	49 20	
		$ 1,841 20
Clerical Dept., office roll, week ending March 11, 1893.....		39 00
Law Dept., office roll, week ending March 11, 1893.....		68 50
Total		$ 1,948 70

ENGINEERING DEPARTMENT.

Patrick McGinnis, (gauge reading).....	$ 3 93	
Mary Rusk, (gauge reading).....	4 64	
Geo. Brainard, (gauge reading).....	10 00	
Wm. Kirkham, (gauge reading).....	10 00	
Alex. E. Kastl (emergency).....	7 60	
Alex. E. Kastl (emergency).....	19 30	
		$ 55 47

LAW DEPARTMENT.

Chicago Telephone Co. (telephone to April 1, 1893).....	$ 22 36	
O. N. Carter, (expense)	54 31	
		$ 76 67
Grand total.....		$ 2,080 84

Mr. Eckhart, seconded by Mr. Kelly, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Russell and Wenter—five (5.) Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 308, Engineering Department, (postage stamps).....	$ 20 00
No. 309, Engineering Department, (whisk brooms).....	1 25
No. 1042, Clerical Department, (stationery).....	11 70
Total.....	$ 32 95

Mr. Cooley, seconded by Mr. Kelly, moved that Requisitions Nos. 308 and 309 for the Engineering Department, and No. 1042 for the Clerical Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs Cooley, Eckhart, Kelly, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 308 and 309 for the Engineering Department, and No. 1042 for the Clerical Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending March 11th, 1893.

The same was read and by unanimous consent was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 15, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending March 11, 1893, as the same have been reported to me:

Engineering Department.....	84	
Engineering Department (Sag Building).....	1	
		85
Clerical Department.....		3
Treasury Department.....		1
Law Department.....		9
Total employes.....		98

Respectfully submitted,

(Signed) THOMAS F. JUDGE,

Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report from the Engineering Department, accompanied by classified statement, for the month of February, 1893; and the same was read.

Mr. Cooley, seconded by Mr. Eckhart, moved the report be ordered printed and, with enclosure, placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, March 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of February; also a classified statement of expenses in the usual form.

Expenses for the month of February were as follows:

Contractors estimates.....	$38,405.14
Pay rolls.....	9,736.23
Material, etc.....	1,500.84
Total.....	$49,642.21

I estimate that the expenses of the Department for the month of March, including contractors' estimates, will be $50.000.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

"CHICAGO, March 8, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Amount of pay rolls and contractor's estimates of Division 1 for the month of February are as follows:

Pay roll	$ 5,169 20
Pay roll, Sag building	220.95
Contractor's estimates	38,405.14
Total	$43,795.29

Division work has been cross-sectioning Main and Diversion Channels, copying notes, making estimates, locating river diversion between Willow Springs and Summit, soundings in upper basin Joliet, and work for the Law Department condemnation cases.

One boring party has been dispensed with.

The office force has been engaged in estimating and making working map and profile of the Main Channel, etc.

Distribution of material is as follows:

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
1, Main Channel	1 000	.....
2, Main Channel	22,100	.....
2, River Diversion	26,600	.....
3, Main Channel	38 200	.....
4, Main Channel	31 500	.....
5 Main Channel	23 600	.....
6, Main Channel	20 600	.....
7, Main Channel	18 200	.....
7, River Diversion	11,800	6,400
8, Main Channel	7.500	1.470
8, River Diversion	47 400	27 100
9, Main Channel	10 400	1.550
9, River Diversion	37,700	4.690
10, Main Channel	18 900	4,680
10, River Diversion	27 400	38 240
11, Main Channel	32.600	20 280
11, River Diversion	2 600	4.810
12, Main Channel	15.553	43 200
13, Main Channel	32,822	50,100
14, Main Channel	15 000	22,500
Totals	441.475	225 020

Total amount of material moved to March 1, 1893:

	Cubic Yards.
Main Channel, Glacial Drift	287,975
Main Channel, Solid Rock	143,780
River Diversion, Glacial Drift	153.500
River Diversion, Solid Rock	81,240

Total amount of estimates paid previous to March 1, $236,077.17.

FORCE REPORT—DAILY AVERAGE.

SEC.	Men.	Teams	Steam Drills.	Channelers	Steam Hoists	Steam Pum's
Sec. 1	54	7	....	....	.. ..	....
Sec. 2	69	4	....	....	....	....
Sec. 3	22	2	....	....	....	....
Sec. 5	6	.5	....	....	....	....
Sec. 6	8	.3	....	....	....	.7
Sec. 7	52	2	2	....	2	.3
Sec. 8	82	13	2	1	...	.2
Sec. 9	18	2	1	....	....	.7
Sec. 10	112	10	4	1	.7	3
Sec. 11	82	14	3	.6	.8	5
Sec. 12	97	8	4	2	2	....
Sec. 13	74	14	2	2	....	....
Total	676	76.8	18	6.6	3.7	9.9

Yours truly,

(Signed) D. C. DUNLAR,
Assistant Chief Engineer."

"CHICAGO, March 6, 1893,

Mr. Benzette Williams, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of February has been:

Completion of the field work of the survey at head waters of the North Branch of Chicago River and continuation of reduction of field notes.

Completion, in accordance with instructions, of the reductions and tabulations pertaining to flood observations in May and June, 1892.

Continuation of reduction of notes pertaining to flood examinations in Illinois Valley.

Continuation of survey of street lines adjacent to the Chicago River and its South Branch.

Completion of disease maps for the State Board of Health.

The work of providing for flood measurements at Desplaines and near Morton on North Branch was undertaken.

The work of preparing a map showing area subject to floods between Bridgeport and Joliet was undertaken.

Some miscellaneous work was done pertaining to the construction ordinance and to the question of control of the Desplaines River flood waters.

Respectfully,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

"CHICAGO, March 11, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—Herewith I submit the report of Division 3 for the month of February, 1893:

Work on the topographical map, scale of two inches to the mile, was continued during the month.

The platting of the second topographical map, scale of 1-80,000, was commenced on the first of the month. On both of these maps we are making use of the results of the coast and lake surveys in the preliminary part of the work. Copies of plats were also made for this purpose in Wheaton, Ills., for that part of DuPage County included within the boundaries of the maps.

The maps of the Chicago River survey are now ready for the platting of the adjacent street lines, the platting and a large part of the inking having been finished.

Nearly all of the section and quarter section corners between Lockport and Joliet were located by the surveying party with reference to the triangulation stations.

The platting of the sewerage map was nearly finished.

Maps and profiles of the Main Channel between Lemont and Willow Springs, and of Propositions 1, 2 and 3 of the regulating works between Lockport and Joliet were made.

Copies of the Illinois and Michigan Canal records were continued.

During March work will be continued on the Chicago River survey, topographical and sewerage maps, on the diagrams of discharge measurements, and the location of section corners.

Yours very respectfully,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

(Enclosing classified statement).

GENERAL FORMS FOR CONTRACT, ADVERTISEMENT AND PROPOSAL.

The Clerk presented a report from the Chief Engineer, accompanied by a blank form for contract, advertisement and proposal; and the report was read.

Mr. Russell, seconded by Mr. Cooley, moved that the report, with enclosure, be referred to the Committee on Engineering and the Attorney.

The motion prevailed unanimously, and the report, with enclosure, was so referred.

The following is

THE REPORT:

"CHICAGO, March 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit general form for contract, as also general form for advertising for proposals, and blank proposals themselves, to be used in contracting miscellaneous work for the Sanitary District. I would recommend that these forms be printed in such shape as to be available for general use.

Very respectfully yours,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Accompanied by form of contract, advertisement and proposal).

REMOVAL OF STONE ON SECTION 8.

The Clerk presented a communication from Mr. James Dullaghan, with reference to the removal of excavated stone on Section eight (8); and the same was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the communication be referred to the Committee on Finance.

The motion prevailed unanimously, and the communication was so referred.

The following is

THE COMMUNICATION:

"CHICAGO, March 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—As there will be considerable surplus stone excavated on Section eight (8) of the Drainage Channel, I would be pleased to have you name price at which you will sell said stone per yard to me.

I agree to remove same, and in no way interfere with your contracts now outstanding for the excavation of said stone on Section eight (8).

Respectfully submitted,

(Signed) JAMES DULLAGHAN.

Address 252 Wabash avenue."

PROPOSITION CONCERNING ILLINOIS AND MICHIGAN CANAL TO BE SUBMITTED.

The Clerk presented a communication from Secretary W. A. S. Graham, of the Board of Canal Commissioners, addressed to President Wenter, with reference to the time when the Canal Commissioners would submit proposition concerning the use of the Illinois and Michigan Canal by the Sanitary District as a Main Channel; and the same was read.

By unanimous consent, the communication was ordered printed and placed on file.

The following is

THE COMMUNICATION:

"SPRINGFIELD, ILL., March 10, 1893.

Frank Wenter, Esq., President Board of Trustees Chicago Sanitary District, Chicago, Ill.:

DEAR SIR—In response to your letter I wish to say that we expect to be able to submit a proposition to you some time next week, or the early part of the week after. Thus far we have been canvassing the situation, and owing to the illness of the Governor have not had an opportunity to confer with him until this week. We have no attorney as yet, but expect to have one in a day or two. I wish to say that, despite the statements of some of the Chicago newspapers, the Governor has not indicated his desires in the premises either way. Nor will he. He prefers to have the Board of Canal Commissioners, and your Board, adjust the matters at issue and simply desires the rights of the State to be amply protected in any event.

Very respectfully,

(Signed) W. A. S. GRAHAM,

Sec'y. Board of Canal Commissioners."

PURCHASE OF "WELBOURN LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase of right of way lands in Cook County, owned by Mr. John Welbourn; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mr. John Welbourn, on the voucher of the Attorney, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the Clerk authorized and directed to pay Mr. John Welbourn, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, March 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with John Welbourn for the purchase from him, for the corporate purposes of this District, of lands hereinafter described, for the sum of Sixteen Thousand Seven Hundred and Twelve ($16,712) Dollars, said Welbourn is to retain the buildings on the tract of land last herein described, and is to remove same therefrom at any time on thirty days' notice from this District, in writing.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said John Welbourn, the sum of Sixteen Thousand Seven Hundred and Twelve ($16,712) Dollars in full payment for the following described land, to-wit:

That part of the East fraction of the southeast quarter (¼) of Section Twenty-two (22) and of the southwest quarter (¼) of Section Twenty-three (23), all in Township Thirty-eight (38) North, Range Twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at the intersection of the North line of said southwest quarter (¼) with the northwesterly reserve line of the Illinois and Michigan Canal, and running thence West on the North line of said Southwest quarter (¼) and of said Southeast quarter (¼) 21.74 chains, thence south 6¼ degrees West 14.67 chains, thence South 54 degrees Last 10.15 chains to said Northwesterly reserve line, thence North 36 degrees East along said reserve line 26 chains to the point of beginning.

Also, that part of the Northwest fractional quarter (¼) of the Northeast quarter (¼) of Section Fourteen (14), Township Thirty-eight (38) North, Range Twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the North line of said Northwest fractional quarter (¼) 900 feet East of the Northwest corner of said Northwest fractional quarter (¼), and running thence Southwesterly in a straight line to a point in the West line of said Northwest fractional quarter (¼) 1,300 feet south of said Northwest corner of said Northwest fractional quarter (¼), thence south on said West line 20 feet, thence East 3 chains and 75 links, thence North 43 degrees East 9 chains and 60 links, thence South 45¼ degrees East 3 chains and 80 links, thence Northeasterly in a straight line to a point in the north line of said Northwest fractional quarter (¼) 1300 feet east of the Northwest corner of said Northwest fractional quarter (¼), thence West on said North line to the point of beginning, excepting and reserving such portion as falls within the above described tract of a strip 20 feet wide and 5.30 chains long in said tract, as follows, viz.: Commencing at a point 17 chains South and 6 50 chains East of the Northwest corner of said quarter section, thence running north 72¼ degrees West 5 chains and 30 links 10 feet wide on each side of said line, and also excepting and reserving such portion as falls within the tract here described of a piece or strip of land 25 feet in width by 125¼ feet in length, being known and described as Lot one (1), Block one (1) in Warner's late subdivision of said Northwest fractional quarter (¼), recorded in Book 6 of Plats, page 95.

Also, that part of Lot one (1) in the division by Cook & Dickey of the East fraction of the Southwest quarter (¼) of Section Twelve (12), Township Thirty-eight (38) North, Range Twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at the intersection of the north line of the turnpike road with the Northwesterly reserve line of the Illinois and Michigan Canal, and running thence Northeasterly along said reserve line 417.42 feet, thence Northwesterly parallel with said road 208.71 feet, thence Southwesterly parallel with said reserve line 417.42 feet to said North line of said road and thence Southeasterly along said north line 208.71 feet to the place of beginning.

All of said land lying and being situate in the County of Cook in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOS. KELLY,
L. E. COOLEY,

Joint Committee on Finance and Engineering."

CONFIRMATION OF ASSISTANT ENGINEERS.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, recommending the confirmation of certain persons as Assistant Engineers, appointed in the report of the Chief Engineer, presented and referred to that Committee at the meeting held March 8, 1898, (Page 1090 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendation made therein concurred in, and the persons named therein confirmed as Assistant Engineers.

Upon roll-call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Russell and Wenter—five (5). Excused and not voting—Mr. Prendergast—one (1). Nays—none.

Upon which result the President declared the motion carried, the report

adopted, ordered printed and placed on file, the recommendations made therein concurred in and the persons named therein confirmed as Assistant Engineers.

The following is

THE REPORT:

"CHICAGO, March 15, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee has had under advisement the nominees for Assistant Engineers, submitted by the Chief Engineer, and referred to this Committee at the last meeting, and recommend the following gentlemen for confirmation: Chas. L. Harrison, E. R. Shnable, Alex. E. Kastl, Ebin J. Ward, H. B. Alexander, H. A. Miller.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
W. H. RUSSELL,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

OFFICIAL PLANS TO BE FILED WITH CLERK.

Mr. Cooley presented an order directing the Chief Engineer to file in the office of the Clerk official plans of the entire work, as provided in the order; and the same was read.

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6.) Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Chief Engineer instructed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, This Board on November 2d adopted a report calling for official plans of the work to be filed for record in the office of the Clerk, which request has not been complied with and did; by order of February 1st, call for estimates from the latest data which have not been submitted, and

WHEREAS, It is essential for the proper performance of the administrative functions of the Board, and for the public welfare, that final estimates should be made and entered of record, and that said record should show the elevation of all grade lines of River Diversion and Main Channel, and the elevation of standard bench marks to which said elevation are referred; together with a proper description of the location and character of said channel, and that a full set of plans, showing all features determined on should be filed for reference in the office of the Clerk; therefore, be it

Ordered, as follows:

That the Chief Engineer comply fully and without delay with the request contained in the report of November 2d, and the order of February 1st, and that he include specifically in his report the following:

1. A written description of the location and dimensions of the Main Channel and river diversion throughout said work, properly referenced.

2. The elevation and grade of Main Channel, of river diversion at the beginning and end of each section, and at points where said grades may change or terminate.

3. The elevation and description of standard bench marks used in determining all elevations and grades, said bench marks being referred to the datum prescribed by law, and report how said datum and elevations of bench marks were determined.

4. Maps, plans and profiles of said work, which shall show graphically and by entries thereon, all information in regard to location of channel, river diversion, levees, bench marks, sections, and give grade lines, cross sections, river profile, quantities, dimensions, and such information as may be pertinent to a full understanding of the work, and to the proper administration thereof by this Board.

And be it ordered, further, That he submit said report and information at the next meeting of the Board, or so much thereof, as he may be able to prepare, and that the entire matter called for to be prepared and submitted without delay."

LEASE TO WESTERN DREDGING AND IMPROVEMENT COMPANY TO BE PREPARED.

Mr. Kelly presented an order directing the Attorney to prepare a lease to the Western Dredging and Improvement Company of certain buildings on Section "C," as provided in the order, and authorizing and directing the President and Clerk to execute the same; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order adopted, the Attorney so instructed, and the President and Clerk authorized and directed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Attorney prepare a lease from this District to the Western Dredging & Improvement Company, contractor for contract section 'C,' leasing to said contractor for and during the term of its contract the building known as the boarding house located on said contract section, or partly on said contract section, and partly on the Illinois and Michigan Canal reserve, at a rental for said building of twenty-five ($25) dollars per month during said term, payable in instalments of one hundred and fifty ($150) dollars each at the expiration of each six months thereof.

Said lease to bear date March 1st, 1893, and to provide that said building shall not be used by any other person or persons or corporation, that said building be kept insured by lessee, loss payable to this District for not less than one thousand ($1000) dollars; that should said building be destroyed, or partly destroyed, by fire or otherwise, there shall be no obligation on the part of the District to rebuild same, and such destruction shall terminate said lease.

And that the President and Clerk be authorized and directed to execute said lease on the part of this District."

PAYMENT FOR "WILSON AMES LAND."

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay to Wilson Ames, on the voucher of the Attorney, for right of way lands in Cook County, money in full of verdict for said lands in the case of Sanitary District of Chicago vs. Albert Piper, Wilson Ames, et. al., as provided in the order; and the same was read.

Mr. Eckhart, seconded by Mr. Russell, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay to Wilson Ames, on the voucher of the Attorney, for right of way lands in Cook County, money in full of verdict for said lands in the case of Sanitary District of Chicago vs. Albert Piper, Wilson Ames, et. al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to Wilson Ames the sum of thirty five thousand four hundred and two dollars and fifty cents ($35,402 50) in full payment for the following described lands, to-wit:

That part of the southwest quarter (¼) of Section twenty-two (22), Township thirty eight (38) north, Range twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the south line of Section twenty-two (22), 875 feet east of the southwest corner of said section; thence east on said south line to the southeast corner of said southwest quarter (¼) of said section; thence north on the east line of said southwest quarter (¼) to the center of said section; thence southwesterly in a straight line to the point of beginning.

That part of the West fraction of the southeast quarter (¼) of Section twenty-two (22), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at the southwest corner of the west fraction of said southeast quarter (¼), and running thence north along the west line of said west fraction to the north-

west corner of said west fraction; thence east along the north line of said west fraction to the northwesterly margin of the Desplaines river; thence southeasterly at right angles with the general course of said river there to the center thread of the current of said river; thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the south line of said west fraction with the northwesterly margin of said river and at right angles to the general course of said river there; thence northwesterly along said line to said northwesterly margin; thence west along said south line to the point of beginning.

Said premises lying and being situate in the County of Cook, in the State of Illinois.

And in full payment for all damages to lands not taken. Said sum being the aggregate of the sums awarded by the verdict and report of the jury in the case of the Sanitary District of Chicago vs. Albert Piper, Wilson Ames et al., in the Circuit Court of Cook County, Illinois, General Number 106,951, on the 18th day of February, 1893, and decree therein for said amount having been entered March 11, 1893."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Cooley, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MARCH 22, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, March 22, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held March 15, 1893, were amended as follows: By unanimous consent the words "February 1st" were amended to read "February 15th," on page 1104 of the printed Proceedings, in the fifty-first line of the first column and in the nineteenth line in the second column.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the minutes of the regular meeting, held March 15, 1893, as printed and amended as shown above, were then approved.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending March 18, 1893.....	$1.057 80
Eng. Dept., Div. No. 1, (Sag Building) week ending March 18, 1893	14 40
Eng. Dept., Div. No. 2, week ending March 18, 1893.....	274 00
Eng. Dept., Div. No. 3, week ending March 18, 1893.....	437 10

Eng. Dept., Div. No. 4, week ending March 18, 1893.....	49 20	$ 1,832 50
Clerical Dept., office roll, week ending March 18, 1893.....		39 00
Law Dept., office roll, week ending March 18, 1893.....		63 00
Total.....		$ 1,934 50

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 2, March 16, '93).....	$661 50	
McArthur Bros. (Sec. 3, March 16, 1893).....	543 38	
Agnew & Co. (Sec. 5, March 16, '93).....	165 38	
Agnew & Co. (Sec. 6, March 16, '93).....	307 13	
Agnew & Co. (Sec. 7, March 16, '93).....	424 46	
Agnew & Co. (Sec. 8, March 16, '93).....	1,491 26	
Mason, Hoge & Co. (Sec. 11, March 16, '93)	3,085 80	
Mason, Hoge & Co. (Sec. 12, March 15, '93)	4,021 93	
Mason, Hoge & Co. (Sec. 13, March 15, '93)	2,943 28	
		$13,644 12

LAW DEPARTMENT.

Cameron, Amberg & Co. (stationery).....	$ 9 00	
Adams A. Goodrich (legal services).....	1,800 00	
Russell M. Wing (legal services).....	2,150 00	
O. N. Carter, (expense)	21 57	
		$ 3,980 57

TREASURY DEPARTMENT.

W. G. Stanford (stationery).....		$ 3 35

GENERAL ACCOUNT.

"The Rialto" (janitor service, February, '93)		$ 80 00
Grand total.....		$19,642 54

Mr. Boldenweck, seconded by Mr. Kelly, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—None.

(Messrs. Cooley and Prendergast voted "Yea" on all vouchers except those for "Construction," on which they were excused. Mr. Eckhart voted "Yea" on all vouchers except those for the "Law Department," on which he was excused).

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 310, Engineering Department, (stamped envelopes).....	$24 00
No. 311, Engineering Department, (rubber gloves).....	5 00
No. 312, Engineering Department (lead pencils).....	54 50
No. 449, Law Department, (file boxes).....	8 00
Total.....	$ 91 50

Mr. Kelly, seconded by Mr. Eckhart, moved that Requisitions Nos. 310, 311 and 312 for the Engineering Department, and No. 449 for the Law Department, as read and shown above, be all referred to the Joint Committee on Finance and Engineering.

The motion prevailed unanimously and Requisitions Nos. 310, 311 and 312 for the Engineering Department and No. 449 for the Law Department, as read and shown above, were so referred.

REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending March 18th, 1893.

The same was read and by unanimous consent was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending March 18, 1893, as the same have been reported to me:

Engineering Department.....	81	
Engineering Department (Sag Building).....	1	
		82
Clerical Department.....		3
Treasury Department.....		1
Law Department.....		9
Total employes.....		95

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

RAISING OF BRIDGES OVER CANAL.

The Clerk presented a message from President Wenter, transmitting two communications, with enclosures, from the Canal Commissioners, with reference to the raising of various bridges over the canal, which the District controls, and recommending that the matter be referred to the Joint Committee on Engineering and Finance; and the message, with enclosures was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the message be concurred in, and with enclosures, be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and it was so ordered.

The following is the

MESSAGE WITH ENCLOSURES.

"CHICAGO, March 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith communications from the Board of Canal Commissioners controlling the Illinois and Michigan Canal, dated March 16th and March 20th, the said communications referring to the raising of various bridges which the Sanitary District do now own and control.

I would recommend that the entire matter be referred to the Joint Committee on Engineering and Finance to suggest proper action in the matter.

Respectfully submitted,

(Signed) FRANK WENTER,
President Board of Trustees."

(Four (4) enclosures).

"LOCKPORT, Ills., March 16, 1893.

Hon. Frank Wenter, President Drainage District, Chicago.

DEAR SIR—Herewith I append a resolution of the Board, bearing date March 13, 1893, relative to what is known as the 'Swift & Co.' bridge, the substance of which will show that immediate action ought to be taken by you in regard to the raising and repairing of said bridge, as we are unable to allow it to remain in its present condition.

I find that a similar notification was sent Swift & Co. on July 12, 1892, but as yet no repairs, etc., have been made. Please give this your personal attention, as you can readily see its importance.

Yours truly,

(Signed) WM. A. S. GRAHAM,
Secretary.
Per A.

"It appearing to the Board of Canal Commissioners from the representation of Walter S. Barnard, General Superintendent, and from William Keough, foreman of the Illinois and Michigan Canal, that the elevation of the bridge across said canal at or near Summit, known as 'Swift & Co.'s" bridge, but now claimed to be owned by the Drainage District of Chicago, is so much lower than bridges across said canal, between Bridgeport and Summit, as to cause serious obstruction to navigation, and that complaints have frequently been made by boatmen that they cannot pass their boats under said bridge.

It is thereupon on motion of Commissioner Welch, resolved, that the Drainage District of Chicago, or Swift & Co., or whoever may claim the ownership of said bridge, proceed forthwith to raise said bridge two and one-half (2½) feet to strengthen it by placing bents underneath and repair the same in a good workmanlike manner, so as not to interfere with navigation, and that the work thereon be under the supervision of the General Superintendent.

Passed March 13, 1893.

(Signed) W. A. S. GRAHAM,
Secretary."

"LOCKPORT, Ills., March 20, 1893.

Hon. Frank Wenter, President Sanitary District, Chicago:

DEAR SIR—As requested by you I append hereto copies of two resolutions passed by the Board of Canal Commissioners on the 13th inst., relative to the raising, etc., of what are known as the Griffin & Connelly bridge at the Sag, and the A. S. Piper & Co. bridge at Mt. Forest, which you claimed in your conversation with me in Chicago, on Saturday last, as now belonging to the Sanitary District.

Yours truly,

(Signed) MERRITT M. ARNOLD,
Chief Clerk."

"It appearing to the Board of Canal Commissioners from the representation

of Walter S. Barnard, General Superintendent, and from William Keough, foreman of the Illinois and Michigan Canal, that the elevation of the bridge across said canal owned by Griffin & Connelly, is so much lower than bridges across said canal, between Bridgeport and Summit, as to cause serious obstruction to navigation, and that complaints have frequently been made by boatmen that they cannot pass their boats under said bridge.

On motion of Commissioner Welch it was resolved that Griffin & Connelly proceed forthwith to raise said bridge, and repair the same in a good workmanlike manner, so as not to interfere with navigation, and that the work thereon be under the supervision of the General Superintendent.

Passed March 13, 1893.

(Signed) W. A. S. GRAHAM,
Secretary."

"It appearing to the Board of Canal Commissioners from the representation of Walter S. Barnard, General Superintendent, and from William Keough, foreman of the Illinois and Michigan Canal, that the elevation of the bridge across said canal, owned by A. S. Piper & Co., is so much lower than bridges across said canal, between Bridgeport and Summit, as to cause serious obstruction to navigation, and that complaints have frequently been made by boatmen that they cannot pass their boats under said bridge.

On motion of Commissioner Welch it was resolved that A. S Piper & Co. proceed forthwith to raise said bridge, and repair the same in good workmanlike manner, so as not to interfere with navigation, and that the work thereon be under the supervision of the General Superintendent.

Passed March 13, 1893.

(Signed) W. A. S. GRAHAM,
Secretary"

USE OF ILLINOIS AND MICHIGAN CANAL.

The Clerk presented a communication directed to President Wenter, by President Alt. Gerdes, of the Board of Canal Commissioners, with reference to the use of the Canal by the District as a Main Channel; and the communication was read.

By unanimous consent the communication was ordered printed and placed on file.

The President stated, with reference to the communication just read, that since the receipt of the same, the Board of Trustees, with the Attorney and General Counsel, had had a conference on Saturday, March 18, 1893, with the Board of Canal Commissioners and their Attorney, and that an answer from the Canal Commissioners had been promised within two weeks from the time of that meeting.

The following is

THE COMMUNICATION:

"PEORIA, Illinois, March 15, 1893.

Hon. Frank Wenter, President Sanitary District of Chicago, Chicago:

DEAR SIR—Your communication of December 1st, 1892, to our predecessors has fallen under the consideration of this Board, and in reply thereto, I am authorized to say, in general terms, that the Canal Commissioners accept the opinion of the Attorney General as expressive in the main of the reciprocal rights and powers of our respective bodies.

I am further authorized to say that the Canal Commissioners stand ready and are disposed to treat with your body in the premises, with the desire only that mutual rights and public interests shall be properly subserved.

The Commissioners will be pleased to give attention to anything further you may see fit to submit.

Yours respectfully,

(Signed) ALT. GERDES,
President Canal Commissioners.'

FOOT BRIDGE AT MT. FOREST.

The Clerk presented a communication from the Canal Commissioners, addressed to President Wenter, with reference to permission to construct a foot bridge across the Canal at Mt. Forest, and the communication was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the communication, with enclosure, be referred to the Joint Committee on Finance and Engineering.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"LOCKPORT, Ills., March 13, 1893.

Hon. Frank Wenter, President Drainage Board, Chicago:

DEAR SIR—At the request of Mr. Graham, I herewith hand you copy of

proceedings had in reference to a foot bridge you desire to construct across the Canal.

Please forward your plans, etc., and I will submit the same to the General Superintendent.

Yours Truly,

(Signed) MERRITT M. ARNOLD,
Chief Clerk."

"Commissioner Graham made a verbal statement to the effect that Hon. Frank Wenter, President of the Drainage Board, was desirious of obtaining permission of this Board to build a temporary foot bridge across the canal, for the use of the engineers and others in the employ of the Drainage Board; whereupon, it was

Resolved, On motion of Commissioner Graham, that permission be granted the Board of Trustees of the Sanitary District of Chicago to construct a temporary foot bridge across the Illinois and Michigan Canal, *provided*, the location of said bridge and the plans thereof meet with the approval of the General Superintendent, and it is further

Provided, That the Canal Commissioners reserve the right at any time in the future to amend, alter or vacate this resolution when in their judgment the interests of the State shall seem to require it.

Accompanying letter of March 12, 1893.

"M. M. A."

WESTERN STONE COMPANY BRIDGE ACROSS DESPLAINES RIVER.

The Clerk presented a report from the Chief Engineer, enclosing specifications and blue print plan, concerning the bridge for the Western Stone Company, across the Desplaines River, near the county line; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report, with enclosures, be referred to the Joint Committee on Engineering and Finance

The motion prevailed unanimously and the report, with enclosures, was so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, March 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—I submit herewith plan and specifications for the Dummy Track Bridge across the new channel of the Desplaines river near the county line, for the Western Stone Company. These specifications furnish the necessary data to fill in the blank form of contract heretofore submitted, which will enable this work to be advertised at your convenience.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Enclosing specifications and blue print.)

SPECIFICATIONS.

The work to be done under this contract consists of the construction of a framed trestle bridge over the diversion channel of the Desplaines river in Will county and on line of or parallel to the present dummy track railroad, located near the county line, between the counties of Will and Cook.

The bridge shall be built in the manner shown on plan marked "Plan of Trestle Bridge for Western Stone Company Dummy Track over Diversion Channel on Section 10," which accompany these specifications and form a part thereof.

The bridge shall be 512 feet long, framed bents, constructed of 12"x12" timbers and spaced 16 feet apart between centers. Mud sills of 4"x16" plank, 12 feet long and well bedded in the bank shall be used at the ends of the bridge.

All necessary excavations at site of bridge will be made by the Sanitary District, except leveling of surface of rock for the sills of the framed bents.

All timbers except bridge ties shall be of good merchantable white or southern yellow pine, free from wind shakes, large knots, decayed wood, sap or any defect, that will impair its strength and durability.

The framing must be done in a thoroughly good and workmanlike manner, using oak tree nails for fastening the parts together.

The caps shall be 12 feet long, and the sills 16 feet long as shown on plan.

The stringers shall be of 6"x16" timber 16 feet long, with 4"x16" pine separators 4 feet long, with packing bolts ¾ inch in diameter, and 30 inches long, each bolt to have a head and nut and two cast iron washers of proper size and weight.

The surface of the rock shall be leveled to a good bearing for the sills and the sills

well anchored thereto, with anchor bolts 1¼ inch in diameter and 3 feet long, the bolts extending into the rock about 2 feet. Head ends to be well cemented into the rock with neat hydraulic cement mortar.

Each screw end to be provided with nut and cast iron washer.

The ties shall be of oak sawed truly to a section of 6"x8" and 8½ feet long. Ends squared and sized to a uniform thickness on the under side where they rest on the stringers.

A foot-walk of 2 x8" pine plank shall be laid from end to end of bridge, plank to be properly spiked to bridge ties.

All iron shall be of good quality and in every way suitable for the various purposes for which it is intended.

APPROXIMATE QUANTITIES OF MATERIAL.

47,570 feet B. M. pine timber.

8,840 feet B. M. oak ties.

1,520 lbs. wrought iron

190 lbs. cast iron.

PRICES.

For each thousand feet board measure of pine timber measured in place, including the cost of drilling holes and cement mortar for anchor bolts.

For each thousand feet board measure of oak ties measured in place.

For each pound of wrought iron.

For each pound of cast iron washers."

REPORT ON OFFICIAL PLANS.

The Clerk presented a report from the Chief Engineer, accompanied by one enclosure, with reference to the order passed at the meeting held March 15, 1893 (page 1104 of the Proceedings), directing the filing of official plans of the entire work in the office of the Clerk; and the report and enclosure were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report, with enclosure, be printed and referred to the Joint Committee on Finance and Engineering, with directions to report back to the Board at the next meeting.

The motion prevailed unanimously and the report was so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—At a meeting of March 15 your Honorable Board passed the following preambles and orders:

"WHEREAS, This Board on November 2 adopted a report calling for official plans of the work to be filed for record in the office of the Clerk, which request has not been complied with; and did by order of February 1 call for estimates from the latest data, which have not been submitted; and,

WHEREAS, It is essential for the proper performance of the administrative functions of the Board, and for the public welfare that final estimates should be made and entered of record, and that said record should show the elevation of all grade lines of river diversion and Main Channel, and the elevation of standard bench marks to which said elevation are referred, together with proper description of the location and character of said channel and that a full set of plans, showing all features determined on should be filed for reference in the office of the Clerk; therefore, be it

Ordered, As follows:

That the Chief Engineer comply fully and without delay with the request contained in the report of November 2 and the order of February 1, and that he include specifically in his report the following:

1. A written description of the location and dimensions of the Main Channel and river diversion throughout said work properly referenced.

2. The elevation and grade of Main Channel and of river diversion, at the beginning and end of each section, and at points where said grades may change or terminate.

3. The elevation and description of standard bench marks used in determining all elevations and grades, said bench marks being referred to the datum prescribed by law, and report how said datum and elevations of bench marks were determined.

4. Maps, plans and profiles of said work, which shall show graphically and by entries thereon all information in regard to location of channel, river diversion, levees, bench marks, sections; and give grade lines, cross sections, river profiles, quantities, dimensions, and such information as may be pertinent to a full understanding of the work, and to the proper administration thereof by this Board; and, be it

Ordered further, That he submit said report and information at the next meeting of the Board, or so much thereof as he may be able to prepare, and that the

entire matter called for to be prepared and submitted without delay."

The peculiar wording given to the above, and particularly the uses to which it has been put by the public prints to reflect discredit upon this Department in a manner which is made to appear as emenating from the Board, make it incumbent upon me to state a few facts with plainness.

1. As to the preambles, the only thing that can be interpreted as an order in the proceedings of November 2d which I have been able to find is attached to the end of a report upon the subject matter of a communication from Mason, Hoge & Co., contractors. The words of the report are, "we recommend as follows: That the Attorney and Engineer consider these two cases and report what may seem equitable and proper in the premises."

"The committee is of the opinion and would recommend that any change in plan be authorized by this Board before any liability therefor attaches to the Board, and furthermore that a full set of plans, with all authorized changes, be filed with the Clerk for record."

The first part of this, calling for a joint report of the Attorney and Engineer, has had cognizance of the officers named, but no report made. The latter part, following an expression of an opinion and printed on another page of the proceedings, was not discovered by any one in this Department, and I was not notified of its existence by any one.

The order is, however, being fulfilled in the carrying out of other orders. The Department is making a map, a copy of which is to be furnished the Board, which will show all that is implied in this recommendation and much more. There are now in existence no maps sufficiently accurate to show these changes upon. In the meantime all authorized changes are matters of record.

The proceedings of February 1st contain no order for estimates; there is, however, an order in the proceedings of Feb. 15, two weeks later, which is being complied with. Indeed, estimates of the character called for by this order of February 15th were being made and data collected therefor long before the date of the order. As soon as completed they will be submitted to the Board. They will not be "final estimates" which can be entered of record as such, they will be merely revised approximate estimates made generally from center line heights, and dependent throughout many sections of the work upon the meager borings which have been made, to show the rock elevations. However, essential "final estimates", may appear to be at the present time, no such estimates will be made or entered of record until after the last blast has been fired and the last shovel of earth thrown. From the conditions of the case and the terms of the contract this is a necessity.

While upon the subject of estimates it may be explained that the surface of the ground, and of the solid rock, in both the Main Channel and river diversion, where rock is encountered, is cross-sectioned generally by means of levels taken in 20 feet squares. The rock lying below the glacial drift cannot, of course, be cross-sectioned until the glacial drift is removed. On certain parts of the work this will not be done, probably, in less than two years or thereabouts; and until it is done no estimates based upon the cross-sections can be made for such parts of the work.

I respectfully call your attention to the accompanying statement of the Assistant Chief Engineer, giving the proportion of this kind of work done on the work under contract. From this it is seen that in a total of 47 miles of rock and earth surface on the Main Channel and river diversion that had to be cross-sectioned, 24.4 miles or slightly more than half has been done. If the data from this work were in the office to-day, and a force of four men were put to work upon it they could not complete and properly check the estimates with less than nine month's or a year's steady work.

It would seem that such a showing ought to set at rest all questions of "final estimates" at this stage of the Sanitary District work.

In the matter of standard bench marks it may be said that this department has in its custody a voluminous set of precise level books and reduction sheets made in 1890–91, establishing and reducing the heights of 162 bench marks strung along the line of the work and river valley from Bridgeport to the Kankakee River. Without going into details at this time, it is sufficient to say, that the most reliable data was used in determining the datum, and the engineers in the field are using the benches thus established in a careful and proper way after a thorough re-checking and comparison of the several benches which come within their divisions.

The Board may rest assured that the orders of the last meeting will be complied with, so far as it is within the do-

main of possibilities so to do, and that it will be done just as rapidly as the limitations under which we are working will permit, but before it is accomplished much field and office work will have to be completed which will take much time. A large part of the information called for is a matter of record in the contracts for the several sections of work, and in the proceedings of the Board. Another large part is carefully filed in this office; this latter I have always construed to be under the control and jurisdiction of the Board just as truly as if it were in the hands of any other officer of the Board, it being assumed that the Engineering Department was one of the agencies through which the work of the District is carried on and its records kept.

With reference to orders in general, I wish to say that there are now orders outstanding, some of them dating back to September, 1892, directing the making of various maps, profiles, etc., which, by as close an estimate as we are able to make, will take an equivalent to the undivided time of seven men for one year to complete. Our Drafting Division has ten men employed, exclusive of those in the field. As the miscellaneous work of the department, such as right of way matters, current drawings, etc., require the time of four or five men, it will be seen that there is work enough ahead for more than a year, and that it will be considerably more than a year from now before all the orders outstanding are fully complied with, to say nothing of the last one.

I believe that all members of the Board who have been present at the various committee meetings when the subject has been discussed will bear me out in the statement that I have fairly endeavored to meet the expressed desires of the committees, that the forces of this department should be kept in as narrow bounds as possible.

The order of the Board passed December 28th, that the Chief Engineer should report with reference to the reorganization of the forces of this department with a view to efficiency and economy, was met by me by a report of January 4th, in which, after giving the reductions and changes which had been made, I stated that whether any further changes should be made was dependent on what the policy of the Board is to be with regard to ordering the engineering work of the Sanitary District. I also stated that even if certain reductions were made more room would be needed by this department. This was based on the knowledge that the work of the construction and drafting divisions of the department is becoming so great that more room must be had. The office force of these divisions has not been weakened but rather strengthened since the beginning of the year, but with our present quarters not to exceed two more men can be worked, and they not to a good advantage. I now understand certain space has been assigned to this department which will be available after the first of May, and which will allow a better working force to be organized. The additional space allowed, however, is not great, and as the office force is necessarily limited by its facilities, I submit that these limitations should be recognized by the Board, and the Chief Engineer allowed some latitude in laying out the work of the department so as to bring about the necessary results with the least expenditure of effort. Even if the field work were completed, it is simply a physical impossibility to comply with the kind and variety of orders made and in the time indicated with the facilities for work at my disposal.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer.

MARCH 22, 1893."

(One (1) enclosure.)

"CHICAGO, March 21, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The following is a statement showing the amount of Main Channel and River Diversion cross-sectioned to date, March 17, between Summit and Lockport:

Sec.	MAIN CHANNEL. No. feet to be cross-sectioned.	Amount Cross Section. Glacial Drift.	Solid Rock	RIVER DIVERSION No. feet to be cross-sectioned.	Amount Cross Section. Glacial Drift.	Solid Rock
F..	4500	.....	.....	4400	none.	none.
E..	5000	.....	.....	3600	none.	none.
D..	5000	1-8	.....	....	.....	none.
C..	5000	5-8	.....	4800	none.	none.
B..	5000	whole.	.....	4500	none.	none.
A..	8000	3-5	.....	6000	none.	none.
1..	6000	whole.	.....	3000	whole.	none.
2..	5000	whole.	.....	2600	2-3	none.
3..	5000	whole.	.....	....	.....	none.
4..	5000	whole.	.....	2400	none.	none
5..	5000	3-4	.....	....	.....	none.
6..	5000	8-9	.....	2400	none.	none.
7..	4700	5-8	1-9	2600	whole.	whole
8..	5800	1-2	1-4	5800	whole.	5-8
9..	5800	1-3	1-4	5300	whole.	9-11
10..	6000	2-3	1-8	6200	whole.	whole
11..	5200	whole.	3-4	2100	4-7	7-10
12..	5000	9-10	1-2	....	.....	.....
13..	5000	whole.	whole	....	.....	.....
14..	6000	5-6	1-6	....	.....	.....

Total number of miles in Glacial Drift in Main Channel, under contract, to be cross-sectioned between Summit and Lockport, is 20 1-6.

Of this amount 13.9 miles of Glacial Drift have been cross-sectioned.

Total number of miles of solid rock, under contract, to be cross-sectioned between Summit and Lockport is 13 6. Of this amount three miles have been cross-sectioned.

Total number of miles of Glacial Drift in River Diversion to be cross-sectioned, is 10½. Of this amount 4.8 miles have been cross-sectioned.

Total number of miles of solid rock in River Diversion, to be cross-sectioned, is 2.9. Of this amount 2.6 miles have been cross-sectioned.

Yours truly,

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

PURCHASE OF "PRESCOTT LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Cook County, owned by Mr. Philip M. Prescott, and authorizing and directing the Clerk to pay for said lands on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mr. Philip M. Prescott, on the voucher of the Attorney, for said lands as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter- eight (8). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mr. Philip M. Prescott, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, March 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Philip M. Prescott for the purchase from him for the corporate purposes of this District, of the lands hereinafter described, for the sum of twenty-five thousand two hundred ($25,200) dollars.

Your committee recommended that the Clerk of this District be directed to pay on the voucher of the Attorney, to said Philip M. Prescott the sum of twenty-five thousand two hundred ($25,200) dollars in full payment for the following described lands to-wit:

All that part of the southwest quarter (¼) of Section twelve (12), township thirty eight (38), north, Range twelve (12), East of the Third Principal Meridian, lying north and west of the center thread of the Desplaines River.

Also, all that part of the Northwest quarter (¼) of Section twelve (12), Township thirty-eight (38) north, Range twelve (12), East of Third Principal Meridian, lying north and west of the center thread of the Desplaines River, and south of a

straight line drawn from a point on the south line of said quarter section, which is 500 feet east of the southwest corner of said quarter section, to the intersection of the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway, with the east line of said quarter section.

Also, all that part of the northeast quarter (¼) of Section twelve (12), Township thirty-eight (38) north, Range twelve (12), East of the Third Principal Meridian, lying north and west of the center thread of the Desplaines River, except the right of way of the Chicago, Santa Fe & California Railway.

Also, all that part of the northwest quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying north of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway, and east of a line drawn 200 feet from and parallel with the east line of said quarter section

Also, all that part of the northwest quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying south of the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway, and north of a straight line drawn from a point on the south line of said quarter section which is 500 feet east of the southwest corner of said quarter section to the intersection of the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway, with the east line of said quarter section and east of a line drawn 200 feet from and parallel with the east line of said quarter section

All of said lands lying and being situate in the County of Cook, in the State of Illinois.

Said sum of twenty-five thousand, two hundred ($25,200) dollars being also in full payment for all damages to land not herein described and not taken by the Sanitary District and owned by Mary A. Prescott and Philip M. Prescott; it being understood and agreed as the basis of this settlement that the Sanitary District is to construct and build a levee on the north side of the new river channel to be constructed by the Sanitary District in Sections D, E and F, as set forth in the contracts let by the Sanitary District for the construction of the proposed work on said Sections D, E and F.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOS. KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL.

Joint Committee on Finance and Engineering."

REPAIR OF BRIDGES AT WILLOW SPRINGS.

Mr. Prendergast, seconded by Mr. Kelly, moved that the Chief Engineer be authorized and directed to repair bridges over the river and canal at Willow Springs at an expense of not to exceed $250:

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Kelly, Prendergast, Russell and Wenter—six (6). Nays—Messrs. Altpeter and Eckhart—two (2).

Upon which result the President declared the motion passed, and the Chief Engineer authorized and directed to repair bridges over the river and canal at Willow Springs, at an expense of not to exceed $250.

SANITARY INSPECTOR TO BE MADE OFFICER OF STATE BOARD OF HEALTH.

The Clerk presented a communication from Dr. F. W. Reilly, Secretary of the State Board of Health, addressed to President Wenter, with reference to having the Sanitary Inspector sworn in as an officer of the State Board of Health; and the communication was read.

By unanimous consent the communication was ordered printed and placed on file.

The following is

THE COMMUNICATION:

"ILLINOIS STATE BOARD OF HEALTH,
SPRINGFIELD, March 21, 1893.

DEAR SIR—I beg to acknowledge the receipt of your communication (received at the Secretary's office during my absence) touching such authority as may be given by the State Board of Health to the Sanitary Inspector of the Sanitary District.

I have no doubt that the Board will gladly take the action you request, and

your communication will be laid before it at its next meeting, April 26, prox.

Very respectfully,

[Signed] F. W. REILLY, M. D.,
Secretary.

Hon. Frank Wenter, President Board of Trustees Sanitary District of Chicago, Chicago, Ill.

CONFERENCE WITH REFERENCE TO MAINTENANCE OF PUBLIC ORDER.

The President announced that in conformity with an order passed at the meeting held February 15, 1893 (page 1053 of the Proceedings), a conference had been held on Monday, March 20, 1893, with the various village, county and city officials along the line of the Main Channel, to devise ways and means for maintaining public order, but that no action on the part of the District had been decided upon.

CLERK TO ADVERTISE AND SELL PROPERTY ON THE RIGHT OF WAY.

Mr. Eckhart presented an order authorizing and directing the Clerk to advertise and sell, under the direction of the Finance Committee, all buildings and machinery owned by the District, on the right of way, as provided in the order; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—none.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to advertise and sell, under the direction of the Finance Committee, all buildings and machinery owned by the District on the right of way, as provided in the order.

The following is

THE ORDER:

Ordered, That the Clerk advertise and sell, under the direction of the Finance Committee, at public or private sale, in such manner, at such time and place, and on such terms as said Committee may think fair, just and reasonable, all the buildings and machinery belonging to the Sanitary District, except the following:

The boarding house on Section A, the boarding house on Section C, and the bunks, tables and benches connected therewith, rented to the Western Dredging and improvement Company; the ice houses, barn, oil house and blacksmith shop on Section E.

AMENDMENT TO RULES OF ORDER.

Mr. Cooley presented an amendment to the Rules of Order, with reference to final action on plans of work, routes, and right of way and changes in the same; and the amendment was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the amendment be printed and referred to the Committee on Rules.

The motion prevailed unanimously, and the amendment was so referred.

The following is

THE AMENDMENT:

"22. All questions involving the determining of plans of work, routes and right of way, and changes in the same, shall be examined by the appropriate committee and reported to this Board, and said report and any recommendation contained therein shall be pending and in order of debate until disposed of, but shall not be finally acted upon until the regular meeting following the one in which the same is received, and final action may be deferred until the second regular meeting on the request of three members."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MARCH 29, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-third regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, March 29, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held March 22, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending March 25, 1893	$1,028 20	
Eng. Dept., Div. No. 1, (Sag Building) week ending March 25, 1893	14 40	
Eng. Dept., Div. No. 2, week ending March 25, 1893	255 60	
Eng. Dept., Div. No. 3, week ending March 25, 1893	431 70	
Eng. Dept., Div. No. 4, week ending March 25, 1893	49 20	
		$ 1,779 10
Clerical Dept., office roll, week ending March 25, 1893		39 00
Law Dept., office roll, week ending March 25, 1893		63 00
Total		$ 1,881 10

ENGINEERING DEPARTMENT.

Jacobs Coles & Co. (stationery)	$71 40	
John Morris Co. (stationery)	22 50	
John Underwood & Co. (carbon paper)	12 00	
E. G. Christoph Lith. Co. (letter heads)	88 00	
E Dietzgen & Co. (drafting material)	36 35	
E. Dietzgen & Co. (drafting material)	4 05	
Keuffel & Esser Co. (drafting material)	15 00	
The Polygraph Print Co. (polygraphs)	2 00	
Geo. H. Benedict & Co. (hektograph prints)	21 34	
W. A. Olmsted, (mounting maps)	6 00	
Seelig & Kandler, (repairing transit)	14 00	
H. Schultz & Co. (paper boxes)	6 00	
Hibbard, Spencer, Bartlett & Co. (hardware)	13 11	
Gottlieb Schroder, (repairs, boring machine)	5 50	
Morrisson, Plummer & Co. (sundries)	4 19	
Columbia Rubber Wks. Co. (rubber boots)	3 00	
The Consumers Pure Ice Co. (water)	7 00	
Robt. H. Cowdrey, (postage stamps)	20 00	
F. W Altpeter, (traveling)	8 25	
Alex. E. Kastl, (expense)	12 28	
A. C. Schrader, (emergency)	22 00	
		$ 393 97

CLERICAL DEPARTMENT.

S. D Childs & Co. (ink)	83	
J. Underwood & Co. (carbon paper)	4 20	
E. G. Christoph Lith. Co. (warrants and envelopes)	102 25	
		$ 107 28

LAW DEPARTMENT.

Barnard & Gunthorp, (printing)	$397 00	
U. W. Weston, (expense)	23 60	
		$ 420 60
Grand total		$2,802 95

Mr. Eckhart, seconded by Mr. Russell, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 313, Engineering Department, (water colors)	$ 4 50
No. 314, Engineering Department, (drafting materials)	4 40
No. 315, Engineering Department (pens)	3 20
No. 451, Law Department, (stationery and sundries)	79 10
No. 1043, Clerical Department (paper)	10 00
Total	$101 20

Mr. Boldenweck, seconded by Mr. Cooley, moved that Requisitions Nos. 313, 314 and 315 for the Engineering Department, No. 451 for the Law Department, and No. 1043 for the Clerical Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—none.

Upon which result the President declared the motion carried, and Requisitions Nos. 313, 314 and 315 for the Engineering Department, No. 451 for the Law Department, and No. 1043 for the Clerical Department, as read and shown above, allowed.

REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending March 25th, 1893.

The same was read and by unanimous consent was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, March 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending March 25, 1893, as the same have been reported to me:

Engineering Department.....	81	
Engineering Department (Sag Building).....	1	
		82
Clerical Department.....		3
Treasury Department.....		1
Law Department.....		9
Total employes.....		95

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

TABULATION OF BENCH MARKS.

The Clerk presented a report from the Chief Engineer, accompanied by enclosure and a tabulation of bench marks, prepared in response to an order passed March 15th, 1893 (Page 1104 of the Proceedings); and the report, with enclosure, was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report and enclosure, be ordered printed, and with accompanying tabulation, be placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, March 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—In partial compliance with the order of your Honorable Board of March 15th, relative to the description of the Main Channel and Collateral Works, I submit herewith elevations and descriptions of Bench Marks used in determining the elevations and grades along the line of said work; also a statement from Mr. Alexander E. Kastl, Assistant Engineer, upon the tabulations of the results of the final reductions of the precise levels from Bridgeport to Kankakee Feeder, made by Mr. O. W. Ferguson in 1890-91, and the methods and datas used for determining the legal datum. The table includes 162 permanent bench marks numbered from 1 to 162, inclusive. The course pursued in determining the datum was evidently the only one possible under the circumstances, and it is undoubtedly correct within the range of variation allowable in such cases.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Enclosure).

"CHICAGO, March 25, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I have the honor to submit the following report upon the tabulation of the results of the final reduction of the precise levels from Bridgeport to the Kankakee Feeder aqueduct, a distance of 49 miles.

The levels were run by Mr. O. W. Fergusan, Assistant Engineer, between October 1st, 1890, and March 18, 1891. The precise level used was manufactured by Fauth & Co., of Washington, D. C.

The tabulation includes 162 permanent bench marks, numbered from 1 to 162 inclusive.

The tabulation was made under my direction by Mr. R. H. Bethel in September, 1892. It was found that Mr. Ferguson had made a final reduction of his notes but did not quite complete it. This reduction was carefully checked and then completed from the original notes. A new tabulation of the results of the final reduction was made. This was compared with the preliminary tabulation made by Mr. Ferguson and all differences examined.

The new tabulation is believed to be correct and the results given may safely be taken as the correct ones resulting from the observations. All elevations are referred to Chicago city datum and start with the elevation of P. B. M. 1 on doorstep of Canal Collector's office, Bridgeport, as 8,441 feet.

Chicago City Datum is the same as the datum established by the Illinois & Michigan Canal Trustees, being the low water of Lake Michigan of 1847.

P. B. M. 1 was selected as the initial bench mark. The best evidence now obtainable goes to show that the elevation of this bench is the most reliable. Mr. Francis Murphy, Assistant Engineer of the Department of Public Works, City of Chicago, is the authority for its elevation. In the summer of 1882 Mr. Murphy established the bench marks referred to in the tabulation as P. B. M. 1 and P. B. M. 6. He carefully determined the elevation of each from what was then considered a very reliable bench mark and the elevation of which was known by him to be the true elevation above Chicago City or Canal datum. This bench mark was to be destroyed and therefore Mr. Murphy adopted means to preserve its elevation. This bench mark was marked on the top of the coping stone near east end of south wall of old lock at Bridgeport, about 350

feet above the present Ashland avenue bridge over the Canal. The top courses of stone were removed shortly after Mr. Murphy had established and leveled to the two bench marks to which reference has been made.

The bench mark known as P. B. M. 1 was established on the west end of door step of the Canal Collector's office at Bridgeport. As it was only about 250 feet from the bench mark on the lock wall, to determine its elevation required only one setting of the leveling instrument. Mr. Murphy repeated the leveling several times until he was satisfied that he had obtained the correct elevation.

The Canal Collector's office had been built several years and the masonry had in all probability ceased to settle. As it is a low building it has probably not settled to any appreciable extent since 1892.

The bench mark know as P. B. M. 6 was established on the top of the southwest corner of projecting course of stone of chimney of the boiler house of the Canal Pumping Works at Bridgeport. The masonry of the chimney was new and Mr. Murphy so noted it. But at that time it was the most permanent point, aside from the Canal Collector's office, on which to establish a bench mark. Mr. Murphy determined the elevation of this bench mark in the same manner as of the former. The elevation in 1882 was 11.795 feet above Chicago City datum. In 1886, Mr. John Ericson, Assistant Engineer Drainage and Water Supply Commission, determined the elevation of this bench mark from the bench mark on the Canal Collector's office and made it 11.782 feet, or 0.013 feet lower than elevation of Mr. Murphy. This difference is in all probability due to the settlement of the chimney, although at the same time it does not exceed the limit of error of a leveling for that distance. The elevation of the bench mark by the precise levels is 11.776 feet, or 0.006 feet lower than elevation of Mr. Ericson. This difference is well within the limit of error of a precise leveling from P. B. M. 1.

The following is submitted as a check on the correctness of the datum to which the precise levels are referred. In 1891, Mr. Ferguson ran a line of precise levels from P. B. M. 1 to the standard city bench mark on the Lind Block, northwest corner of Market and Randolph streets, a distance of about 4½ miles. The elevation by precise levels is 15.699 feet. The city elevation is 15.775 feet. The difference, 0.076 feet, is not any larger than the average discrepancy between precise and ordinary levels for the distance between the bench marks. The elevation of the same bench mark on the authority of Mr. John Ericson, Assistant Engineer Drainage and Water Supply Commission, is given as 15.703 feet, which differs only 0.004 feet from the precise levels elevation. While running this line of levels, Mr. Ferguson connected with 16 city bench marks. Comparing the precise elevations of these with the city elevations, it is found that the latter differ from +0.251 feet to —0.305 feet with the former. The average datum of the bench marks by city elevations is 0.055 feet lower than the average datum by precise elevations. This difference cannot be regarded as excessive or as casting doubt on the correctness of the precise levels datum, when it is considered that the city elevations were determined by ordinary levels at different times and by different observers. Moreover, most of the bench marks are on heavy buildings, which are known to have settled since the bench marks were established.

The following is an extract from an ordinance passed by the City Council on March 19, 1888: The above elevations as fixed are intended to be measured from the plane of low water of A. D. 1847, as fixed by the Commissioners of the Illinois and Michigan Canal and adopted by the late Board of Sewerage Commissioners and by the late Board of Public Works, as the base or datum for city levels."

My thanks are due to Mr. Francis Murphy, who kindly showed me the bench marks established by him and identified them as being the same as those used by Mr. O. W. Ferguson. Mr. Murphy also gave me the history of the bench marks.

Respectfully submitted,

(Signed) ALEX. E. KASTL,
Assistant Engineer."

(Enclosing tabulation).

REVISED APPROXIMATE ESTIMATES, SUMMIT TO LOCKPORT.

The Clerk presented a report from the Chief Engineer, accompanied by tables, showing revised approximate estimates on the entire work from Summit to Lockport, presented in accordance with an order passed March 15, 1893 (Page 1104 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report, with enclosed tables, be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, March 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the order of February 15th, relative to a revised estimate of the work between the Range line at Summit and the end of Section 14 above Lockport, I have the honor to submit herewith a complete tabulation of all the sections of work under contract, namely 1 to 14, inclusive, and "A" to "F," inclusive. These estimates have been based and quantities determined mostly from center line elevations and from borings for rock surface where the rock did not come close to the surface of the ground, and can only be considered "revised approximate estimates."

The quantities carried out at the contract prices give a total for:

Sections 1 to 14. inclusive..$10,563,920.53
Sections A to F, inclusive.. 2,958,981.70

Making a grand total of..$13,522,902.23

A somewhat less amount than that shown by the first estimates.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

SANITARY DISTRICT OF CHICAGO.

Revised Preliminary estimates of Main Drainage Channel and River Diversion from range line near Summit to end of Section No. 14 above Lockport, based on contract prices and quantities determined mostly from center line elevations of located lines and from borings for rock surface.

Sec.	Classification.	No. Cu. Yds. Estimated.	Price per Cu. Yd.	Amount.	Total Amount.
1	Glacial drift—Main Channel..	1,672,276	$ 0.27	$ 451,514 52	
	Glacial drift—River diversion.	145,841	0.27	39,377 07	
	Solid rock—Main Channel....	359,702	0.83 1-2	300,351 17	
	Solid rock—River diversion..	.....	.....	.....	
	Retaining wall.....	46,788	1.37 1-2	64,333 50	
	Totals.....			$ 855,576 26	$ 855,576 26
2	Glacial drift—Main Channel..	725,509	$ 0.28	$ 203,142 52	
	Glacial drift—River diversion.	107,872	0.28	30,204 16	
	Solid rock—Main Channel....	375,168	0.91	341,402 88	
	Solid rock—River diversion..	.....	.....	.....	
	Retaining wall.....	32,670	2.00	65.340 00	
	Totals.....			$ 640,089 56	$ 640,089 56
3	Glacial drift—Main Channel..	312,826	$ 0.27	$ 84,463 02	
	Glacial drift—River diversion.	.....	.....	.....	
	Solid rock—Main Channel. ..	792,140	0.86	681,240 40	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	6,304	2.00	12.608 00	
	Totals.....			$ 778,311 42	$ 778,311 42
4	Glacial drift—Main Channel..	913,317	$ 0.27	$ 246,595 59	
	Glacial drift—River diversion.	120,000	0.27	32,400 00	
	Solid rock—Main Channel....	317,485	0.86	273,037 10	
	Solid Rock—River diversion..	.....	.....	.....	
	Retaining wall	47,492	2.00	94,984 00	
	Totals.....			$ 647,016 69	$ 647,016 69
5	Glacial drift—Main Channel..	978,985	$ 0.27	$ 264,325 95	
	Glacial drift—River diversion.	10,350	0 27	2,794 50	
	Solid rock—Main Channel....	223,525	0.73 1-2	164,290 87	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	54,134	1.48	80,118 32	
	Totals.....			$ 511,529 64	$ 511,529 64
6	Glacial drift—Main Channel..	576,714	$ 0.27	$ 155,712 78	
	Glacial drift—River diversion.	31,100	0.27	8,397 00	
	Solid rock—Main Channel....	517,809	0.73 1-2	380,589 61	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	26,276	1.48	38,888 48	
	Totals.....			$ 583,587 87	$ 583,587 87
8	Glacial drift—Main Channel..	143,908	$ 0.26	$ 37,416 08	
	Glacial drift—River diversion.	40.414	0.26	10,507 64	
	Solid rock—Main Channel....	882.036	0.73 1-2	648,296 46	
	Solid rock—Main diversion...	41,991	0.73 1-2	30,863 38	
	Retaining wall.....	2,300	1.48	3,404 00	
	Totals.....			$ 730,487 56	$ 730,487 56
8	Glacial drift—Main Channel..	38,051	$ 0.26	$ 9,893 26	
	Glacial drift—River diversion.	67,627	0.26	17,583 02	
	Solid rock—Main Channel....	1,114,843	0.74 3-4	833,345 14	
	Solid rock—River diversion...	92,591	0.74 3-4	69,211 77	
	Retaining wall.....	2,122	1.48	3,140 56	
	Totals.....			$ 933.173 75	$ 933,173 75

Sec.	Classification.	No. Cu. Yds. Estimated.	Price per Cu. Yd.	Amount.	Total Amount.
	Glacial drift—Main Channel..	74,534	$ 0.26	$ 19,378 84	
	Glacial drift—River diversion.	38,003	0.26	9,880 78	
9	Solid rock—Main Channel....	966,362	0.76 9-10	743,132 38	
	Solid rock—River diversion...	20,889	0.76 9-10	16,063 64	
	Retaining wall.....	3,258	1.48	4,821 84	
	Totals.....			$ 793,277 48	$ 793,277 48
	Glacial drift—Main Channel..	30,733	$ 0.25	$ 7,683 25	
	Glacial drift—River diversion.	30,744	0.25	7,686 00	
10	Solid rock—Main Channel....	1,108,492	0.80	886,793 60	
	Solid rock—River diversion...	57,632	0.80	46,105 60	
	Retaining wall.....	3,346	2.00	6,692 00	
	Totals....			$ 954,960 45	$ 954,960 45
	Glacial drift—Main Channel..	44,000	$ 0.30 1-4	$ 13,310 00	
	Glacial drift—River diversion.	16,524	0.30 1-4	4,998 51	
11	Solid rock—Main Channel ...	968,342	0.79 1-4	767,411 04	
	Solid rock—River diversion...	5,254	0.79 1-4	4,163 79	
	Retaining wall.....	3,214	1.66	5,335 24	
	Totals.....			$ 795,218 58	$ 795,218 58
	Glacial drift—Main Channel..	25,316	$ 0.30 1-4	$ 7,658 09	
	Glacial drift—River diversion.	.....	.....	.....	
12	Solid rock—Main Channel....	966,055	0.79 1-4	765,598 58	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	2,284	1.66	3,791 44	
	Totals.....			$ 770,048 11	$ 770,048 11
	Glacial drift—Main Channel..	33,530	$ 0.26	$ 8,717 80	
	Glacial drift—River diversion.	.....	.....	.....	
13	Solid rock—Main Channel....	998,727	0.74 3-4	746,548 43	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	1,124	1.48	1,663 52	
	Totals.....			$ 756,929 75	$ 756,929 75
	Glacial drift—Main Channel..	228,952	$ 0.20	$ 45,790 40	
	Glacial drift—River diversion.	.....	.....	.....	
14	Solid rock—Main Channel....	1,018,837	0.73	743,751 01	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	12,086	2.00	24,172 00	
	Totals.....			$ 813,713 41	$ 813,713 41
	Total Sections 1 to 14 inclusive.....				$ 10,563,920 53

Sec.	Classification.	No. Cu. Yds. Estimated.	Price per Cu. Yd.	Amount.	Total Amount.
A	Glacial drift—Main Channel..	1,992,005	$ 0.30 5-8	$ 610,051 53	
	Glacial drift—River diversion.	135,800	0.30 5-8	41,588 75	
	Solid rock—Main Channel....	51,385	0.80	41,108 00	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	.....	.....	.....	
	Totals.....			$ 692,748 28	$ 692,048 28
B	Glacial drift—Main Channel..	1,353,471	$ 0.27	$ 365,437 17	
	Glacial drift—River diversion.	203,200	0.27	54,864 00	
	Solid rock—Main Channel....	.....	.....	.....	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	.....	.....	.....	
	Totals.....			$ 420,301 17	$ 420,301 17
C	Glacial drift—Main Channel..	1,788,370	$ 0.23 1-2	$ 420,266 95	
	Glacial drift—River diversion.	176,900	0.23 1-2	41,571 50	
	Solid rock—Main Channel....	.....	.....	.....	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	.....	.....	.....	
	Totals.....			$ 461,838 45	$ 561,838 45
D	Glacial drift—Main Channel..	1,820,525	$ 0.26 7-10	$ 481,301 30	
	Glacial drift—River diversion.	.....	.....	.....	
	Solid rock—Main Channel....	.....	.....	.....	
	Solid rock—River diversion...	.....	.....	.....	
	Retaining wall.....	.....	.....	.....	
	Totals.....			$ 481,301 30	$ 481,301 30
E	Glacial drift—Main Channel..	1,684,800	$ 0.27 1-2	$ 463,320 00	
	Glacial drift—River diversion.	131,400	0.27 1-2	36,135 00	
	Solid rock—Main Channel....	5,000	1.00	5,000 00	
	Totals.....			$ 504,455 00	$ 504,455 00
F	Glacial drift—Main Channel..	1,284,000	$ 0.23 3-4	$ 304,950 00	
	Glacial drift—River diversion.	178,600	0.23 3-4	42,417 50	
	Levees north Santa Fe R. R..	60,000	0.23 3-4	14,250 00	
	Solid rock—Main Channel....	45,900	0.80	36,720 00	
	Totals.....			$ 398,337 50	$ 398,337 50
	Total Sections "A" to "F" inclusive.....				$ 2,958,981 70
	Total Sections 1 to 14 inclusive.....				10,563,920 53
	Grand total.....				$ 13,522,902 23

FLOODS OF MAY AND JUNE, 1892, IN THE DESPLAINES VALLEY.

The Clerk presented a report from the Chief Engineer accompanied by map, with reference to the extent and height of the overflow in the Desplaines River, between Bridgeport and Joliet, during the floods of May and June, 1892; and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be ordered printed, and, with accompanying map, be placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, March 29, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the order of February 23d, page 1062 of Proceedings, I submit herewith a map showing the extent and height of overflow in the Desplaines River below the Riverside Dam and throughout the territory between Bridgeport and Joliet for the floods of May and June, 1892. The boundaries of said floods have been put upon the most reliable map now in the possession of the Sanitary District, which covers the whole territory in question. Until a complete and new topographical map is made for the whole distance nothing more accurate than this can be furnished.

The profile of the flood heights called for will be shown on the River Diversion profile, which will be submitted in accordance with other orders of your Board.

Respectfully submitted.

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Accompanied by map).

PURCHASE OF "OGDEN ESTATE" AND "OLDFIELD LANDS."

Mr. Eckhart, Chairman, for the Joint Committee on Finance and Engineering, presented a report recommending the purchase of right of way lands in DuPage and Cook Counties, owned by Jessie Oldfield, and the estate of William B. Ogden, and authorizing and directing the Clerk to pay for said lands on the voucher of the Attorney, as provided in the report: and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Jessie Oldfield and the estate of William B. Ogden, on the voucher of the Attorney, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Jessie Oldfield and the estate of William B. Ogden, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, March 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons, at the prices here stated, to-wit:

From Jesse Oldfield the land hereinafter described, for the sum of four hundred and fifty ($450) dollars.

From Marianna A. Ogden, William O. Wheeler and Andrew H. Green, surviving executors and trustees under the last will and testament of William B. Ogden, late of the City and State of New York, deceased, the land hereinafter described for the sum of twenty-one thousand four hundred and ninety-six ($21,496) dollars.

Your committee recommend that the Clerk of this District be authorized and directed to pay, on the vouchers of the Attorney, to said Jesse Oldfield the sum of four hundred and fifty ($450) dollars in full payment for the following described land, to-wit:

That part of the north fraction of the southeast quarter (¼) of Section eleven (11), Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the north line of said north fraction 1,070.52 feet east

of the center of said section and running thence south on a line parallel with the west line of said north fraction to the northwesterly margin of the Desplaines River; thence at right angles to the general course of said river there to the center thread of the current of said river, or the boundary line between DuPage and Cook Counties; thence northeasterly up said center thread to its intersection with a line drawn southeasterly from a point of contact of a line parallel with and 1,220.34 feet east of the west line of said north fraction with said northwesterly margin; thence northwesterly along said line to said northwesterly margin; thence north on said line parallel with said west line of said north fraction to the north line of said north fraction; thence west on said north line to the point of beginning.

Said premises lying and being situate in the County of DuPage, in the State of Illinois.

To Marianna A. Ogden, William O. Wheeler and Andrew H. Green, surviving executors and trustees of the last will and testament of William B. Ogden, late of the City and State of New York, deceased, the sum of twenty-one thousand four hundred and ninety-six ($21,496) dollars in full payment for the following described lands, to:wit:

That part of the west half (½) of the northeast fractional quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12), East of the Third Principal Meridian, lying south of the center thread of the Desplaines River, together with the riparian rights thereof.

Also, that part of the east half (½) of the northeast quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at the southwest corner of said east half (½), thence east on the south line of said east half (½) to the southeast corner of said northeast quarter (¼), thence north on the east line of said Section twelve (12) 500 feet, thence southwesterly in a straight line to the point of beginning.

Also, that part of the northeast quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12), East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the north line of said Section twelve (12) 1,600 feet west of the northeast corner of said Section twelve (12); thence south on a line parallel with the east line of said northeast quarter (¼) to the northerly margin of the Desplaines River; thence southerly at right angles with the general course of said river there to the center thread of the current of said river; thence northwesterly up said center thread to its intersection with a line drawn westerly from the point of contact of the north line of said northeast quarter (¼) with the easterly margin of the Desplaines River and at right angles with the general course of said river there; thence easterly on said line to said easterly margin; thence east on said north line to the point of beginning, excepting therefrom the right of way of the Chicago, Santa Fe & California Railway Company

Also, that part of the southeast quarter (¼) of Section one (1), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the south line of said southeast quarter (¼), 1,600 feet west of the southeast corner of said section; thence north to a point in the north line of said southeast quarter (¼), 1,600 feet west of the northeast corner of said southeast quarter (¼); thence west to the easterly margin of the Desplaines River; thence westerly and at right angles with the general course of said river there to the center thread of the current of said river; thence southerly down said center thread to its intersection with a line drawn westerly from the point of contact of the south line of said southeast quarter (¼) with the easterly margin of the Desplaines River and at right angles with the general course of said river there; thence easterly on said line to said easterly margin, thence east on said south line to the point of beginning.

Also, that part of the east fraction of the northeast quarter (¼) of Section one (1), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the south line of said northeast quarter (¼) 1,600 feet west of the southeast corner of said northeast quarter (¼); thence north 400 feet on a line parallel with the east line of said northeast quarter (¼); thence west parallel to the south line of said northeast quarter (¼) to the margin of the Desplaines River, thence westerly at right angles with the general course of said river there to the center thread of the

current of said river, thence southerly down said center thread to its intersection with a line drawn westerly from the point of contact of the south line of said northeast quarter (¼) with the easterly margin of the Desplaines River; thence easterly along said line to said easterly margin; thence east on said south line to the point of beginning.

All said last above described premises lying and being situate in the County of Cook, in the State of Illinois.

As part of the consideration aforesaid grantors consent to the diversion of the Desplaines River by grantee into a new channel, and releases all claims for damages to lands not taken by grantee herein for its right of way growing out of such diversion of said river and out of the construction and maintenance of its main channel and the necessary adjuncts thereto; and grantee on its part agrees by the time of the completion of its main channel and the putting of same into operation, to build a levee not less than twenty (20) feet wide on top and to a height of twenty (20) feet above datum, with slopes of one and one-half (1½) to one (1), on the south side of the new river channel and one hundred and twenty (120) feet therefrom, measured to the toe of the slope, joining the Chicago, Santa Fe & California Railway grade east of the railway bridge over the Desplaines River, and to build a levee extending northward from the Chicago, Santa Fe & California Railway for a distance of about 3,200 feet, joining the high ground on the east of the Desplaines River, to be twenty (20) feet wide on top, with slopes of one and one-half (1½) to one (1) on the outside and two (2) to one (1) on the inside. Its grade at the said railway to be twenty-four (24) feet above datum, and to rise thence with a uniform grade to its north end when the elevation of the grade is to be twenty-six (26) feet above datum.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
L. E. COOLEY,
THOS. KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

REPLY FROM COMMISSIONERS OF ILLINOIS AND MICHIGAN CANAL.

The Clerk presented a communication from the Board of Commissioners of the Illinois and Michigan Canal, accompanied by the opinion of their Attorneys, sent in response to a request directed to that Board, November 30, 1892 (Page 927 of the Proceedings) with reference to the use of the Illinois and Michigan Canal as a Main Channel; and the communication, with enclosed opinion, was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the communication, with enclosed opinion, be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordred.

The following is

THE COMMUNICATION AND OPINION:

"CHICAGO, March 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

Since our last meeting with you on the 18th inst., we have duly considered the question of the use by the Sanitary District of that portion of the Illinois and Michigan Canal lying between Ashland avenue and the Summit, and the conclusion we have arrived at is sufficiently expressed in the communication addressed to us by our attorneys, Messrs. Duncan & Gilbert, a copy of which we herewith enclose. If you will submit to us for inspection and examination the plans and specifications for the improvement which you propose to make, so far as it relates to the Canal, we will give them immediate consideration.

Yours respectfully,

(Signed) W. A. S. GRAHAM,
JOHN M. WELCH,
Commissioners."

The following is

THE OPINION:

"*To the Canal Commissioners:*

In reply to your request for advice as to your duty with respect to the use by the Sanitary District of that portion of the Illinois & Michigan Canal lying between Ashland avenue and the Summit, we submit as expressing our views of the law, the following propositions:

1. The question whether it is "necessary," within the meaning of the statute

of 1889, relating to Sanitary Districts, in making any improvement therein provided for, to enter upon and use a portion of the canal, is one exclusively for the determination of the Board of Trustees of the Sanitary District.

2. In case the Board of Trustees of the Sanitary District determine that it is necessary so to do, the statute confers upon them the right, without paying any compensation therefor, to enter upon, use, widen, deepen and improve any portion of the canal within the limits of Cook County, provided they do not unnecessarily interrupt or interfere with the public use thereof, and that they restore it to its former usefulness as soon as practicable.

3. The statute does not contemplate that the Canal Commissioners shall surrender possession of any portion of the canal to the Board of Trustees of the Sanitary District, but on the contrary it contemplates that the Canal Commissioners shall retain possession.

4. The statute does not license the Board of Trustees of the Sanitary District to enter upon, use, widen, deepen and improve the Canal in any manner or to any extent they may see fit, but only in such manner and to such extent as will not unnecessarily interrupt or interfere with the public use thereof, and as will admit of its restoration to its former usefulness as soon as it is practicable, and it is the right and the duty of the Canal Commissioners to forbid and prohibit any improvement or method of making the same, that would, in their judgment, be productive of the results provided against by the statute.

5 The decision of the Canal Commissioners that a particular method of procedure proposed by the Board of Trustees of the Sanitary District is a violation of the statute, is not conclusive, but is subject to review by means of a judicial proceeding.

6. The Canal Commissioners and the Board of Trustees of the Sanitary District are not authorized by law to contract with each other in respect to the use of the Canal, the rights of the Sanitary district being fixed and defined by the statute, and the Canal Commissioners being unauthorized to enlarge or diminish those rights.

7. It is the duty of the Canal Commissioners before permitting the Board of Trustees of the Sanitary District to enter upon and improve any portion of the Canal, to require said Board of Trustees to submit to them for inspection and approval, plans and specifications of the proposed improvement. In case the improvement described by said plans and specifications will, in the judgment of the Canal Commissioners, comply with the law, it is their duty to permit it to be made, but otherwise, to forbid it.

The foregoing propositions are sufficient statements of the law, we think, to guide you in your dealings with the Board of Trustees of the Sanitary District. We do not deem it necessary at this time to present any argument for their support. The statute seems to be plain and you will, no doubt, endeavor to execute its provisions in the utmost good faith, wholly uninfluenced by any desire to deprive the Sanitary District of any right which the law has conferred upon it, and will readily permit the making of any improvement by the Sanitary District that, in your judgment, after you shall have consulted competent engineers, is authorized by the statutes.

(Signed) DUNCAN & GILBERT.

CHICAGO, ILL., March 24, 1893."

PRESENTATION OF PLANS TO COMMISSIONERS OF ILLINOIS AND MICHIGAN CANAL.

Mr. Kelly presented a resolution authorizing and directing the President to present to the Canal Commissioners the action taken by this Board with reference to enlarging and taking possession of the Illinois and Michigan Canal; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the resolution.

Mr. Prendergast presented the following amendment to the resolution; and the same was read:

"The Board does not concede the correctness of the view of the law stated in the communication of the Canal Commissioners this day received and filed, but as a matter of courtesy, this resolution is adopted without prejudice to the rights of the Sanitary District of Chicago."

Mr. Prendergast, seconded by Mr. Altpeter, moved the adoption of the amendment.

On roll-call on the amendment, the vote stood: Yeas—Messrs. Altpeter, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Excused and not voting —Mr. Cooley—one (1). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, and the amendment adopted.

On roll-call on the original resolution as amended, the vote stood: Yeas—Messrs. Altpeter, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Excused and not voting—Mr. Cooley—one (1). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, and the resolution as amended, adopted.

The following is

THE AMENDED RESOLUTION:

"WHEREAS, The Commissioners of the Illinois and Michigan Canal have requested this Board to submit for their inspection the plans and specifications of the improvement proposed to be made by the Sanitary District of Chicago in the Illinois and Michigan Canal, between Summit and Bridgeport; therefore be it

Resolved, That the President of this Board be and he is hereby authorized and directed to present to the Canal Commissioners the action taken by this Board in reference to enlarging the Illinois and Michigan Canal, and the proceedings had thereon up to this date.

This Board does not concede the correctness of the view of the law stated in the communication from the Canal Commissioners this day received and filed, but as a matter of courtesy, this resolution is adopted without prejudice to the rights of the Sanitary District of Chicago."

IRON PIPE AND OUTLET ON PRESCOTT LAND.

Mr. Eckhart presented an order authorizing and directing the Attorney to agree in the deed for the Prescott land for the right to lay and maintain an iron drain pipe, and for the maintenance of an outlet and drain, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the order be adopted, and the Attorney instructed in accordance with same.

After discussion Mr. Boldenweck, seconded by Mr. Altpeter, moved that the order be referred to the Joint Committee on Engineering and Finance.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley and Prendergast—four (4). Nays—Messrs. Eckhart, Kelly, Russell and Wenter—four (4).

Upon which result the President declared the motion to refer lost.

On roll-call on the original motion of Mr. Eckhart for the adoption of the order, the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, the order passed, and the Attorney authorized and directed in accordance with same.

The following is

THE ORDER:

"*Ordered*, That the Attorney be and he is hereby authorized in accepting a deed for that portion of the Prescott property lying north of the right of way the Chicago, Santa Fe & California Railway Company, the purchase of which was reported by the Joint Committee on Finance and Engineering, March 22, 1893, to accept same with a clause providing that grantor therein may reserve the right to lay and continuously maintain an iron pipe, not exceeding six (6) inches in diameter in, through or over the land conveyed, from the Desplaines River to the remaining land in said northwest quarter of Section twelve (12), for the purpose of procuring a water supply to the same; to be done at the grantors expense and in such manner as not to damage the levee or ditch provided for, and to be done under the direction of the Chief Engineer of grantee, but that said reservation shall not be construed as an obligation on the part of grantee to maintain water in said Desplaines River, and that grantee shall not be estopped by anything therein from changing the course of said river, or interfering with, controlling, and restraining the flow of the waters of said river, and said clause also providing that grantee shall construct and continuously maintain from the time when its Main Channel shall have been completed, such an outlet or drain from the ditch provided for, as will carry all the water from said ditch into said Main Channel."

OFFICES TO BE CLOSED ON APRIL 4, 1893.

Mr. Russell presented an order directing that the offices of the District be closed on Tuesday, April 4, 1893, election day; and the same was read.

Mr. Russell, seconded by Mr. Kelly moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—none.

Upon which result the President declared the motion carried, and the order adopted.

The following is

THE ORDER:

"*Ordered*, That the offices of this District be closed on Tuesday, April 4, 1893, election day, the same being a legal holiday."

REPORT ON OVERFLOWED LANDS IN ILLINOIS VALLEY.

Mr. Prendergast presented an order directing the Chief Engineer to present a report on the lands and property in the Illinois Valley that will be injuriously affected by the works of the District; and the same was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the order be referred to the Committee on Judiciary, with instructions to report two weeks from date.

The motion prevailed unanimously, and the order was so referred.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer, as soon as practicable report what lands and property in the Illinois River Valley will be injuriously affected by the construction and operation of the works of the Sanitary District of Chicago, and the character and extent of such injury, if any, to the end that the compensation therefor be fixed by condemnation proceedings."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

APRIL 5, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, April 5, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7) members were present.

MINUTES.

The minutes of the regular meeting held March 29, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, March, 1893	$ 1,545 16	
Eng. Dept., Div. No. 1, week ending April 1, 1893	994 70	
Eng. Dept., Div. No. 1, (Sag Building) week ending April 1, 1893	6 00	
Eng. Dept., Div. No. 2, week ending April 1, 1893	245 00	
Eng. Dept., Div. No. 3, week ending April 1, 1893	457 70	
Eng. Dept., Div. No. 4, week ending April 1, 1893	49 20	
		$ 3,277 76
Clerical Dept., Clerk's roll, March, 1893	$ 483 33	

Clerical Dept., office roll, week ending April 1, 1893.....	$39 00	$ 522 33
Treasury Dept., Treasurer's roll, March, 1893.....		166 66
Law Dept., Attorney's roll, March, 1893.....	$ 1,502 33	
Law Dept., Joliet roll, March, 1893.....	458 33	
Law Dept., office roll, week ending April 1, 1893.....	63 00	$ 2,029 66
General Account, Sanitary Inspector's roll, March, 1893.....	$ 200 00	
General Account, Trustee's roll, March, 1893	2 333 33	$ 2,533 33
Total.....		$ 8,529 74

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 3, April 1, '93).....	$ 708 75	
Agnew & Co. (Sec. 5, April 1, '93).....	165 37	
Agnew & Co. (Sec. 6, April 1, '93).....	378 00	
Agnew & Co. (Sec. 8, March 31, '93).....	1,792 13	
Agnew & Co. (Sec. 9, March 31, '93).....	881 47	
Mason, Hoge & Co. (Sec. 11, March 31, '93)	3,709 89	
Mason, Hoge & Co. (Sec. 12, March 31, '93)	5,963 57	
Mason, Hoge & Co. (Sec. 13, March 31, '93)	6,671 44	
McCormick Const. Co. (Sec. 14, April 1, '93).	191 62	$20,462 24

ENGINEERING DEPARTMENT.

Keuffel & Esser Co. (drafting material)..	$ 12 10	
Hiram A. Miller, (traveling—Sag).....	11 18	
A. C. Schrader, (traveling).....	15 09	
E. J. Ward, (traveling)	5 42	
A. R. Benson, (expense)	4 94	
Alex. E. Kastl, (emergency).....	3 85	
Alex. E. Kastl, (emergency).....	76 10	
Alex. E. Kastl, (emergency).....	28 75	
A. R. Benson, (emergency).....	29 75	$ 187 13

CLERICAL DEPARTMENT

Cameron, Amberg & Co. (stationery).....	$ 4 42	
John Underwood & Co. (typewriter paper)..	9 35	
Trevor Spring Water Co. (ice).....	3 00	$ 16 77

LAW DEPARTMENT.

John Underwood & Co. (typewriter paper)..	$ 25 10	
Jos. Donnersberger, (expert services).....	250 00	$ 275 10

GENERAL ACCOUNT.

The Chicago Edison Co. (electric lighting)...	38 05
Grand total.....	$29,509 01

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7.) Nays—None.

(Mr. Cooley voted "Yea" on all vouchers except those for "Construction," on which he was excused).

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 316, Engineering Department, (memorandum books).....	$ 9 00
No. 317, Engineering Department, (ink).....	9 00
No. 318, Engineering Department, (pens).....	1 00
No. 319, Engineering Department, (ink).....	50
Total.....	$19 50

Mr. Boldenweck, seconded by Mr. Cooley, moved that Requisitions Nos. 316, 317, 318 and 319 for the Engineering Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7.) Nays—none.

Upon which result the President declared the motion carried, and Requisitions Nos. 316, 317, 318 and 319, for the Engineering Department, as read and shown above allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the

District for the week ending April 1st, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending April 1, 1893, as the same have been reported to me:

Engineering Department	80	
Engineering Department (Sag Building)	1	
		81
Clerical Department		3
Treasury Department		1
Law Department		9
Total employes		94

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of March, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report		$2,524,122.18
Received from Blair & Co. for 250 bonds with interest and premium.	$257,390.85	
Received from Land Account, insurance premium on fire insurance policies—Piper ice houses	56.87	
Received from Tax Acct., Town of Jefferson Collector	3,289.57	
Received from Tax Account, Town of Cicero Collector	5,406.49	
Received from Tax Account, Town of Lake View Collector	8,292 04	
Received from Tax Account, Town of Hyde Park Collector	18,111.33	
Received from Tax Account, Town of Lake Collector	$ 19,307.59	
Received from Tax Account, Town of West Chicago Collector	58,719.08	
Received from Tax Account, Town of North Chicago Collector	35,484.74	
Received from Tax Account, Town of Lyons Collector	727.01	
Received from American Trust and Savings Bank, interest for March	994.16	
Received from Chicago National Bank, interest for March	1,062.92	
Received from National Bank of Illinois, interest for March	1,012.75	
Received from Metropolitan National Bank, interest for March	1,016.63	
Received from Ft. Dearborn National Bank, interest for March	1,010.91	$ 412,382.94
Total cash received for month		$2,936,505.12
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 688.83	
Treasury Department	170.02	
Engineering Departm't.	12,796.50	
Engineering—Construction—Department	32,042.93	
Law Department	10,448.52	
Law Department—Land Account	162,749.50	
General Account	2,505.08	$221,401.38
Balance this date, in banks as per schedule endorsed hereon		$2,715,103.74

(Signed) MELVILLE E. STONE,
Treasurer.

CHICAGO, April 5, 1893. "

SCHEDULE:

Fort Dearborn National Bank	$ 526,122.08
Chicago National Bank	550,638.08
Metropolitan National Bank	528,859.95
National Bank of Illinois	526,962.61
American Trust and Savings Bank.	582,521.02
Total	$2,715,103.74

COMPARISON OF FLOOD WATERS.

The Clerk presented a report from the Chief Engineer, accompanied by eight maps, the results of the investigation and comparison of the previous and recent

floods in the basins of the Chicago, Desplaines and Illinois Rivers, made in accordance with an order passed at the meeting held June 1, 1892 (Page 535 of the Proceedings), and transmitted as part of the report of March 1, 1893 (Page 1,067 of the Proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed, and with the accompanying maps, be referred to the Committee on Engineering.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith copies of eight plans which accompanied the report of Mr. T. T. Johnston, First Principal Assistant Engineer, dated February 7th, which report was transmitted by me to your Honorable Board on March 1st, and is found on page 1068 of the Proceedings. The followihg are the plans:

Discharge measurements of the North Branch Chicago River, near Clybourn place.

Discharge measurements of the South Branch Chicago River at Indiana Elevator.

Discharge measurements of the Illinois River at Morris, Ills., May, 1892.

Discharge measurements of the Illinois River at Morris, Ills., July, 1892.

Discharge measurements near the mouth of the Illinois River.

Curves of the discharge measurements of the South Branch of the Chicago River, near the Indiana Elevator.

Sketch showing location of discharge sections at Morris, Ills.

Curves of the discharge measurements of the Illinois River at Morris, Ills.

This report had reference to the flood measurements of May and June, 1892. The transmission of these plans fully complies with the original order.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Accompanied by eight (8) maps).

QUARTERLY PROPERTY RETURN.

The Clerk presented a report from the Chief Engineer, transmitting property return for the quarter ending March 31, 1893; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be ordered printed, and with accompanying property return, be placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit a property return for the quarter ending March 31st, 1893.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Accompanied by property return).

MONTHLY REPORT OF THE SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of February, 1893; and the same was read.

Mr. Boldenweck, seconded by Mr. Russell, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, April 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The month of February has witnessed no very marked change in the sanitary condition of the various encampments. My suggestions in regard to desirable improvements necessary in some of them have been complied with, and I feel confident that we will be fully prepared for the increased dangers that we would naturally anticipate on the approach of warmer weather. But at the rate at which the hospital is being pushed to completion, we will be in good shape to care for all cases of sickness that may occur on the work, as the

hospital at Mt. Forest, which will accommodate some hundred and fifty patients, will be ready for their reception about the 10th of April. All of the camps are now supplied with good water, and I have a plan that I think will effectually dispose of the sewage, the adoption of which I shall urge upon the various contractors.

Respectfully submitted,

(Signed) WILLIAM MARTIN,

Sanitary Inspector."

PURCHASE OF "WENTWORTH LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase of right of way lands in Cook County, owned by Mr. Moses J. Wentworth, in his own right and as trustee under the will of John Wentworth, deceased; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay, on the voucher of the Attorney, to Mr. Moses J. Wentworth, in his own right and as trustee under the will of John Wentworth, deceased, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay, on the voucher of the Attorney, to Mr. Moses J. Wentworth, in his own right and as trustee under the will of John Wentworth, deceased, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with Moses J. Wentworth in his own right and as trustee under the will of John Wentworth, deceased, for the purchase from him, for the corporate purposes of this District, of the land hereinafter described, for the sum of ten thousand five hundred and ninety ($10,590) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said Moses J. Wentworth, in his own right and as trustee, the sum of ten thousand five hundred and ninety ($10,590) dollars, in full payment for the following described land, to wit:

That part of the southeast quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying north of the Northwesterly Reserve line of the Illinois and Michigan Canal, containing thirty-five and thirty one-hundredths (35.30) acres, more or less.

Said land lying and being situate in the County of Cook in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.

W. H. RUSSELL.

THOS. KELLY,

WM. BOLDENWECK,

L. E. COOLEY,

JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

FOOT BRIDGE AT MOUNT FOREST.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to a communication from the Canal Commissioners, regarding permission to construct a foot bridge over the canal at Mount Forest, presented and referred to that committee at the meeting held March 22, 1893 (Page 1,111 of the Proceedings): and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Finance and Engineering respectfully report that reference to the communication received from the Canal Commissioners concerning the foot bridge over the Canal at Mt. Forest, presented and referred to that Committee at the meeting held March 22, 1893 (page 1111 of the Proceedings) that the Chief Engineer has already presented to the Canal Board the plans requested, and that no further action is required until the reply of the Canal Board is received.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,

Joint Committee on Finance and Engineering."

REQUISITIONS NOS. 310, 311, 312 AND 449.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to Requisitions Nos. 310, 311, 312, for the Engineering Department, and 449 for the Law Department, presented and referred to that committee at the meeting held March 22, 1893 (Page 1,109 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7.) Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, April 5, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Finance and Engineering to whom was referred Requisitions Nos. 310, 311, 312 for Engineering Department, and 449 for Law Department, presented at the meeting held March 22, 1893, (page 1109 of the Proceedings), respectfully report that they have considered the same and return them herewith with the recommendation that Nos. 310 and 312 for Engineering Department and 449 for Law Department be allowed, and that No. 311 for Engineering Department be not allowed.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,

Joint Committee on Finance and Engineering."

RAISING CANAL BRIDGES AND SPECIFICATIONS FOR WESTERN STONE CO. BRIDGE.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to the communications from the Canal Commissioners, presented and referred to that committee at the meeting held March 22, 1893 (Page 1,110 of the Proceedings), and also with reference to the specifications for the Western Stone Company bridge at the county line, presented and referred to that committee at the meeting held March 22, 1893 (Page 1,112 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7.) Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurrd in.

The following is

THE REPORT:

"CHICAGO, April 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the notice of the Canal Commissioners to raise cer-

tain bridges, known as the Swift Bridge, the Piper Bridge, and the Griffin & Connelly Bridge, located between Summit and Sag, and now belonging to this District, referred to this Committee on March 22d, we report as follows:

The bridges are now in our control as part of the property of the Sanitary District, and we are obliged to raise or otherwise change them in the interests of navigation, as the Canal Commissioners may direct, or otherwise remove the same. Their use, in conjunction with the sido tracks on the right of way is valuable to our contractors in enabling them to maintain communication with the Alton Railway, as a means of transporting machinery and supplies to the work, while their direct use to the District, otherwise than as accommodation to the contractors, is very small.

Your Committee therefore recommends that the Attorney and Chief Engineer arrange with the contractors who may be interested in each case for such raising of the bridges and changes in the same and in the approaches as may be necessary to comply with the requirements of the Canal Board.

In regard to the specifications for the bridge for the Western Stone Co. switch across the river diversion, near the County line, your Committee recommends that the advertising of the same be postponed until the specifications and plans for the highway bridge at Lemont can be considered, and furthermore, until more definite information is at hand, in relation to the Santa Fe crossing at the same place. It is expedient to advertise these structures at one time if it can be done, as the aggregate involved in each case is only a few thousand dollars. We therefore recommend that the Chief Engineer prepare the plans and specifications for these two bridges, and that meantime, the Committee retain the matter under advisement.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
JOHN J. ALTPETER,
THOMAS KELLY,
W. H. RUSSELL,

Joint Committee on Engineering and Finance."

APPEAL IN "YORE, COOK ET AL. CASE."

Mr. Kelly presented an order directing the Attorney to perfect an appeal to the Supreme Court of the State of Illinois, and authorizing and directing the President and Clerk to execute the necessary bond in the case of the Sanitary District of Chicago vs. Ellen E. Yore, John A. Cook, et al., as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, the Attorney directed to perfect an appeal to the Supreme Court of the State of Illinois, and the President and Clerk authorized and directed to execute the necessary bond in the case of the Sanitary District of Chicago vs. Ellen E. Yore, John A. Cook, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Attorney be and he is hereby directed to perfect an appeal to the Supreme Court of the State of Illinois from the judgment of the Circuit Court of Cook County, in the case of the Sanitary District of Chicago vs. Ellen E. Yore, John A. Cook et al., in which a motion for a new trial was overruled and judgment entered March 18, 1893, and that the President and Clerk execute on the part of the District its bond as per order of court, for the purpose of so perfecting said appeal."

LEASE TO L. D. CONNER & CO. TO BE PREPARED.

Mr. Kelly presented an order instructing the Attorney to prepare a lease to L. D. Conner & Co. of certain buildings on Section "A," and authorizing and directing the President and Clerk to execute the same, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Attorney instructed and

the President and Clerk authorized and directed, in accordance with same.

The following is

THE ORDER:

"*Ordered*, That the Attorney prepare a lease from this District to L. D. Conner & Co., contractors for contract sections "A" and "B," leasing to said contractors for and during the term of their respective contracts, the building known as the lower boarding house located on contract Section "A," or partly on said contract section and partly on the Illinois and Michigan Canal Reserve in the northeast quarter (¼) of Section thirty-three (33), Township thirty-eight (38), Range twelve (12) East of the Third Principal Meridian, at a rental for said building of twenty ($20) dollars per month during said term, payable in installments of one hundred and twenty ($120) dollars each at the expiration of each six (6) months thereof.

Said lease to bear date of April 1, 1893, and to provide that said building shall not be used by any other person or persons or corporation; that said building be kept insured by lessee, loss payable to this District, for not less than six hundred ($600) dollars; that should said building be destroyed or partially destroyed by fire or otherwise, there shall be no obligation on the part of the District to rebuild same, and such destruction shall terminate said lease.

Said lease may also contain a provision granting to said contractors the right to use the railroad track and bridge connecting the right of way of this District in the southwest quarter (¼) of Section twenty-seven (27), Township thirty-eight (38), Range twelve (12) East of the Third Principal Meridian, with the Chicago, Alton and St. Louis Railroad, providing said contractor shall keep said railroad track and bridge in repair at their own expense, and shall make whatsoever changes may be required by the Canal Commissioners in the construction of said bridge, or its elevation above the canal;

And that the President and Clerk be authorized and directed to execute said lease on the part of this District."

PURCHASE OF "MOSES J. WENTWORTH LAND."

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay Mr. Moses J. Wentworth, on the voucher of the Attorney, for certain right of way lands in Cook County, in full of verdict for said lands in the case of the Sanitary District vs. Albert Piper, Moses Wentworth, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenterseven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Mr. Moses J. Wentworth, on the voucher of the Attorney, for certain right of way lands in Cook County, in full of verdict for said lands in the case of the Sanitary District vs. Albert Piper, Moses Wentworth, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to Moses J. Wentworth, the sum of nine hundred and seventy-five ($975) dollars in full payment for the following described land, to-wit:

All that part of the east half (½) of the southeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying north and west of the northwesterly Reserve line of the Illinois and Michigan Canal, and north of the northerly boundary line of the right of way of the Chicago and Calumet Terminal Railway Company.

Said premises lying and being situate in the County of Cook in the State of Illinois.

Said sum being the amount awarded by the verdict and report of the jury in the case of the Sanitary District of Chicago vs. Albert Piper, Moses J. Wentworth, et al., in the Circuit Court of Cook County, Illinois, General Number 106,951, on the 18th day of February, 1893."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

APRIL 12, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, April 12, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members were present.

MINUTES.

The minutes of the regular meeting held April 5, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

PRESIDENT'S MESSAGE ON SUPERINTENDENT OF CONSTRUCTION.

The President presented a message, with reference to progress of work on the Main Channel, and the appointment of a Superintendent of Construction; and the message was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the message be ordered printed and referred to the Joint Committee on Rules and Engineering.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, and the message ordered printed and referred to the Joint Committee on Rules and Engineering.

The following is

THE MESSAGE:

"CHICAGO, April 12, 1893.

"To the Honorable. the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I consider it my duty from time to time when I believe the interest and the progress of our work, which is entrusted to us, can be advanced, to so notify the Board. I believe the time has arrived when the most energetic work is required on the part of the parties to whom were awarded the contracts for the excavation of the channel on the various sections, covering a distance of over twenty miles, from Summit to Lockport. For said distance all the lands are in our possession that are needed for construction.

It devolves upon us, as Trustees, to see to it that contracts entered into with this Board are carried out. Now is the time when work must begin and continue until the channel is finished. Thorough supervision must be had, and this can only be done by having a duly authorized party to superintend said work. The Chief Engineer is entrusted with said duties, but his office work requires his attention almost entirely. The assistant to the Chief is charged with certain duties, and is supposed to oversee the work in progress. I believe a superintendent of construction should be directly appointed by this Board; his duties to the Board and relations to the Chief Engineer should be clearly defined; he should be a man of experience and executive ability; his time should be entirely devoted along the channel on the scene of the work; his powers that which are essential to having the work prosecuted to its full extent; he should report every two weeks on the progress made by every contractor, and keep the Board informed otherwise. The work is of such magnitude that too much care cannot be exercised for the proper supervision of the same.

It must be admitted that during last winter progress could not be made at the same rate as if the weather had been more favorable; however, sufficient time was had from the time contracts were awarded to the present time, which should have enabled the contractors to place such machinery and apparatus on the ground, to work with a full force and excavate that amount which is essential to comply with the stipulations of the contracts entered into with the Sanitary District.

I believe every effort should be made on the part of this Board to make contractors live up to their agreements, and I am satisfied the Board will meet every obligation that devolves upon us to fulfill.

We have, at the present time, over $2,700,000 in the treasury. This may be a notice to the contractors that they can shovel all the dirt and blast all the rock they can and their warrants will be promptly paid—this Board wants work done.

Respectfully submitted,

(Signed) FRANK WENTER,

President Board of Trustees."

PRESIDENT'S MESSAGE CONCERNING ALLEGED SUB-CONTRACTORS.

The President presented a message, transmitting to the Board three documents, concerning alleged sub-contracts said to have been made on Section 8 of the Main Channel; and the message was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the message be ordered printed, the recommendations made therein concurred in, and the message, with enclosures referred to the Joint Committee on Judiciary and Finance and the Attorney.

The motion prevailed unanimously and it was so ordered.

The following is

THE MESSAGE:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith to the Board three documents, which are papers that have a bearing on the contracts covering Section 8. Said papers were handed to myself, addressed to the Board. The entire matter is of great importance to the Sanitary District, and should have the fullest consideration.

I would recommend that said papers be referred to the Joint Committee on Judiciary and Finance, with the Attorney of the Board, with full power to investigate and report back to the Board the result of said investigation, and make such recommendation to the Board as in

their judgment will be to the best interests of the Sanitary District.

Respectfully submitted,

(Signed) FRANK WENTER,

President Board of Trustees."

(Accompanied by three (3) documents).

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending April 8, 1893	$854 70	
Eng. Dept., Div. No. 2, week ending April 8, 1893	171 60	
Eng. Dept., Div. No. 3, week ending April 8, 1893	453 30	
Eng. Dept., Div. No. 4, week ending April 8, 1893	49 20	
		$ 1,528 80
Clerical Dept., office roll, week ending April 8 1893		39 00
Law Dept., office roll, week ending April 8, 1893		63 00
Total		$ 1,630 80

ENGINEERING DEPARTMENT.

F. Mayer & Co. (blue prints)	$13 97
John T. Allison, (hardware and rent)	30 50
Knickerbocker Ice Co. (bricks)	37 20
Edw. L. Fry, (expressage)	2 00
Chicago Toilet Supply Co. (toweling)	5 40
The Waukesha Hygeia Mineral Spring Co. (water)	5 00
Trevor Spring Water Co. (ice)	9 00
Jacob Herzog, (expressage)	3 00
Wm. Kirkham, (gauge reading)	10 00
Geo. Brainard, (gauge reading)	10 00
Patrick McGinnis, (gauge reading)	10 00
Mary Rusk, (gauge reading)	10 00
D. C. Dunlap, (horse and buggy)	45 00
H. S. Norton, (rent, Lemont)	18 00
C. L. Harrison, (rent Lockport)	20 00
E. R. Shnable, (traveling)	13 38
A. C. Schrader, (emergency)	$60 10
A. C. Schrader, (emergency)	34 80
	$ 337 35

CLERICAL DEPARTMENT.

Warner's Towel Supply (toweling)	$ 1 50

LAW DEPARTMENT.

S. D. Childs & Co. (stationery)	$ 6 35	
Chicago Telephone Co. (telephone)	31 25	
J. L. Bennett, (court stenographer)	72 20	
Jas. M. Purcell, (court stenographer)	130 50	
Geo. Hingston, (reporting accident, April 7)	5 50	
Jas. Griffin, (expert witness)	400 00	
Haynie R. Pearson, (expense)	17 75	
		$ 663 55

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings)	$175 92	
J. B. Taylor & Co. (printing — Channel Tables)	160 00	
Chicago Telephone Co. (telephone)	31 25	
		$ 367 17
Grand total		$3 000 37

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8.) Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 320, Engineering Department, (pens)	1 50
No. 321, Engineering Department, (drafting material)	15 80
Total	$17 30

Mr. Boldenweck, seconded by Mr Kelly, moved that Requisitions Nos.

320 and 321 for the Engineering Department, as read and shown above, be allowed.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, and Requisitions Nos. 320 and 321 for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending April 8, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending April 8, 1893, as the same have been reported to me:

Engineering Department	81
Clerical Department	3
Treasury Department	1
Law Department	9
Total employes	94

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of March, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of March was $796.11, divided as follows:

Salaries	$ 678 33
Stationery	108.28
General expenses	9.50
Total	$ 796.11

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $750.

The total amount expended and charged to the General Account during the month of March was $2,707.22, divided as follows:

Salaries	$2,533.33
Printing and Stationery	82.72
Janitor service	80 00
General expenses	11.17
Total	$2,707.22

There are no outstanding liabilities against the General Account, and the expenses for the present month will be under $3,500.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (with three (3) enclosures) from the Engineering Department, for the month of March, 1893; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report, with enclosures, be ordered printed and referred to the Joint Committtee on Engineering and Finance.

The motion prevailed unanimously, and the report was so referred.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of March also a classified statement of expenses in the usual form.

Expenses for the month of March were as follows:

Contractors' estimates	$32,095.47
Pay rolls	9,768.71
Material, etc	1,669.78
Total	$43,533.96

I estimate that the expenses of the Department for the month of April, including contractors' estimates, will be $55,000.

In the report of the Assistant Chief Engineer will be found a tabulated statement of the amount of work done on Sections 1 to 14 inclusive, to April 1, as compared with that which should have been done to comply with the provisions of the contracts. From this it will be seen that the work at this date is much behind contract requirements, though this in itself, owing to the severe winter and the spring floods, and the necessary delays in procuring sufficient plants for carrying on the work, would not be a matter of serious moment, provided there was an evidence that such plants were under construction and could be put to work within a reasonable time. This I regret to say is not apparent for some of the sections. I believe that it would be appropriate for the Board to take some action to ascertain what provisions are being made under all the contracts to provide proper plants and what the prospects are for their being put to work within a reasonable time.

I also desire to call your attention to the statement of the Assistant Chief Engineer, that on account of the lack of proper help and the extra work constantly coming up, the work of some of the divisions is considerably behind. Two of the divisions are now without permanent heads, the supervision thereof being thrown upon engineers in charge of adjacent divisions, where their whole time and energy is required. This arises from the fact that two of the assistant engineers, whose names were submitted to the Board on March 8 for confirmation under the new rules of the Board, have been suspended pending action of the Board in their cases. I would respectfully call your attention to the fact that it is desirable, for the interest of the service, that this matter be disposed of at an early date.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Three (3) enclosures).

"CHICAGO, April 11, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I submit the following report for Division one for the month of March:

Pay roll	$ 4,803.50
Pay roll, Sag building	58.80
Contractor's estimates	32,095.47
Total	$36,957.77

The pay roll for April may be increased $500, and contractors' estimates about one-half.

There has been but little field work done during the month, except the semi-monthly estimates, on account of high water.

A large portion of the labor of the division parties has been copying and checking cross-section notes. On account of the lack of proper help and the extra work constantly coming up, the work of some of the divisions is considerably behind.

In addition to the usual tables, there is one made up on a dollar basis, showing the total amount of work done to April 1—the rate per month and the amount behind on contracts, etc.

Amount of work done to April 1 on the different sections is as follows:

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
1, Main Channel	1 000	.....
2, Main Channel	24,800	.....
2, River Diversion	26,600	.....
3, Main Channel	43.500	.....
4, Main Channel	31.500	.....
5, Main Channel	25.000	.....
6, Main Channel	23 500	.....
7, Main Channel	18 200	.....
7, River Diversion	11,800	7,060
8, Main Channel	7,500	1 470
8, River Diversion	47.400	32 120
9, Main Channel	10 400	2 860
9, River Diversion	37,700	4 690
10, Main Channel	18 900	4,680
10, River Diversion	27 400	38 240
11, Main Channel	32.600	30 080
11, River Diversion	2.600	4 810
12, Main Channel	15.553	57.600
13, Main Channel	32,822	64,800
14, Main Channel	15 000	22,800
Totals	453.775	271,210

Total amount of estimates paid previous to April 1, $268,172.64.

Total amount of material moved to April 1, 1893:

	Cubic Yards.
Main Channel, Glacial Drift	300,275
Main Channel, Solid Rock	184,290
River Diversion, Glacial Drift	153.500
River Diversion, Solid Rock	86,920

FORCE REPORT—DAILY AVERAGE.

	Men.	Teams.	Steam Drills.	Channelers.	Steam Hoists.	Steam Pumps.	Cableways.	Steam Shovels.	Steam Scrapers.	Cantilever Cranes.	Cable Hoists.	Air Drills.
Section 1	12	4	....	....	....	....	....	....	....	....	....	....
Section 2	11	.3	....	....	....	....	....	....	....	....	....	....
Section 3	50	3	....	....	....	.5	....	.5	....	....	....	....
Section 4	.4	....	....	....	....	....	....	....	....	....	....	....
Section 5	13	.2	....	....	....	.7	....	.6	....	....	....	....
Section 6	11	.1	....	....	....	1	....	....	1	....	....	....
Section 7	27	2	.7	....	.2	1.5	....	....	....	....	....	....
Section 8	74	6	2	.4	.9	1	....	....	....	....	....	....
Section 9	18	1	.9	....	....	1	....	....	....	....	....	....
Section 10	....	....	....	....	....	....	....	....	....	....	....	....
Section 11	106	15	1.5	2	1	5	....	....	....	....	.3	2.7
Section 12	136	5	6	2	....	....	2	....	....	....	....	....
Section 13	120	5	4	3	....	....	....	....	....	.5	....	....
Section 14	....	....	....	....	....	....	....	....	....	....	....	....
Section B	.6	.1	....	....	....	....	....	....	....	....	....	....
Section C	9	.1	....	....	....	....	....	....	....	....	....	....
Totals	588	43.7	15.1	7.4	2.1	10.7	2	1.1	1	.5	.3	2.7

CONDITION OF WORK APRIL 1, 1893.

Section.	Contractor.	Amount done to January 1, 1893.	Amount during January, 1893.	Amount during February, 1893.	Amount during March, 1893.	Total amount done April 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done April 1, 1893.	Amount short as per contract April 1, 1893.
1	Alfred Harley	.....	.....	$ 270	.....	$ 270	$ 20,867	$ 15,650	$ 15,380
2	McArthur Bros	$ 6,916	$ 4,564	2,156	$ 756	14,392	15,611	31,223	16,831
3	McArthur Bros	9,828	.....	486	1,431	11,745	18,983	75,932	64,187
4	McArthur Bros	8,505	.....	.....	.....	8,505	15,780	47,342	38,837
5	Agnew & Co	6,372	.....	.....	378	6,750	12,476	31,190	24,440
6	Agnew & Co	4,914	405	243	783	6,345	14,233	35,584	29,239
7	Agnew & Co	8,115	1,838	2,550	485	12,988	17,816	44,541	31,553
8	Agnew & Co	23,845	7,321	4,462	3,752	39,380	22,760	91,041	51,661
9	Agnew & Co	14,094	2,149	1,061	1,007	18,311	19,348	77,392	59,081
10	E. D. Smith & Co	27,880	12,609	5,472	.....	45,911	23,291	93,166	47,255
11	Mason & Hoge & Co	17,606	6,300	6,625	7,766	38,297	19,395	77,582	39,285
12	Mason & Hoge & Co	22,219	7,449	9,272	11,412	50,352	18,781	75,126	24,774
13	Mason & Hoge & Co	21,481	9,269	5,232	10,988	56,970	18,461	73,846	16,876
14	McCormick Con. Co	18,184	1,241	.....	219	19,644	19,846	79,386	59,742
	Totals	.....	.....	.....	.....	$ 329,860	.....	$849,001	$ 519,141

Total amount required to be done April 1st.....$849,001
Total amount done April 1st, 1893..... 329,860
Amount short as per contract April 1st, 1893.....519,141

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

"CHICAGO, April 10, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of March has been:

The work of reducing the notes pertaining to floods in the Illinois River Valley was continued.

Work was done, as time permitted, on reduction of field notes pertaining to survey of head waters of North Branch of Chicago River.

The survey of street lines adjacent to the South Branch of the Chicago River was continued.

Flood measurements were successfully and satisfactorily made in the Desplaines River at Desplaines and in the North Branch just below Morton. The reduction of the field notes was undertaken and nearly completed.

A plat showing the overflowed area between Bridgeport and Joliet was completed.

Some work was done pertaining to the preparation of official plans of Main and Diversion Channels.

Miscellaneous work pertaining to construction, maintenance of river gauges, flood data and reports and hydraulic calculations of general character was done.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

"CHICAGO, April 8, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The report of Division 3 for the month of March 1893 is as follows:

The platting of the two topographical maps of the Sanitary District and adjacent territory was continued without any interruption. Copies of plats for use in preparing these maps were made in Will County, Ill., and Lake County, Ind. In DuPage County the copies of the records were finished.

The inking of the Chicago River Survey and sewerage maps was continued.

Copies were made for hektograph prints of the corrected map and profile of the Main Drainage Channel, and of various discharge curves and measurements in the Chicago and Illinois Rivers.

The work of locating section corners was continued north from Lockport.

During April work will be continued on the corrected map and profiles of the Main Drainage Channel, the topographical and Chicago River survey maps, and on the location of section corners north of Romeo.

Very respectfully,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of March, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit a report of the total amount paid out on account of the Law Department, during the month of March, 1893, classified as follows:

Salaries.

Attorneys	$1,425 00	
Right of way force	616 67	
Office force	245 50	
		$2,287 17

Expenditures.

Right of way	$ 529 76	
Court costs	2,541 25	
Legal services	5 200 00	
Stationery	51 08	
Sundries	52 77	
		$8,374 86

Land Account.

Right of way	$162,749 50
Total	$173 411 53

I do not know of any reason why the current expenses for the present month should differ greatly from those of March. The amount paid out for land will probably be quite large, as several large settlements are about to be made.

The motion for a new trial in the Cook-Yore case has been argued and overruled; and under the order of this Board, passed last week, an appeal prayed on behalf of the District. A motion for a new trial in the Burke-Ames case has been argued and overruled. Mr. Ames has

settled for his judgment and we now have possession of the land. In the Burke case the defendants have given notice of an appeal to the Supreme Court. Since the last report about 250 acres have been obtained by purchase, near Summit. All the lands between Summit and Willow Springs have now been settled for, except about 55 acres.

The appeal in the case of the Sanitary District vs. Piper, Cullerton et al., which was ordered by the Board at its meeting of December 14, 1892, has been perfected, and printed arguments and briefs filed in the Supreme Court on behalf of all the parties, during the month of March.

The case of the Sanitary District vs. Tedens, et al., which was tried in DuPage County in August, 1892, was appealed by three of the defendants to the March term, 1893, of the Supreme Court. The case was continued on motion of the Sanitary District to the October term, 1893, beacuse of the imperfect transcript of record prepared by the defendants who appealed the case.

All the right of way needed by the District between Summit and the lower end of contract section 14, near Lockport, except about 140 acres, has been obtained; the few scattering pieces remaining will be procured very shortly by condemnation, if settlement is not made.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

OVERFLOWED LANDS IN ILLINOIS VALLEY.

Mr. Kelly, Chairman, presented a report from the Committee on Judiciary, with reference to the order directing the Chief Engineer to present a report on lands and property in the Illinois Valley injuriously affected by the works of the District, presented and referred to that Committee at the meeting held March 29, 1893, (page 1133 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee, to whom was referred the order of March 29, 1893, directing the Chief Engineer, as soon as practicable, to report what lands and property in the Illinois river valley will be injuriously affected by the construction and operation of the works of this District, and the character and extent of the injury, to the end that the compensation therefor be fixed by condemnation proceedings, have had the same under consideration and report as follows:

We find that the Chief Engineer, in a communication to this Board June 29, 1892, asked for authority to employ a force of men to collect data upon the May floods in the Illinois river valley, noting the height of the water and approximate areas of land overflowed along the river from Joliet to its mouth, that authority to make such investigation was granted July 27, 1892, and a force of men was accordingly employed in that work several months under the charge of Assistant Engineer E. J. Ward. The reduction of the notes pertaining to that flood has been almost completed, and when same are completely tabulated and classified, this Board will have at its command sufficient data to enable it to determine what further information, if any, may be needed, and what action should be taken thereon.

Respectfully submitted,

(Signed) THOMAS KELLY,
Chairman.
WM. BOLDENWECK,
JOHN J. ALTPETER,
Committee on Judiciary."

TIME WHEN ILLINOIS VALLEY INFORMATION WILL BE PRESENTED.

Mr. Prendergast presented an order, directing the Chief Engineer to report at the next meeting when the information concerning the Illinois Valley would be presented to the Board; and the same was read.

Mr. Prendergast, seconded by Mr. Boldenweck, moved the adoption of the order.

The motion prevailed unanimously and the Chief Engineer was instructed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, that the Chief Engineer be and he is hereby directed to report at the next meeting of the Board the time when he will submit to the Board the information with reference to the lands in the Illinois Valley."

PURCHASE OF THE "M'CONNELL, DOUD AND MURPHY LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Cook County, owned by the estate of George McConnell, deceased, and by Patrick and Edward Doud and Sarah Murphy, and authorizing and directing the Clerk to pay for said lands on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the estate of George McConnell, deceased, and Patrick and Edward Doud and Sarah Murphy, on the voucher of the Attorney, for said lands as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the estate of George McConnell, deceased, and Patrick and Edward Doud and Sarah Murphy, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with John McConnell, Benjamin F. McConnell and Abbie M. McConnell, as executors of the last will and testament of George McConnell, deceased, for the purchase from them, for the corporate purposes of this District, of the lands hereinafter described, for the sum of one thousand four hundred seventeen and fifty one-hundredths ($1,417.50) dollars.

From Patrick Doud for the purchase from him, for the corporate purposes of this District, of the lands hereinafter described, for the sum of five thousand five hundred ($5,500) dollars.

From Edward Doud and Sarah Murphy for the purchase from them, for the corporate purposes of this District, of the lands hereinafter described, for the sum of five thousand five hundred ($5,500) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said John McConnell, Benjamin F. McConnell and Abbie M. McConnell, executors of the last will and testament of George McConnell, deceased, the sum of one thousand four hundred seventeen and fifty one-hundredths ($1,417.50) dollars in full payment for the following described land, to-wit:

That part of the south fraction of the northwest quarter (¼) of Section twelve (12) Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at the center of said Section twelve (12) and running thence north on the east line of said south fraction to the southerly margin of the Desplaines river, thence northerly at right angles with the general course of said river there to the center thread of the current of said river, thence west and south down said center thread to its intersection with a line drawn northwesterly from the point of contact of the south line of said south fraction with the southeasterly margin of said river and at right angles with the general course of said river there; thence southeasterly along said line to said southeasterly margin, thence east along said south line to the point of beginning.

Said land lying and being situate in the County of Cook and State of Illinois

To Patrick Doud the sum of five thousand five hundred ($5,500) dollars in full payment for the following described land, to-wit:

That part of lot six (6) of a subdivision of the southeast fractional quarter (¼) of Section eleven (11), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, as per plat recorded in the Recorder's office in

Cook County, Illinois, in Book 173 of Maps, page 27, bounded and described as follows:

Beginning at the intersection of a line drawn from the northeast corner of said southeast fractional quarter (¼) to a point in the south line of said southeast fractional quarter (¼) 900 feet east of the southwest corner of said southeast fractional quarter (¼) with the north line of said lot six (6) and running thence southwesterly on said first named line 752.70 feet; thence east on a line parallel with the south line of said southeast fractional quarter (¼) to the westerly margin of the Desplaines river; thence easterly at right angles with the general course of said river there to the center thread of the current of said river; thence northerly up said center thread to its intersection with a line drawn easterly from the point of contact of the north line of said Lot six (6) with the westerly margin of the Desplaines River and at right angles with the general course of said river there; thence westerly on said line to said westerly margin, thence west on said north line to the point of beginning, and for damages to land not taken.

To Edward Doud and Sarah Murphy the sum of five thousand five hundred ($5,500) dollars in full payment for the following described land, to-wit:

That part of Lot six (6) of a subdivision of the southeast fractional quarter (¼) of Section (11), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, as per plat recorded in the Recorder's office in Cook County, Illinois, in Book 173 of Maps, page 27, bounded and described as follows:

Beginning at the intersection of a line drawn from the northeast corner of said southeast fractional quarter (¼) to a point in the south line of said southeast fractional quarter (¼), 900 feet east of the southwest corner of said southeast fractional quarter (¼) with the south line of said southeast fractional quarter (¼), and running thence northeasterly along said first named line 757.80 feet; thence east on a line parallel with the south line of said southeast fractional quarter (¼) to the westerly margin of the Desplaines River; thence easterly at right angles with the general course of said river there to the center thread of the current of said river; thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the northwesterly margin of the Desplaines River with the south line of said southeast fractional quarter (¼), and at right angles with the general course of said river there, thence northwesterly along said line to said northwest margin; thence west along said south line to the point of beginning, and for damages to land not taken.

All of said land lying and being situate in the County of Cook, in the State of Illinois.

As part of the consideration for the two last above described tracts of land, the Sanitary District is to construct and build a levee on the north side of the new river channel, to be constructed by the Sanitary District in Sections D, E and F, as set forth in the contracts let by said Sanitary District for the construction of the proposed work on said Sections D, E and F, and also is to construct and continuously maintain from the time when its main channel shall have been completed, such an outlet or drain from the ditch provided for on the outside of said levee, as will carry all the water from said ditch into said main channel.

The dyke, ditch and drain already provided for in the contract for the purchase of the Prescott land, will be the same dyke, ditch and drain provided for in the purchase of this land, and no extra expense will be caused by the agreement herein contained as to the construction of the dyke, ditch and drain in the purchase of the land herein described.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
WM. BOLDENWECK,
W. H. RUSSELL,
L. E. COOLEY,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

COMMITTEE'S REPORT ON TAIL RACE—LOCKPORT TO JOLIET.

Mr. Cooley, Chairman, on behalf of the majority of the Joint Committee on Engineering and Finance, presented a report from that committee, accompanied by two supplemental reports from the Chief Engineer, recommending that plans and specifications be prepared for the route as outlined in Propositions Nos. 1 and 3 (as amended) of the Chief Engineer's report, presented and referred to that committee at the meeting held March 1, 1893 (page 1070 of the Pro-

ceedings); and the majority report was read.

Mr. Cooley, in his own behalf, presented a minority report, from the Committee, with two (2) enclosures the report being uncompleted.

The minority report in part, with enclosure, was ordered printed, and by unanimous consent permission was given to print the remainder of the minority report at the following meeting.

Mr. Eckhart, seconded by Mr. Kelly, then moved that the majority report be adopted, ordered printed, and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

(By unanimous consent, Mr. Prendergast explained his vote "yea" by stating that he would have preferred to have the report provide for the inviting of bids for the construction of Proposition No. 1, in its entirety.

Mr. Cooley changed his vote from "nay" to "yea" for the purpose of moving a reconsideration at the next meeting.)

Upon which result the President declared the motion carried, and the majority report adopted, ordered printed, and placed on file.

The following is

THE MAJORITY REPORT, WITH ENCLOSURES:

CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance have considered the report of the Chief Engineer, referred to the Committee on March 1, relative to the extension of the Main Channel below the end of Section 14, and the waste works therefor, extending to Dam No. 1 in Joliet, as embodied in three propositions accompanying said report, and beg leave to recommend that a route following west of the wire mills be adopted to a point three-quarters of a mile below said mills, and that plans and specifications be prepared for the work along said route, and that beyond said point plans and specifications be prepared for work on two routes as outlined in Propositions 1 and 3, as modified by the report of the Chief Engineer, submitted to the Committee on April 3, and that bids for all of said work be invited by advertisement to enable the Board to determine which of the two propositions is the cheaper and most advantageous for all purposes.

The Committee also recommends that steps be taken to acquire the necessary right of way to a point one-eighth of a mile below the middle of Section 28, Township 36 north, Range 10 East of the Third Principal Meridian, and that careful estimates be made of the cost of right of way on the two routes below the point named.

The work as planned is intended to be complete and final, requiring no further expenditure on the part of the Sanitary District throughout this reach, to provide for the combined discharge of the Desplaines River and the Main Channel. From the evidence submitted and the various statements made to the Committee, we believe that by the adoption of a doubtful makeshift for regulating works, by limiting the discharge to the Main Channel, and the capacity of the waste works to 300,000 cubic feet per minute, and by restricting the right of way to just enough to serve a temporary purpose, the present cost of this work might be reduced to a sum less than the estimates of the Chief Engineer. The work done on such a scheme, however, would serve only a temporary purpose, and the expenditure incurred thereon would ultimately be thrown away. But what is of more importance, the total expenditure of the District which must be made prior to putting the Main Channel into operation with a supply of 300,000 cubic feet of water per minute from the lake, would probably be much increased. It is undisputed that the Desplaines River flood waters must be controlled, and excluded from the Chicago River, if the city is to realize that sanitary relief which it will have a right to expect after the expenditure of so large a sum as the Main Channel will cost. There are but two feasable ways of accomplishing this; one is to build the Skokie cut-off to turn a part of these floods to the lake, the remaining portion being carried down the valley below Summit; and the other is to utilize the Main Drainage Channel and the bed of the Desplaines River to convey all the flood discharge of that river down the valley in the manner suggested as possible by the Chief Engineer in his report of June 7th, 1892.

Pursuant to this suggestion, one of the reasons advanced by several members of the Board for providing a 600,000 cubic feet channel between Summit and Willow Springs (see proceedings of the Board of of November 9, 1892, page 863), was that the expense of the Skokie cut-off might be thus saved. To this proposition, now that it has been finally decided to make this portion of the channel full size, your Committee heartily agrees, and it believes that it would now be a short sighted policy to adopt a plan at Lockport which will render the Skokie cut-off an absolute necessity, the expense of which would have to be met before the Main Channel could be put into operation. We consider that there is much force in the contention that economy dictates the line west of the wire mills, at least to a point three-quarters of a mile below said mills, to avoid all property, railroad and water-power complication, which will surely arise if we attempt to pass east of them.

We believe also, that so far as may be, that route should be followed which renders the utilization of water-power the easiest, and will contribute the most to, and interfere the least with the creation of a navigable channel from the end of the Main Channel through Joliet, and that will interfere the least with any railroad and commercial interests of the valley. In the opinion of the majority of your Committee, the route west of the wire mills to a point above designated, the best complies with these requirements, and we hence recommend it for your adoption subject to the limitations hereinbefore specified.

We transmit herewith two reports made to the Committee by the Chief Engineer, one dated March 23, and the other dated April 3, which are supplementary of his main report, and which we recommend be spread on the minutes.

Respectfully submitted,

(Signed) B. A. ECKHART,
WM. BOLDENWECK,
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

EXHIBIT A.

"*To the Joint Committee on Engineering and Finance:*

GENTLEMEN—The questions that were raised at a meeting of the committee held on the 9th, and the criticisms that at sundry other times have found expression, regarding the three propositions for the extension of the Main Channel and the construction of waste works between the lower end of Section 14 and Dam No. 1, submitted to the Board on March 1st and referred to the Joint Committee on Engineering and Finance for consideration, I believe entitle me by all parlimentary usage to the privilege of your attention to the following explanation:

The General Character of the Work is objected to because, instead of the plans proposed, the water might be let out of the Main Channel uncontrolled, except by natural barriers, and allowed to follow the Desplaines River with little, if any, restraint.

Before dealing specifically with questions thereby raised I beg to call your attention to the order directing the report under consideration.

The following is from the Proceedings of November 23, 1892, page 917:

"*Surveys and Investigations on Questions 1 and 4.* Mr. Altpeter presented an order directing the Chief Engineer to make surveys, investigations, etc., with reference to questions 1 and 4 of the President's message of November 16, 1892, and the same was read.

Mr. Altpeter, seconded by Mr. Boldenweck, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Russell and Wenter—six (6). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried and the Chief Engineer instructed in accordance with the order.

The following is the order:

"*Ordered*, That the Chief Engineer be instructed to make all needed surveys and investigations, including property values, and to prepare all necessary maps, plans, etc., and arrange all data needed for the full consideration of questions 1 and 4,

which are to be submitted to a Board of Engineers, in accordance with the message of the President of November 16th namely:

"1. The disposal of flood waters from all drainage areas which materially modify or affect the sanitary condition of the District.

4. The works and treatment needed between the lower end of Section 14, above Lockport and Lake Joliet, to properly dispose of the water brought down by the Main Channel, in addition to the flood waters; said works being considered with reference to the ultimate necessity of the general government constructing a navigable channel throughout this reach, connecting with the Main Channel of the Sanitary District, and to any incidental commercial advantages which the situation presents."

On the failure of the proposition to appoint an advisory board of engineers, this order together with the action of the Board upon the President's report of November 16 (page 872 of Proceedings), remained as my authority for the report of March 1.

I submit that this authority is explicit in rendering it incumbent upon your Engineer to present a full and complete plan for this work, having in view such incidental commercial and navigable advantages as the situation presents, and not a mere make-shift.

The specific objection made, that in following this order, we are "prejudicing the future," loses all its force when we remember that if the work done by the Sanitary District be not along lines that are to be permanent, the District will not only prejudice its own future interests, but it will prejudice all public and private interests of the Valley including the navigable interest of the State and general government.

The work that the Sanitary District does, even though it be a make-shift, will form the nucleus around which will cluster manufactories, and it will guide and control the permanent improvements of railroads, particularly those of the Chicago, Santa Fe & California Railway; so that, unless the right territory is occupied now, a situation will be created rendering the proper treatment of this question well nigh impossible.

The danger is not in "prejudicing the future," but in having the future prejudice public interests beyond the hope of redemption.

The suggestion that the regulating works at the end of the Main Channel may be dispensed with, during the time that a 300,000 cubic feet channel is in use from Chicago to Summit, and the Chicago River is exclusively relied upon to supply it, is impracticable unless they are built somewhere else, for the reason that if we should succeed in getting 300,000 cubic feet per minute through the South Branch of the river, it will only be by a number of changes in bridges, and by deepening and perhaps widening the river in places, and by creating the maximum allowable velocity in the river. Let us suppose this accomplished, with low water in the lake, and the lower end of the Main Channel excavated to just the proper place to allow 300,000 cubic feet to escape and to maintain the requisite slope in the Chicago River, and the surface of the lake rises four or perhaps five feet, there would then be thrown into the Chicago River, and the channel between Chicago and Summit 4 or 5 feet of extra slope, except a small amount used at the regulating works, and in the Main Channel below Summit, thereby increasing the velocity in the river from 60 to 80 per cent and the discharge still more. This would be ruinous to the interests of navigation in the tortuous and narrow Chicago River.

There are constructive reasons why it will not be advantageous to defer the construction of these works after the channel is put into operation, into which I will not enter.

It is enough to say that to build a $20,000,000 channel, and to leave it without control, in order to defer for a few years, an outlay of perhaps one-half of one per cent of its cost, would be on a par with building the Chicago water supply system with its net work of pipes and tunnels and leaving it without stop gates. Again it should be remembered that this is a question wholly by itself, and has no possible bearing upon determining the proper course to pursue with the waste channel below the regulating works.

Objections were made to carrying the Main Channel to Station 1529, near to the Lockport road, as being more expensive than stopping it farther up. This is true if we consider only the work which the Sanitary District is to do, but just how

much saving may be made by such a change cannot be told until the Regulating Works are fully designed. It is likely to be less than $100,000. By cutting the Main Channel short we increase the expense of the waste channel, which must be excavated if carried above the point shown, and we increase the expense of the basin at the end of the Main Channel, and the expense of the Regulating Works. No saving can be effected, however, by such change on the work as whole. If the excavation on the continuation of the Main Channel is also considered the location of the Regulating Works shown on the plans is the cheaper and more advantageous. It was intended when these works were located to make this excavation, but in abandoning the idea, the present advantage to be derived in a higher location was overlooked. This is a mere matter of detail, however, which there is no pretense of having fully developed, and which has no possible bearing upon the merits of the plans for waste works in which all the difference between the various propositions lie, except as it increases the cost of Proposition 2 (the one that passes east of zhe Wire Mills), relatively more than the others.

It is claimed for Proposition 2 that the water might be made to follow the river below the Wire Mills by confining it by two parallel banks a few hundred feet apart, thereby saving right of way and making a more desirable disposition of it than by allowing it to spread over so great an area. This is true, but as it would compel the abandonment of parts of the river on the east side of the valley in order to provide for lateral drainage, and involves a considerable amount of excavation and two water-tight embankments, probably walled to prevent erosion, it would materially increase the cost of the work.

Above the Wire Mills on the other hand, with proposition 2, where the water would, if unrestrained, flood railway tracks and water power improvements, it is urged that it should be allowed free swing. But for the condemnation of the work above the Mills, where it seemed absolutely necessary to avoid a make-shift, the condemnation of the proposed make-shift below the Mills would bring unalloyed gratification.

It may be said in reference to the lower part of both propositions 2 and 3, that I have never regarded, nor do I now regard the plan estimated upon as one that is worthy of any consideration, or that should in any event be carried out; it would be a disgrace to the Sanitary District. It is only put forward to be used in comparison with propositton 1, because it seemed the cheapest treatment, and would give the least color to adverse criticism regarding relative expense, and because the tenor of all criticisms now and in the past has been that, without regard to consequences, the cheapest thing should be done and the water allowed absolute freedom in the choice of its route down the slope.

Proposition 2, I regard as the cheapest practicable plan for waste works on a route east of the Wire Mills, that in any degree fills the requirements of the order under which I am working. It is nevertheless unworthy of consideration in view of other alternatives.

I also fully agreed with the idea that the water should be restrained for a part of the way on the west side of the waste channel for proposition 1, and as it will cost not to exceed $48,000 to do it, I consider it money well spent.

It is objected that the retaining embankments proposed are unsafe, and the report of Capt. W. L. Marshall, "On survey of water way from Lake Michigan to the Illinois river at La Salle," is referred to as evidence of this. An examination of that report (page 48) shows that the proposed embankment which was not recommended because it was considered less safe than another plan, was wholly different from the one described in my report. The former embankment was to be made of earth and was to have its top 2 feet above the water line; it was to be 12 feet on top with slopes of 1½ to 1, the water side to be covered with riprap two feet thick. No provision was made for a water tight joint where it joined the rock.

I propose a bank from 4 to 5 feet higher than the water line, 24 feet wide on top, with the natural slope of broken rock, assumed at 1¼ to one, with an earth core and a concrete rib 2 feet square in sections to render it water tight. Its maximum height is 25 feet and its average about 21 feet. Its total range being 15 to 25 feet, instead of 35 to 40 feet. The greatest depth of water supported by the bank at any place is 18 feet. The sides are to be made

of rock to the extent of about two thirds of its volume. For the main portion of the bank, the rock and earth is to be built up simultaneously in layers, the finer portions of the rock and earth to intermingle on each side of the earth core proper, the mass gradually growing coarser toward the sides, the whole to be well consolidated in building. The top to be leveled with small broken stone forming an even surface. These details as to dimensions, etc., are of course subject to variations on farther study and investigation of the subject. The accompanying plan exhibits two banks, one constructed in the manner described, but not recommended by Captain Marshall, the other as proposed by me for the purpose of the estimates. Such an embankment cannot be destroyed except by water pouring over its top; and being composed to such an extent of large masses of stone its destruction would be very slow even under such conditions. Indeed if the surface is properly leveled with fine stone and consolidated so as to form, and be ured as a roadway, with fairly large coping stones on each edge, water could run over the bank a foot or two deep for many hours, and perhaps days, without damage.

By expending $30,000, the bank can be made two feet higher throughout its whole length, and a spilway 800 feet long provided adjacent to the site of the sluice gates at Station 1620, which will secure absolute immunity from overflowing. Or automatic gates can be made at the same place, which will yield when the water exceeds a given height, thereby accomplishing the same end.

Loose rock dams, and loose rock and earth dams, are largely used and have given excellent satisfaction. They are considered safer than earth dams, because if constructed with sufficient base and on a foundation that cannot erode by the percolation of water, they do not fail from the causes that sometimes destroy earth dams. When founded on rock, as in this case, leakage does not jeopardize them in the least. Dams have been successfully built entirely of loose rock, with no earth, when there situation was such that some leakage is unobjectionable, and it is said that their tendency is to become better with age.

On the accompanying sketch is a section of an earth and loose rock dam in use across the Boise River, Idaho, built by the Idaho Mining and Irrigation Company, and also one wholly made of loose rock and faced with plank built across the Hassayampa River near Prescott, Arizona, and known as the Walnut Grove Dam. This latter one failed, not because of any fault of the design, but because of an insufficient waste way, and because a small portion of the dam rested upon from 5 to 12 feet in depth of loose earth and gravel instead of rock exclusively. It will be noticed that it was relatively very tall compared to its base, viz., 110 feet in height and 138 feet wide, a ratio of 1¼. The bank proposed for the Sanitary District Channel has a proportion of 22 feet in height and 78 feet in width, a ratio of more than 3.5. In addition to this it is believed to be an improvement in every way, and to combine all the good points of the dams described, with none of their weaknesses or defects. But be its shortcomings what they may, it will afford no opportunity for a burrowing animal to work, whatever havoc muskrats may have committed with light earth or silt banks elsewhere.

With all the successful dams and retaining embankments in use throughout the world, the condemnation of an otherwise desirable plan because an embankment is used, would be at least surprising. Whatever the Sanitary District may do, a navigable channel will never be built from Lockport to Joliet without a liberal use of embankments, and they are not likely to be built of masonry exclusively. But even if a breach should occur in such a bank as that proposed, the slowness with which it would yield, the great length of the waste channel and its shallowness, wholly unlike an ordinary storage reservoir, combined with the large channel which will be provided through Joliet, a channel which will without injury admit of the passage of water largely in excess of the greatest flood requirements, would render the danger from such a break inconsiderable. An exemplification of the statement that such a bank would resist an overflow for a long time is seen in the rock filled dam at the wire mills below Lockport, which carelessly built as it is, withstands the continued overflow of the Desplaines River floods in a surprising manner. In this connection we should not lose sight of the fact that nothing in the nature of a storage res-

ervoir is proposed. It is merely a channel built along the west side of the valley, with an average cross section of about 7,000 square feet, and an average velocity when 600,000 cubic feet per minute is flowing, of 1.45 feet per second.

The questions raised regarding the correctness of the estimates for this work doubtless have had their origin in a misunderstanding. The estimates of course are approximate, but I am sure they are safe to within the usual range of variation, which I think you recognize has not been so great for the work heretofore estimated upon and contracted for, as to wholly discredit what may now be put forward. Some items will doubtless be found too high and others too low but on the whole they are likely to average up about right. I have full confidence that, taking the work as a whole on proposition 1 from the end of Section 14 to Dam No. 1, a bank can be built along the west side of the waste channel to narrow it up, and that other additional expenses can be incurred if found necessary, and still keep the cost within the estimate.

Objections are raised to the use of dams —two in number—in the course of the waste channel. This is the fault of the situation and not of the Engineer.

There is a descent of 32 feet to make in a distance of 22,000 feet, or about 1½ feet to the thousand. It would be bad engineering to use it up in slope. To get a channel of uniform slope, and walled so as to stand the high velocities which so great a slope would induce, would be far more expensive than the plan proposed, and it would contribute absolutely nothing to navigation or water power development.

Then, no ordinary structure subjected to such velocities with so large a volume year in and year out could be considered durable. This is one grave objection to a confined and walled channel in the river bed below the Wire Mills. My predecessor, Mr. Samuel G. Artingstall, proposed to accomplish this descent in the river bed, but with the use of dams.

Safety and durability, and frequently cheapness, in hydraulic works accompany the eradication and avoidance of high velocities. Such I believe to be recognized as the best engineering practice, as it certainly is most in harmony with scientific principles.

There are a few salient points that are essential to the avoidance of confusion in deciding upon a route:

1. Specifications, and minutely detailed plans, have not been worked out for the work in hand. Even if there had been opportunity to do so, it would be a waste of time to attempt it until the route and general treatment shall have been decided.

2. Whatever the faults in details, they do not in any wise affect the merits of the general plan. Proper details can be made by some one.

3. To inhibit the use of restraining embankments is to condemn the whole drainage scheme, and particularly the navigable part of it, as next to impracticable, and is to fly in the face of all engineering practice. Such questions are of an engineering and scientific nature and should be handled as befits such questions, by the use of expert advice if necessary.

4. Neither the location of the regulating works, the character of these works, nor the question of works or no works, has any bearing upon the treatment of the waste channel

5. Now is the time to fix upon a route that will as far as possible meet every future need, and most fully husband every resource; to do otherwise will be to invite difficulties and impediments to the usefulness of the work.

6. The river route, for the waste channel, will compel one of two things; either a navigable channel must follow the east side forcing the removal of the Santa Fe Railway and causing unnecessary expense for excavation, or it will take the west side in a manner substantially as mapped out, abandoning the work done by the Sanitary District. Whatever may be said to the contrary, the only economical route for a navigable channel is on the west side of the valley, and any money expended in the river will be so much thrown away so far as contributing to any useful navigable or commercial purpose is concerned.

7. It is of vital importance, considering the Santa Fe question which faces the Sanitary District at Lemont and at the Chicago end, that the Joliet end should be

settled so as to raise no complications, and so as to hold no threat over that company.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer.

CHICAGO, March 23rd, 1893."

(Accompanied by colored drawing.)

EXHIBIT B.

"*To the Joint Committee on Engineering and Finance.*

GENTLEMEN—In accordance with the instructions of the Committee, given on Monday, the 27th ultimo, I submit herewith an estimate (marked "Appendix 1") of a modification of original proposition No. 3, relative to waste works, as contained in my report to the Board, dated March 1st, 1893.

The modification consists in locating the wier dam at a point 3,600 feet below the Wire Mills, instead of at the E. J. & E. Railroad; and in moving the regulating works 800 feet further north. The change in the location of the dam also necessitates slight changes in the character of the protecting banks on the east side of the river below the Wire Mills. In the valuation of real estate the same rates have been used as heretofore.

The total estimate of the modified plan is $1,241,725 85. At previous conferences of the Committee, serious, and as I consider valid objections were made, particularly by the Chairman, to the plan estimated upon for propositions 2 and 3 below the Wire Mills, in that the water was allowed too wide a spread, when it might be confined in narrower bounds by levees, thereby saving right of way and creating a more creditable engineering structure.

In the report to the committee dated March 23, I gave the reasons why this had not been done from the first, and further stated that I did not regard the plan estimated upon as one that is worthy of any consideration, or that should in any event be carried out. In harmony with these views I respectfully submit an outline for a plan for a second modification shown on an accompanying map, which is identical with the first modification of proposition 3, from the end of Section 14 to the wier dam below the Wire Mills, though beyond that point it differs in that the water is confined between two levees and delivered into the river a few hundrud feet above the upper basin.

This plan permits of a large reduction in the right of way, and avoids the flooding of lands on the east side of the river above the E. J. & E. Ry.

The estimate of cost is given in Appendix 2. It amounts in all to $1,324,534.50. The rates for determining the cost of the right of way being the same as heretofore use in Appendix 1.

It should be said that in neither of these modified plans, nor in the original Proposition 3, has any allowance been made for the expense to which the Chicago, Sante Fe and California Railway Company would be subjected in constructing a roadbed on their new right of way growing out of the proposed works of the Sanitary District, nor for any modifications or additions to the bridge for the main line of the Elgin Joliet and Eastern Railway, neither of which can now be intelligently given.

Respectfuly submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer.

CHICAGO, April 3, 1893."

APPENDIX 1.

Modification of Proposition 3.—Estimate.

Main Channel and regulating works as per estimate of March 1st		$ 694,198
Station 1529 to 1620—		
110,500 cubic yards embankment, Station 1529 to 1581, at 22 cents	$ 24,310 00	
58,000 cubic yds. earth filling, Station 1581 to 1620, at 25 cents	14,500 00	
116,000 cubic yds rock embankment, Station 1581, to 1620, at 40 cents	46,400 00	
4,200 cubic yards in roadways at 25 cents	10,500 00	
1,437 cubic yards concrete under embankment, at $4.50.	6,466 50	
9,700 lineal feet of trench for same, at 15 cents	1,455 00	
Bridge at Lockport road	21,600 00	
Bridge at Wire Mills road	19,800 00	

Masonry dam.....	$59,100 00	
	$ 204,131 50	
5 per cent for supertendence, etc.....	10,265 75	$ 214,397 25
Overflow Dam to Upper Basin—		
30,500 cubic yds earth in embankment below Wire Mills, at 20 cents.....$	6,100 00	
15,000 cubic yards of rip rap, at 40 cents.	6,000 00	
Raising one mile of C. St. Fe & Cal. Ry. track.....	7,800 00	
Bridge for switch track E. J. & E. Ry..	34,800 00	
Raising track E. J. & E. Ry.....	8,125 00	
4,700 cubic yards dry rubble masonry, at $2.00.....	9,400 00	
10,000 cubic yds earth filling, at 50.....	5,000 00	
11,000 cubic yds rock backing, at 25 cents	2,750 00	
56,600 cubic yds rock excavation, entrance to upper basin, at 70 cents...	32,620 00	
Tow path bridge.....	6,100 00	
	$ 118,695 00	
5 per cent for superintendence, etc.....	5,934 75	$ 124,629 75
		$ 1,033,225 85
Less for change of regulating works..		42,500 00
		$ 990,725 85
Right of way.....		251,000 00
Total..... ..		$ 1,241.725 85

APPENDIX 2.

Second Modification of Proposition 3.—Estimate.

Main Channel and Regulating Works, as per estimate of March 1..		$ 694,198 85
Station 1529 to 1620 as per Appendix 1.....		214,397 25
Overflow Dam to Upper Basin—		
72,000 cubic yds earth embankment at 20 cents.....$	14,400 00	
40,000 cubic yds rock embankment hauled, at 20 cents.....	8,000 00	
184,000 cubs yds rock excavation, at 70 cents.....	128,000 00	
21,000 cubic yds earth excavation at 20 cents.....	$4,200 00	
2,824 cubic yards of concrete at $4.50. .	12,708 00	
13,000 lineal feet of trench at 15 cents..	1,950 00	
3,800 cubic yards of dry wall at $2.00....	7,600 00	
9,000 cubic yards of cement masonry at $5.00.....	45,000 00	
5,500 lineal feet of trench for wall at 50 cents.....	2,250 00	
Bridge for switch track, E,, J. & E. R. R.....	46,400 00	
Tow path bridge.....	6,100 00	
	$ 276,608 00	
5 per cent for superintendence, etc.....	13,830 40	$ 290,438 40
		$ 1,199,034 50
Less for change of Regulating works..		42,500 00
		$ 1,156,534 50
Right of way.....		168,000 00
Total.....		$ 1,324,534 50

The following is

THE MINORITY REPORT, IN PART, WITH ENCLOSURE.

"CHICAGO, April 12, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—I am able to file to-day certain memorandum estimates which are to accompany my report on the Lockport-Joliet reach, and which can be completed so as to enter the record of to day's proceedings; my report I cannot submit until the next meeting, as the estimates have been very tedious, and I have been occupied with other duties.

My conclusion is that the Main Channel should be extended 2,500 feet and right of way secured so as to control the riparian rights to the river down to the upper basin. This involves an expenditure of $443 600. Aside from this, I find that only $239,400 is necessarily involved in river correction and tail race, and as the work is all very light

and can be done in one season, there is no reason why this should now be undertaken.

Very respectfully,

(Signed) L. E. COOLEY,

Chairman Joint Committee on Engineering and Finance."

(Two (2) enclosures.)

MEMORANDUM NO. 1.

Project and Estimate for the Joliet-Lockport Reach.

The following project and estimate cover the work necessary to deliver 600,000 cubic feet of water per minute from the present terminus of the Main Channel and care for the same, and also the floods of the Desplaines River down to the upper basin at Joliet. No attempt is made to utilize the waters, though all rights are preserved by securing riparian control of the channel through which the same will pass. All the work is projected on the theory of a future extension of the Main Channel for navigation and water power, when that shall be justified, and so as to involve the minimum of expenditure for work that may, in that event, be ultimately useless.

The Project—Basis of Estimates.

It is proposed to continue the Main Channel in a direct line to a point most economical for wasting the water, provide a side spill-way and regulating works on the left, and thence cut a tail race to the Lockport highway at the stone bridge. Some excavation and embankment is provided for between the upper and lower highway, the dam cut down so as not to unnecessarily raise the pool level, and the water below the dam trained by a dyke to the middle of Section 27, so as to avoid backwater to the mill-power at the lower highway.

The great flood of May, 1892, when 600,000 cubic feet per minute passed Joliet, raised the water only two feet opposite Norton's Mill, or from 20.2 feet to 18.2 feet below datum, so that this volume can be carried by this point without materially raising the normal level, and at no great cost. From above the dam at the lower highway to the middle of Section 27, the normal descent is 13.4 feet, (from 20.5 feet to 33.9 feet below datum); and the descent in the flood referred to was 11.3 feet (approximately from 19.0 feet to 30.3 feet below datum). This is the steepest descent in any half mile of the river above Joliet, and involves very little work in the treatment proposed. As the normal descent from the tail race at the Wire Mill is 4.3 feet to the middle of Section 27, the waste water will not back to the Wire Mill bridge.

In view of the waste water taxing the river bed to its full capacity at Lockport it is desirable to remove therefrom the variable and large additional volume due to floods in the natural river.

It is proposed therefore to continue the embankment as specified for the Romeo reach in a straight course to the lower highway and divert the Desplaines River parallel thereto on the west and to construct such works at the Wire Mill as will preserve the present riparian rights of property at that point to the natural river.

The main body of the water will rejoin the river about 1,500 feet below the lower highway where its normal level is three feet lower than the tail race, so that in floods the head available for water power will not be impaired.

From the middle of Section 27 to Dam No. 1, only such works are proposed as are necessary to restrict the flow within the limits of the right of way to be acquired along the river, requiring levees and embankments of very moderate dimensions. On any project it is desirable to lower and lengthen the crest of Dam No. 1, or to remove the same, and a removable dam or crest may be expedient. By such a device, the conditions would be much improved for a considerable distance up stream, probably to the steep slope above the E. J. & E. bridge.

No estimate is submitted for changing Dam No. 1, as this work would be part of the improvement required through the City of Joliet.

No estimate is made for bridging on the new right of way of the Santa Fe, as this line is not yet built, and any possible increase in flood height will not greatly change the conditions to be met at this point so far as length and height of structure are concerned. The local attorneys at Joliet state that the E. J. & E. switch below the high bridge has been abandoned and no estimate is therefore submitted for this crossing. The treatment proposed should not seriously increase flood heights

at this point, and the necessity for any considerable work, in any event, is not apparent.

No complications are involved at the Wire Mills, as Mr. Norton states that if the work is carried out so as to leave to him the water power which he now enjoys, he will deed to the District all the land required for its works, for a nominal consideration.

Terminus of Main Channel—Point of Greatest Economy.

In order to determine the most economical point at which to stop the Main Channel and waste the water, calculations have been made of the cost of the Main Channel and tail race from the present terminus at Station 1480 to the river above the Stone Bridge at Station 1537.

The figures for the Main Channel are based on the quantities and prices submitted by the Chief Engineer to the Committee. The price of rock in the tail race is taken at 60 cents per cubic yard as against 64 cents, for Proposition No. 1, where the material removed is to be carefully placed in a retaining embankment rather than wasted. As the rock is all shallow surface cutting, this is probably sufficient as compared to other prices in the estimates of the Chief Engineer.

The level of the water in the Main Channel is assumed for the present discussion, at that used by the Chief Engineer, or 8 feet below datum. The grade of the tail race is assumed at 15 feet opposite the end of the Main Channel, the width at 400 feet, and the descent at one in one thousand to the river at the Lockport road. With proper regulating works, the tail race proposed will be sufficient to waste the water. The estimate is probably ample, as the ground on the left, in which the tail race is cut, is one-half foot to one foot lower than along the center line of the channel, the profile of which was used in the computations, and for the further reason that excavation below a point 2 000 feet from the end of the Main Channel is largely a matter of choice rather than necessity.

The following table exhibits the cost, with 5 per cent. for contingencies, of the Main Channel and tail race, between Station 1,480, the present terminus, and the river above the Lockport road at Station 1,537, the Main Channel terminating at the points designated:

Main Channel Terminating at	Cost of Main Channel	Cost of Tail Race.	Total
Station 1,490.....	$106.300	$219.000	$325 300
" 1,495.....	155,400	156,300	311.700
" 1.500.....	205,500	116.300	321.800
" 1.505.....	253,600	81.300	334.900
" 1 510.....	302.800	52.500	355.300
" 1.515.....	350,800	36,900	387,700
" 1,520.....	397 000	19,400	416,400

The most economical point at which to waste the water is shown to be at or near Station 1,495, an extension of the channel of some 1,500 feet. It may be noted that this is within 300 to 400 feet of the point called for in proposition No. 2, as adopted by this Board, and had the work been laid out on the ground as specified and as shown by the maps, it would not now be necessary to consider the further extension of the Main Channel.

Extension of Main Channel.

It seems judicious to extend the channel one thousand feet further, or to Station 1505, a total extension of 2,500 feet, as thereby the cost of the tail race is reduced one-half, and is no longer an item of great moment, while the total cost is increased by only $23,200. The estimates are therefore based on the channel terminating at Station 1505.

As the figures for the Main Channel are based on the quantities furnished by the Chief Engineer for each thousand feet, the details will not be presented.

Extending Main Channel 2 500 feet.	$253,600
Spillway and Regulating Works...	80,000
Total for channel.....	$333.600

A large experience has been had in France and in this country in removable dams, designed to regulate the height of navigable pools and pass floods, fleets of boats, drift, etc. In view of the steady flow through the Main Channel, and the slowness with which the conditions influencing the same will change, the above estimate for regulating works should be sufficient.

The Tail Race.

As above remarked, the amount of excavation from a point one-fourth mile above the Lockport highway, beyond that required for levees, is a matter of choice. The estimate contemplates continuing the grade of the tail race until it runs out in the pool below the highway, and using the surplus material for grading. The estimate from Station 1505 to the middle of Section 27, one-half mile below the lower highway, is as follows:

To Station 1537—Rock, 107,600 yards at 60 cents	$ 64,560
Earth, 64,200 yards at 20 cents	12,840
Station 1537 to Dam. Earth and Rock Excavation, 30,000 yards at 40 cents	12,000
Levee, extending 3,300 feet below Dam, containing 26,400 yards, at 25 cents	6,600
Bridging, etc., Lengthening Lockport Bridge, and changes in Dam and Bridges at the Lower Crossing	14,000
Total	$ 110,000
Contingencies, 5 per cent	5,500
Total, including contingencies.	$ 115,500

The River Diversion.

The river diversion begins at the river (Station 1530), above the Lockport road, and terminates 1,500 feet below the lower highway, the grade at bottom beginning at 18 feet, and descending 1 in 800 for a distance of 3,200 feet, the width excavated being 300 feet, and the distance between levees or guard banks being 400 feet. The west guard bank extends from the road to the proposed dam at the wire mill, and thence below the dam for 1,500 feet. The east guard bank begins at Station 1524, and is practically a continuation of the bank specified for the Romeo reach down to the lower highway. The work at the Wire Mill is so arranged as not to impair the water power conditions there existing, and so as to enable the work to be carried out without material interference. The grades are so steep that the work required, except at the mills, is very moderate, and the quantities are in excess of the absolute necessities. The estimate is as follows:

Rock, 38,000 yards, at 60 cents	$ 22,800
Earth, 23,000 yards, at 20 cents	4,600
Rock, 24,000 yards, at 70 cents	16,800
Earth, 14,000 yards, at 25 cents	$ 3,500
Guard bank below highway, 12,000 yards at 25 cents	3,000
Dry wall, 2,000 yards, at $1.75	3,500
Bridge, Lockport road	7,500
Bridge, lower highway, new span and changes in old	5,300
Dam, 330 feet, flumes and railway bridge in combination	15,000
Total	$ 82,000
Contingencies, 5 per cent	4,100
Total, including contingencies.	$ 86,100

Wire Mill to Upper Basin.

Alternative methods of treatment have been estimated from a point one-half mile below the Wire Mill to Dam No. 1, the results not differing greatly. The levees provided are probably in excess of the actual needs.

Levee along west side Section 34, thence along E. J. & E. Railway, thence along Santa Fe right of way to Ingalls street, thence to basin, 66,000 cubic yards, at 25 cents	$ 16,500
Raising Santa Fe Railway grade	7,800
Changing Fractional Run, back drains and culverts	1,700
Tow path bridge and canal bank, etc.	10,000
Total	$ 36,000
Contingencies, 5 per cent	1,800
Total, including contingencies.	$ 37,800

Should the District be under any obligations in regard to the abandoned crossing of the E. J. & E. Railway, the total is not likely to be raised thereby to $50,000.

Right of Way.

The estimate for 700 acres of right of way down to the Upper Basin at Granite street, including the river bed, based on revised figures furnished by Mr. Weston, the right of way agent of the District, is $110,000.

Summary of Estimates.

Recapitulating the foregoing items, the total estimate is as follows:

Extending Main Channel 2,500 feet and including Regulating Works.	$333,600
Tail Race	115,500
Diversion of river	86,100

Improvement of river from the middle of Section 27 to Upper Basin..	$37,800
Right of way, 700 acres.....	110,000
Total...	$683,000

Some $50,000 of this expenditure is necessitated on account of preserving the situation at the Wire Mill.

Aside from the Main Channel, the total is $349,400. The land carries with it the riparian interests, and is to be regarded as a permanent investment. The works necessary for properly wasting the water aggregate $239,400 only, and of this again, the River Diversion and the river improvement in large part will, in all probability, possess permanent utility, so that the work that may be regarded in any sense as temporary, pending a final development of the Lockport-Joliet reach, is inside of $150,000.

The foregoing estimates are based on the assumption of the Chief Engineer that the grade of the Main Channel at the lower end will be raised two feet.

Should this not be done the estimate will be increased as follows:

Extension of Main Channel 80,000 yards at 70 cents.....	$ 21,000	
Tail-race deepened by 2 feet, 90,000 yards at 60 cents.....	54,000	
		$75,000

The East Route.

The following project and estimate are for the continuation of the Main Channel from the proposed terminus for a tail race to Dam No. 1 at Joliet for purposes of navigation and water power, when the investment may be justified.

It is proposed to extend the Main Channel in a direct course until it approaches the canal, thence in a course parallel to the canal to Joliet. The Summit level is to be continued between parallel walls to a point opposite Lock No. 2, Illinois & Michigan Canal, and then dropped to a suitable level to be continued to Dam No. 1. If it is proposed to accomplish this descent by two locks and an intermediate level, the cost will not greatly differ, as the extra lock will about offset the saving in excavation. The channel is to be 160 feet wide to the upper basin, and 300 feet wide for 3,000 feet above the dam.

The level of the Illinois & Michigan Canal below Lock No. 2 is to be extended up to the rear of Norton's flouring mill, so as to receive the tail water from the mill and the Canal and the drainage on the east.

It is assumed that the railway problem will be so solved as to do away with railway bridges except at the E. J. & E. and the lower Santa Fe crossings.

Solid masonry of concrete-rubble, carried five feet above datum, will form the sides of the channel throughout the extension of the Summit level, said walls to be six feet thick at top with a batter of ¼ foot.

The following is the estimate of cost:

STATION 1505-1523—SUMMIT LEVEL.

726,000 yards rock at 70 cents.....	$ 508,200 00	
70,000 yards earth at 20 cents.....	14,000 00	
200,000 yards Masonry Wall at $4.50.....	900,000 00	
100,000 yards filling at 25 cents.....	25,000 00	
Change in Illinois & Michigan Canal.....	110,000 00	
Two highway swing bridges.....	42,800 00	
		$1,600,000 00

STATION 1623-1760—JOLIET LEVEL.

1,170,000 yards rock at 70 cents.....	$ 819,000 00	
50,000 yards earth at 20 cents.....	10,000 00	
80,000 yards rock at $1.00	80,000 00	
35,000 yards dry wall at $2.00.....	70,000 00	
Bridges—2 railway and 1 highway...	115,000 00	
		$1,094,000 00
Lock and weir..... ..		1,100,000 00
Extra right of way....		100,000 00
Total.....		$ 3,894,000 00

Should the grade of the channel not be changed, the above estimate will be increased—

Present extension to Station 1505.....	$ 21,000 00	
Future prolongation Summit level.....	98.000 00	
		$ 119,000 00

MEMORANDUM NO. 2.

The Chief Engineer's Project and Estimate for the West Route, known as Proposition No. 1.

The Project.

It is proposed to extend the Main Channel 4,900 feet to a point just above the Lock-

port road, on a course curving westward and to widen out the same at the end for regulating works which are designed to be permanent, the Summit level to terminate at this point. The water below the regulating works is to have a normal level of 10 feet below datum and this level is to continue along the west side of the valley, some 17,900 feet to a point opposite Pitts agricultural works, some 4,800 feet below the E. J. & E. Railway crossing. Thence the water is to be dropped to a level just below datum, and continued 4,100 feet to Ruby street in Joliet, where it is dropped over a weir into the upper basin.

The second or river level is some 3 4 miles long and is maintained against the west bluff by an embankment made of the waste excavated from the line of the channel, a core of material from the right of way with a rib of concrete 2 feet square at the rock, being relied upon to make the bank water tight. Some 500 acres of ground, from the embankment to the bluff, are to be covered with water. The Desplaines River is to be taken into the basin thus formed, at the Lockport road and its floods, along with the water from the Main Channel, is to be wasted over weirs, one of 250 feet, just above the E., J. & E. Ry. and one of 400 feet at the lower end of the basin, and it is contemplated to waste at the Lockport road, whatever may be required in the abandoned river-bed from that point to Pool No. 1 at Joliet, known as the upper basin.

The lower level, from Pitt's Agricultural Works to Ruby street, is to be similarly treated and the water wasted into the upper basin over a weir 600 feet long.

Navigation is not provided for below the regulating works. The channel is here off set for 5,200 feet, so as to leave the prism of the navigable channel to be provided in the future, and certain work is left in the bottom of the basins which will require removal in the future also. Considerable work is also left on the lower level, and one guard and lift lock and two lift locks are left until navigation is to be extended below the Lockport road, the immediate design being to carry a high level for water power purposes to a point below the E. J. & E. Railway, all work beyond this requirement being omitted.

The route is designed to avoid railway crossings, except the E. J. & E. Railway, and terminates at the basin below the proposed crossing of the Santa Fe Railway. The grades of the E. J. & E. and of the switch require considerable change.

The work proposed is not considered sufficient and the right of way valuation as too low. Items of correction are given for the purpose of making the proposed structures entirely safe and for work that will involve extraordinary future cost. Estimates are also submitted for what is required to develop the line for purposes of navigation to the level of the upper basin.

Estimates.

The estimates are as follows:

EXTENDING SUMMIT LEVEL.

Estimate of Chief Engineer (including regulating works) for extending level 4,900 feet.....		$ 694,193 85
The river level, Station 1529-1708, estimates of Chief Engineer:		
Embankments.....	$ 280,745 00	
Weirs, 650 feet.....	61,100 00	
Highway bridges, 2....	51,900 00	
E. J. & E. Ry. bridge...	61,500 00	
Contingencies, 5 per cent.....	20,262 00	
		$ 425,507 00

CORRECTION OF ABOVE ESTIMATE.

It is proposed to remove the rock to the full depth (see report, page 1073 of proceedings), so as to avoid maintaining the channel in the future; also, to construct the inside embankment mentioned by Chief Engineer in report to Committee (see page 1155 of proceedings), in order to avoid wide spreading and sedimentation of sewage, and to strengthen the embankment by a solid masonry wall.

Extra excavation, Station 1581-1708, 80,000 yards at 70 cents.....	$ 56,000 00	
Inside embankment...	48,000 00	
Masonry wall, Station 1581-1708, 101,600 yds., at $4.00.....	406,400 00	
Contingencies, 5 per cent.....	25,520 00	
		$ 535,920 00

THE LOWER LEVEL.

Below Station 1708, estimate of Chief Engineer—		
Embankment.....	$ 52,060 00	

Bridges, Ingalls street and tow path.....	$22,100 00	
Weir of crib work, 600 feet.....	6,125 00	
Contiugencies, 5 per cent.....	4,014 00	
		$ 84,299 00

No correction is made of above as no serious menance is involved if works should give way, and the level is temporary.

LAND.

743 acres by Chief Engineer		$ 286,000 00
Correction of land estimate.....		130,000 00

The most valuable land between Lockport highway and Joliet is taken, stone land and manufacturing sites more favorably situated for development than any other land between the points named. All the land not taken is seriously damaged as access is cut off on the west and it is hemmed in by the river on the east.

RECAPITULATING THE FOREGOING ESTIMATES:

	Chief Eng	Correct'n	Total.
Extending Main Channel.....	$ 694,194	.....	$ 694,194
River Level...	425,507	$535,920	961,427
Lower Level..	84,299	.....	84,299
Land	286,000	130,000	416,000
Total.....	$1,490,000	$665,920	$2,155,920

Development of West Route for Navigation.

The Chief Engineer estimates the additional cost for all work except the three locks as follows (see page 1082 of Proceedings):

Excavation and embankment near Lockport.....	$ 103,000	
Excavation, Lower Level.....	205,100	
Excavation, Upper Basin.....	51,000	
Dam No. 1, rebuilt.....	50,000	
Bridges and Miscellaneous...	62,820	
		$ 471,920

CORRECTION OF ABOVE ESTIMATE.

Masonry Wall near Lockport, 28,000 yards at $4.00..	$ 112,000	
Two Highway Bridges, omitted from above estimate....	32,000	
Masonry Wall, Lower Level, 20,000 yards at $4.00.....	80,000	
		$ 224,000
Total.....		$ 695,920

In making these corrections no account is taken of the fact that the lower level must be unwatered at considerable expense at Pitt's Agricultural Works before the works on the lower level can be completed.

The cost of three locks have been approximately estimated at.....	$2,020,000
The total future expenditure required to develop the west route for navigation to the upper basin is therefore.	2,715,920
The work now contemplated involves	2,155,920
The total for navigable channel is..	$4,871,840

Change of Grade.

All of the foregoing estimates are based on changing the grade of the Main Channel. If the Main Channel is kept at the original grade and capacity, as now let to contract, the following items are involved in continuing the full depth through the river level.

Extra cut on MainChannel (see p. 1067 of Proceedings).....	$ 75,320
Extra cut on river level.....	124,600
Extra cut, Station 1529 to 1581, when developed for navigation.....	43,400
	$243,320
Of this the first two items apply properly to present work, raising the total to.....	$2,355,840
The last item applies to future work, raising the total to.....	$2,759,320
Grand total.....	$5,115,160

SANITARY LEGISLATION.

Mr. Boldenweck, for the Committee on Health and Public Order, presented a report, with reference to recommendations concerning the securing of proper legislation for the regulation of space in sleeping apartments and the proper ventilation of the same, made in the report of the Sanitary Inspector, presented and referred to that Committee at the meeting held March 8, 1893, (page 1090 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, April 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee have had under consideration the recommend-

ation of the Sanitary Inspector in his report of March 2, 1893, that action of the part of this Board be taken looking to the securing of proper legislation providing for the regulation of space in sleeping apartments and proper ventilation of the same.

After discussing the matter with the Sanitary Inspector and the members of the Board, your Committee is of the opinion that it is not advisable to undertake to secure legislation on this subject at the present time.

Your Committee recommend that the attention of the State Board of Health be called to this matter by the Sanitary Inspector for such action as said State Board of Health may deem best.

Respectfully submitted,

(Signed) WM. BOLDENWECK,

JOHN J. ALTPETER,

Committee on Health and Public Order."

APPEAL BOND IN "YORE, COOK, ET AL." CASE.

Mr. Kelly presented an order authorizing and directing the President and Clerk to execute an appeal bond in the case of the District vs. Ellen E. Yore, John A. Cook, et al.; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

Upon roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast. Russell and Wenter—eight (8.) Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the President and Clerk authorized and directed to execute an appeal bond in the case of the District vs. Ellen E. Yore, John A. Cook, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the President and Clerk be authorized and directed, in the matter of the appeal by this District in the suit of the District vs. Ellen E. Yore, John A. Cook, et al. in the Circuit Court of Cook County, Illinois, General No. 106,951, to execute an appeal bond in said cause in the sum of one thousand ($1,000) dollars, conditioned according to law, and also to execute the bond of this District in the penal sum of fifty thousand ($50,000) dollars with surety to be approved by the court, conditioned that the petitioner will pay to the owners of or to the persons interested, any and all compensation that may be finally awarded for taking and appropriating the property involved in said suit and containing all other conditions as required by law, and that the matter of securing sureties on said bond be referred to the Joint Committee on Finance and Judiciary, with full power to act."

DEPOSIT FOR "PIPER, YORE, COOK, ET AL. LANDS."

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay on the voucher of the Attorney, to the Globe National Bank of Chicago, money as a deposit for the payment for right of way lands in Cook County, owned by Albert Piper, Ellen E. Yore, John A. Cook, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—none.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay on the voucher of the Attorney, to the Globe National Bank of Chicago, money as a deposit for payment for right of way lands in Cook County, owned by Albert Piper, Ellen E. Yore, John A. Cook, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to the Globe National Bank of Chicago, at Chicago, Illinois, the sum of sixty-two thousand two hundred and twenty-three and 10-100 ($62,223.10) dollars to be held on deposit by said, the Globe National Bank of Chicago, subject to the order of the Circuit Court of Cook County, Illinois, for the use and benefit of the owners or persons interested in certain lands and property hereinafter described, in Cook County, Illinois, in accordance with an order and decree of said court, dated March 18, 1893, and filed April 7, 1893, in said court in certain condemnation proceedings brought by the Sanitary District of Chicago against Albert Piper, Ellen E. Yore, John A. Cook, et al., in said Circuit Court of Cook County, said sum of sixty-two thousand two hundred and twenty-three and 10-100 ($62,223.10)

dollars, being the total of all amounts awarded by the verdict of the jury, and said order and decree in said condemnation proceedings to the owners or persons interested, for the lands described in said order and decree, as follows, to-wit:

That part of the north fraction of the northwest quarter (¼) of Section thirty-three (33), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the north line of said section, 1,840 feet east of the northwest corner of said section, running thence east along the north line of said section to the northeast corner of said north fraction of said northwest quarter (¼), thence south along the east line of said north fraction of said northwest quarter (¼) to the northwesterly margin of the Desplaines River; thence southeasterly at right angles with the general course of said river there to the center thread of the current of said river, thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the west line of said north fraction of said northwest quarter (¼) with the northwesterly margin of said river, and at right angles with the general course of said river there; thence northwesterly along said line to said northwesterly margin of said river, thence north along said west line of said north fraction of said northwest quarter (¼) to a point 2,200 feet south of the northwest corner of said Section thirty-three (33), thence northeasterly in a straight line to the point of beginning.

Those parts of the northwest fractional quarter (¼) and the southwest fractional quarter (¼) of Section twenty-seven (27), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the north line of said section, 875 feet east of the northwest corner of said Section twenty-seven (27), running thence east along the north line of said section to the northeast corner of the north fraction of the northwest quarter (¼) of said section, thence south along the east line of said north fraction of said northwest quarter (¼) to the northwesterly margin of the Desplaines River, thence southeasterly and at right angles with the general course of said river there to the center thread of the current of said river; thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the west line of the north fraction of said southwest quarter (¼) with the northwesterly margin of said river, and at right angles with the general course of said river there; thence northwesterly along said line to said northwesterly margin, thence north along the west line of said Section twenty-seven (27) to the southwest corner of the northwest quarter (¼) of the northwest quarter (¼) of said section; thence northeasterly in a straight line to the point of beginning.

Said premises lying and being situate in the County of Cook, in the State of Illinois.

Also for all the buildings and improvements now located upon the premises last above described and for all damages to lands not taken."

PAYMENT FOR "COLUMBIA PARK COMPANY ET.AL. LANDS."

Mr. Eckhart presented an order, authorizing and directing the Clerk of the District to pay on the voucher of the Attorney, for right of way lands in Cook County, owned by the Columbia Park Company, and Bernard F. Weber, Trustee, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Boldenweck—one (1). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk of the District authorized and directed to pay, on the voucher of the Attorney, for right of way lands in Cook County, owned by the Columbia Park Company and Bernard F. Weber, Trustee, as provided in order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to the Columbia Park Company and Bernard F. Weber, Trustee, the sum of seven thousand five hundred ($7,500) dollars in full payment for the following described land, to-wit:

All that part of the northwest quarter (¼) of Section five (5), Township thirty-seven (37) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at the southwest corner of said northwest quarter (¼) and running thence north on the west line of said northwest quarter (¼) to a point 560 feet south of the southeasterly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company, measured along said west line; thence northeasterly in a straight line 982 feet to a point 534 feet south of said southeasterly boundary line, measured on a line at right angles to said boundary line; thence northeasterly in a straight line 913 feet more or less to the northwesterly margin of the Desplaines River, the point of intersection being 546 feet from said southeasterly boundary line, measured on a line at right angles to said boundary line; thence southeasterly at right angles to the general course of said river there to the center thread of the current of said river, thence southwesterly down said center thread to its intersection with a line drawn southeasterly from the point of contact of the south line of said northwest quarter (¼) with the northwesterly margin of said river, and at right angles with the general course of said river there, thence northwesterly along said line to said south line, thence west on said south line to the point of beginning, said land lying and being situate in the County of Cook, in the State of Illinois, said sum having been awarded by a verdict of the jury in the case of the Sanitary District of Chicago vs. Columbia Park Company, et al., in the Circuit Court of Cook County, Illinois, general No. 105,723, on the 15th day of October, 1892, and decree entered therein for said amount November 15, 1892."

RETURN OF CHECKS ON THE BIDS FOR DREDGING ILLINOIS AND MICHIGAN CANAL.

Mr. Eckhart presented an order, authorizing and directing the Clerk to return certain checks deposited January 25, 1893, with bids on the work of the Main Channel between Ashland avenue and Summit for dredging the Illinois and Michigan Canal, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the order be adopted, and the Clerk authorized and directed in accordance with the same.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter seven (7). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed in accordance with same.

The following is

THE ORDER:

"*Ordered*, That the Clerk return to John Griffiths and to W. S. Carkin, the checks deposited by them respectively with their bids submitted for work on the Main Channel between Willow Springs and Summit, and for dredging of the Illinois and Michigan Canal, and opened January 25, 1893, said bids not being among the lowest submitted therefor."

PAYMENT OF SEMI-ANNUAL INTEREST ON DISTRICT BONDS.

Mr. Eckhart presented an order, authorizing and directing the Clerk to draw a warrant, payable to Mr. Melville E. Stone, Treasurer, for the semi-annual interest on the bonds of the District, due May 1st, 1893; and the same was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the order be adopted, and the Clerk authorized and directed in accordance with the same.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be directed to draw a warrant upon the Treasurer, payable to the order of Melville E. Stone, Treasurer, in the sum of fifty thousand ($50,000) dollars, and deliver same to said Treasurer to be used by him in paying the semi-annual interest due May 1, 1893, on the bonds of this District."

ORDER FOR OFFICIAL PLANS TO BE FULLY COMPLIED WITH.

Mr. Cooley presented an order authorizing and directing the Chief Engineer to fully comply with the order of March 15, 1893 (Page 1,104 of the Proceedings), as provided in the order; and the same was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer instructed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer comply with the instruction conveyed in the order of March 15, 1893 (page 1104 of the Proceedings), in regard to points therein numbered 1, 2 and 4, and that he report at the next meeting thereon or so much thereof as may be practicable."

PLANS AND SPECIFICATIONS FURNISHED CANAL COMMISSIONERS.

President Wenter made a verbal report, stating that in accordance with the instructions of the Board, at the meeting held March 29, 1893, (Page 1131 of the Proceedings), he had addressed the Canal Board and they had agreed to designate an engineer to examine the plans and specifications and report back to that body, and that he expected an answer from the Canal Commissioners before the next meeting.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Cooley, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

APRIL 19, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, April 19, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6), and subsequently Mr. Prendergast, making a total of seven (7) members were present.

MINUTES.

The minutes of the regular meeting held April 12, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending April 15, 1893.....	$937 48	
Eng. Dept., Div. No. 2, week ending April 15, 1893.....	171 60	
Eng. Dept., Div. No. 3, week ending April 15, 1893.....	458 10	
Eng. Dept., Div. No. 4, week ending April 15, 1893.....	49 20	
		$ 1,616 38
Clerical Dept., office roll, week ending April 15, 1893.....		39 00
Law Dept., office roll, week ending April 15, 1893.....		63 00
Total		$ 1,718 38

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 3. April 17, '93).....	$1,228 50	
Agnew & Co. (Sec. 5, April 17, '93).....	448 88	
Agnew & Co. (Sec. 6, April 17, '93).....	756 00	
Agnew & Co. (Sec. 8, April 15, '93).....	2,482 03	
Agnew & Co. (Sec. 9, April 15, '93).....	1,365 93	
Mason, Hoge & Co. (Sec. 11, April 15, '93)	3,626 67	
Mason, Hoge & Co. (Sec. 12, April 15, '93)	4,992 75	
Mason, Hoge & Co. (Sec. 13, April 15, '93)	6,409 81	
McCormick Const. Co. (Sec. 14, April 15, '93).	1,179 50	
		$22,490 07

ENGINEERING DEPARTMENT.

L. J. Myers, (rent, Mt. Forest).....	$20 00	
A. C. Schrader, (traveling).....	37 49	
		$ 57 49

LAW DEPARTMENT.

U. W. Weston, (expense).....	$ 56 14

GENERAL ACCOUNT.

The Chicago Deposit Vault Co., (rent, Jan. to March, 1893).....	$1,885 00	
The Chicago Deposit Vault Co. (janitor service, March 1893.....	80 00	
Thos. F. Judge, (payroll expense).....	13 69	
		$1,978 69
Grand total.....		$26,300 77

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, and Wenter—seven (7.) Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 322, Engineering Department, (work on store-room).....	$ 24 00
No. 323, Engineering Department, (repairs and drawing tables) ..	$75 00
No 324, Engineering Department, (window shades).....	30 00
No. 325, Engineering Department, (fittings for map vault).....	90 00
No. 326, Engineering Department, (sign).....	4 00
Total.....	$223 00

Mr. Cooley, seconded by Mr. Eckhart, moved that Requisitions Nos. 322 to 326, inclusive, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—none.

Upon which result the President declared the motion carried, and Requisitions Nos. 322 to 326, inclusive, for the Engineering Department, as read and shown above, referred to the Committee on Engineering, with power to act.

The Clerk also presented the following requisition:

No. 454, Law Department, (sundry stationery).....	$8 25

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisition No. 454, for the Law Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—none.

Upon which result the President declared the motion carried, and Requisition No. 454, for the Law Department, as read and shown above, allowed.

The Clerk also presented the following requisition:

No. 1044, Clerical Department, (stationery, etc.).....	$7 25

Mr. Cooley, seconded by Mr. Kelly, moved that Requisition No. 1044, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7.) Nays—None.

Upon which result the President declared the motion carried, and Requisi-

tion No. 1044, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending April 15, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending April 15, 1893, as the same have been reported to me:

Engineering Department.....	87
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	8
Total employes.....	99

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

TIME ILLINOIS VALLEY INFORMATION WILL BE PRESENTED.

The Clerk presented a report from the Chief Engineer, made in response to an order passed at the meeting held April 12, 1893, (Page 1149 of the Proceedings) with reference to the time when the information concerning the Illinois Valley would be presented to the Board; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, April 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—In compliance with the order passed at the last meeting, that the Engineer be and is hereby directed to report to the Board at the next meeting the time when the plans and information with reference to the survey of overflowed lands in the Illinois Valley will be ready for presentation to the Board, I would respectfully state that all the work done during the last year has been mapped and the overflowed lands fully tabulated, and will only need copying to be presented to the Board.

The work of 1890 had not heretofore been tabulated and it was considered that this too should be put in available shape. The greater portion of this work has been done, though it will take a few week's work to finish it. Nothing at present is being done upon it, owing to the Assistant Engineer, Mr. E. J. Ward, who has this work in charge, being absent for some weeks on leave of absence.

The maps of the work for both years are completed, though no duplicates have been prepared. To finish the tabulation entire for both years and get it properly copied will probably take four weeks after the work is again taken up by Mr. Ward.

There is no order in the proceedings calling for this work to be reported to the Board.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

REPORT OF DESCRIPTION OF MAIN CHANNEL, ETC.

The Clerk presented a report from the Chief Engineer, (accompanied by one enclosure and twelve prints and maps) giving a description of the Main Channel and River Diversion, presented in response to sundry orders of the Board, enumerated in the report; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be ordered printed, and with enclosure and maps, referred to the Committee on Engineering.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN:—In fulfillment of various orders of the Board, I transmit herewith:

1. A written description of the location and dimensions of the Main Chan-

nel beginning with the first tangent west of Summit, at Station 480 of said channel and ending with Station 1480 at the south end of Section 14.

The part of the channel between the range line east of Summit to Station 480 is not described, as the exact location thereof cannot be fully determined until the method of working along the Illinois & Michigan Canal has been fully settled upon.

2. A written description of the location and dimensions of the River Diversion from the bend of the Desplaines River above Lemont at Station 1070 of the said river diversion to its intersection with Goose Lake at Station 1290.

The grade of this part of the river diversion differs somewhat from the grade as determined by the specifications for this work. When these were prepared no study for a general system of river diversion from Summit to Goose Lake had been made, and the grade was generally specified at one foot below low water in the river. On taking the matter up more systematically it was found that better results would be obtained throughout this reach with the same amount of excavation, if the grade was fixed 2.8 feet below low water at Station 1070; at the level of low water at Station 1180, and 1.12 feet below low water at Station 1290, thus giving the same amount of work with a more regular and effective slope.

The river diversions on Sections 1, 2, 4 and 5, and on Sections A, B, C, E, and F, have not been finally located and referenced, and very little work has been done thereon, hence no written description is furnished.

The estimates therefor submitted to the Board on March 29, were based upon the location and grades as shown upon the map and profiles accompanying this report. For Sections B, C, E, and F, these correspond strictly with the specifications for the work, but for Sections 1, 2, 4 and 5 the grades shown are lower than those specified, increasing the glacial drift excavation 113,350 cubic yards or about $30,935.

3. A statement of Mr. Francis Murphy, accompanied with an acknowledgment before a Notary Public, regarding the establishment of precise bench mark No. 1, from old bench marks that had been made by the Canal Commissioners on the old Bridgeport lock.

4. Map of the line of the Main Channel (scale one inch equal 400 feet) from the range line near Summit to the lower end of Section 14, showing location of the same, and of the river diversion levees, bench marks, land boundaries, etc.

5. Profile of Main Channel and River Diversions, from range line near Summit to the lower end of Section 14, showing surface of earth and rock as nearly as has been determined, grades, etc.

6. Plan of characteristic cross-sections covering the same range as the map and profiles.

7. Nine hektograph prints of the profile and map of the Main Channel for individual members of the Board.

In the submission of the above items the requirements of the following orders are fully complied with:

Order, September 28, 1892, Page 769 of Proceedings.

Recommendation in Committee's Report, Nov. 2, 1892, Page 850 of Proceedings.

Items 6 and 8 of the Order of Nov. 16, 1892, Page 884 of Proceedings.

Profile showing height of floods of May and June, 1892, as called for by order of Feb. 23, 1893, Page 1062 of Proceedings.

Unfilled items of order of March 15, 1893, Page 1104 of Proceedings.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer.

April 19th, 1893."

DESCRIPTION OF THE MAIN CHANNEL BETWEEN SUMMIT AND THE SOUTH END OF SECTION 14.

Location.—Beginning at Station 480 of said Main Channel west of Summit on a tangent forming the center line thereof, which said tangent intersects the East and West quarter line of Section 14, Township 38 North, Range 12 East of the 3d Principal Meridian at Station 503+13.4 on line of said Main Channel and at a point 1268.9 feet west of the east quarter corner of said section 14; and that intersects the section line between sections 22 and 23, township and range as aforesaid, at Station 570+93 on line of said Main Channel at a point 163 feet south of the quarter corner between said sections 22 and 23; said tangent being continued to Station 628+83.5 of said Main Channel, said Station being located in the Southeast corner of the Northwest quarter of section 27, town and range as aforesaid;

thence turning 12 deg. and 6 min. to the right with a 30-minute curve to Station 653+03.5; thence continuing on a tangent to said curve, said tangent intersecting the east and west quarter line of section 33, town and range as aforesaid, at Station 713+52 of said Main Channel and at a point 1604.4 feet west of the center of said section 33 and intersecting the north and south quarter line of Section 5, Township 37 North, Range 12 East of the 3rd Principal Meridian at Station 761+54.3 of said Main Channel and at a point 2126.2 feet north of the center of said section 5; thence continuing on a straight line to Station 767+15.3 of said Main Channel; thence curving to the right 9 deg. 12 min. with a 30 minute curve to Station 785+55.3 of said Main Channel; thence continuing on a tangent to said curve, which tangent intersects the section line, between sections 5 and 6, town and range aforesaid, at Station 793+39.3 and at a point 190.4 feet north of the quarter corner between said sections 5 and 6 and that intersects the east and west quarter line of Section 12, Township 37 North, Range 11 East of the 3rd Principal Meridian at Station 895+25.2 of said Main Channel and at a point on said east and west quarter line 608.5 feet west of the center of said section 12 and that intersects the section line between sections 14 and 15, town and range aforesaid, at Station 983+15 of said Main Channel, and at a point 576.4 feet north of the quarter corner between said sections 14 and 15; thence continuing to Station 989+84.55 on said Main Channel; thence curving to the right 10 deg. 50 min. and 30 sec. with a 30 minute curve to Station 1011+52.88 of said Main Channel; thence on a line tangent to said curve that intersects the north and south quarter line of section 15, town and range aforesaid, at Station 1013+40.81 and at a point 862.22 feet south of the center of said section 15 and that intersects the section line between sections 19 and 20, town and range aforesaid, at Station 1156+73 85 and at a point 915.25 feet south of the quarter corner between said sections 19 and 20 and that intersects the range line between ranges 10 and 11, east of the 3rd Principal Meridian, said range line being the line between the counties of Will and Cook at Station 1210+63.38 and at a point 286.2 feet south of the northwest corner of Section 30, Township 37 North, Range 11 East of the 3rd Principal Meridian; thence on a straight line to Station 1241+37.7 of said Main Channel; thence curving to the left 61 deg. 57 min. and 10 sec. with a 36 minute curve to Station 1344+63.16; thence on a line tangent to said curve and that intersects the township line between townships 36 and 37 North, Range 10 East of the 3rd Principal Meridian at Station 1359+07.78 and at a point 1605 2 feet east of the northwest corner of Section 2, Township 36 North, Range 10 East of the 3rd Principal Meridian and that intersects the section line between sections 11 and 14, township and range aforesaid, at a point 473.6 feet east of the southwest corner of said section 11, town and range aforesaid; thence continuing in a straight line to Station 1480 of said Main Channel, being the south end of that part of said Main Channel known as Section 14.

Grade.—The elevation of the bottom of said Main Channel at said Station 480 is 23.22 feet below datum. It descends thence at the rate of .03 of a foot vertical to 1000 feet horizontal to Station 740 at Willow Springs Road where it has an elevation of 24 feet below datum, and descends thence with a slope of .08 of a foot vertical to 1000 feet horizontal to Station 1480 at the lower end of Section 14 where it has an elevation of 29.92 feet below datum.

Cross Section.—Cross Section of said Main Channel from Station 480 to a point at or about Station 713 is to be 210 feet on the bottom with side slopes of two horizontal to one vertical, to a height of 25 feet above grade; thence to the natural ground surface the slope thereto to be 1½ horizontal to 1 vertical from a point at or about Station 713 for a distance of 125 feet, said channel to gradually contract at the bottom to a width of 160 feet; thence to Station 1480 the cross section of said channel shall have a width of 160 feet in the clear at the bottom.

Wherever the sides of said channel come in rock they are to be kept vertical, except for such off-sets as are found necessary in elevation. Wherever the sides of said channel are in material other than solid rock they are to be walled from the surface of the rock, or from the bottom of the channel as the case may be, to a height of 5 feet above datum. The top of said wall on each side of the channel to be 83 feet from the center line of said channel. Their thickness at top to be 4 feet and at the bottom their thickness shall never be less than one-half of the total height.

DESCRIPTION OF RIVER DIVERSION CHANNEL FROM STATION 1070 ABOVE LEMONT TO STATION 1290 AT GOOSE LAKE.

Location.—Beginning at a point on the westerly margin of the Desplaines River

in the southeast corner of the southwest quarter of Section 16, Township 37 North, Range 11 East of the 3rd Principal Meridian, 145 feet north of the Cook County line, which point is on the north line of the River Diversion, said north line running thence west and parallel to the said county line a distance of about 1300 feet; thence on a curve to the left to the intersection of said north line with the said county line at Station 1089+97.28, said point being 458.28 feet east of the northwest corner of Section 21, town and range aforesaid; thence running on a tangent to Station 1094+91.8 of the north line of said River Diversion, which point is 184.2 feet south of the northwest corner of said Section 21; the center line of said River Diversion intersecting the section line between Sections 20 and 21, town and range aforesaid, 291.83 feet south of the northeast corner of said Section 20; thence continuing in a straight line intersecting the north and south quarter line of said Section 20, 1267.90 feet north of the center of said section and intersecting the east line of Section 19, town and range aforesaid, 223.71 feet north of the east quarter corner of said section; thence to Station 1236+50 of said center line in the northeast corner of the northwest quarter of Section 25, Township 37 North, Range 10 East thence curving to the left 6 deg. with a 1 deg. curve to Station 1242+50; thence curving to the left with a 25 minute curve to the intersection with Goose Lake in the southeast quarter of Section 26, town and range aforesaid.

Grade.—The grade of the bottom of said River Diversion to be as follows: Beginning at Station 1070 with an elevation of 5.04 feet above datum, it is to descend thence with a uniform grade to Station 1100 where it has an elevation of 4.68 feet above datum; thence it descends with a uniform grade to Station 1150 where it has an elevation of 4.08 feet above datum; thence it descends with a uniform grade to Station 1200 where it has an elevation of 3.48 feet; thence to Station 1250 where it has an elevation of 2.88 feet; thence with a uniform grade to Station 1270 where it has an elevation of 2.64 feet; thence with a uniform grade to Station 1290 where it has an elevation of 2.04 feet above datum.

Cross Section.—The said River Diversion is uniformly 200 feet in width at the bottom and when in rock the sides are taken out vertically—when in earth with a slope of one to one.

"31 WINTHROP PLACE, CHICAGO,
April 16, 1893.

Mr. Benezette Williams, Chief Engineer, Sanitary District of Chicago:

DEAR SIR:—In reply to your letter of the 3rd inst., I will make the following statement:

In the construction of the Bridgeport Pumping Works it became necessary to remove the upper courses of masonry from the old lock in the Illinois & Michigan Canal at Ashland avenue. There were bench marks on the upper surface of one of the coping stones at the north end of the east wall of the lock. I am not positive as to whether they were two or three in number. One was neatly engraved, with the elevation 11.12 beside it. The lock-keeper stated this to be the one which he had seen put in by General Wilson.

In order to save these benches, I ran levels to a bench mark which I had prepared upon the west end of the door sill of the Canal Collector's office. This was done between June 23rd and July 10th, 1882.

I found that the benches all had the same elevation, as nearly as I could determine. For one of them the elevation 11.120 was given as reliable by Richard Potts, Assistant City Engineer, so I used this elevation.

In leveling the rod was waved and each reading repeated several times. The readings for each sight were all equal. The distances between the instrument and the sights were laid off equal by measurement. The accompanying sketch shows the position of the benches and the line over which the levels were run.

Mr. Potts had nothing to do with this transfer, and to my knowledge did not make the transfer between the old bench and that on the door step at any time.

Respectfully yours,

(Signed) FRANCIS MURPHY."

COPY OF TRANSFER NOTES.

B.S.	Inst.	F.S.	Elev.	
			11.120	North bench on coping of Canal Lock.
1.869	12.989	6.447	6.542	Transferred to west end of door sill, Canal Collector's office.
4.403	10.945	1.504	9.441	B. M. on west end Canal Collector's office on door sill.

(Sketch accompanying.)

"I hereby certify that the statement within, made by me relative to the bench marks and notes of same is correct and true to the best of my knowledge and belief.

(Signed) FRANCIS MURPHY, C. E.

Subscribed and sworn before me this 18th day of April, 1893.

(Signed) SAMUEL M. DICKSON,
Notary Public."

(Notarial seal.)

PURCHASE OF "CASS AND LIPE LANDS."

Mr. Eckhart. Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Cook County, owned by George W. Cass and Mrs. Elizabeth Lipe, and authorizing and directing the Clerk to pay for said lands on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay to George W. Cass and Mrs. Elizabeth Lipe, on the voucher of the Attorney, for said lands as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay George W. Cass and Mrs. Elizabeth Lipe, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, April 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons, at the prices herein stated, to-wit:

From George W. Cass the land hereinafter described, for the sum of sixteen hundred ($1,600) dollars.

From Elizabeth Lipe the land hereinafter described, for the sum of nineteen hundred fifty-nine and seventy-five one-hundredths ($1,959.75) dollars,

Your Committee recommend that the Clerk of this District be authorized and directed to pay, on the vouchers of the Attorney to said George W. Cass, the sum of six een hundred ($1.600) dollars in full payment for the following described land, to-wit:

That part of the southwest fractional quarter (¼) of the southeast fractional quarter (¼) of Section one (1), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying west of the center thread of the Desplaines River, containing six and forty one-hundredths (6.40) acres, more or less.

To said Elizabeth Lipe, the sum of nineteen hundred fifty-nine and seventy-five one-hundredths ($1,959.75) dollars.in full payment for the following described land, to-wit:

That part of the southeast quarter (¼) of the southwest quarter (¼) of Section one (1), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at the southeast corner of said southeast quarter (¼) of said southwest quarter (¼) and running thence north along the north and south center line of said section one (1) to the northeast corner of said southeast quarter (¼) of said southwest quarter (¼) of said Section one (1), thence west on a line parallel with the south line of said southwest quarter (¼) two hundred (200) feet; thence south on a line parallel with the east line of said southwest quarter (¼) to the south line of said section; thence east on said south line two hundred (200) feet to the point of beginning, containing six and three one-hundredths (6.03) acres, more or less.

All of said above described land lying and being situate in the County of Cook in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
Joint Committee on Finance and Engineering"

PURCHASE OF "TEDENS AND THORMAHLEN LANDS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in DuPage County, owned by John H. Tedens and John Thormahlen, and authorizing and directing the Clerk to pay for said lands on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John H. Tedens and John Thormahlen, on the voucher of the Attorney, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Kelly and Wenter—five (5). Nays—Messrs. Eckhart and Prendergast—two (2).

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John H. Tedens and John Thormahlen, on the voucher of the Attorney, for said lands as provided in the report.

The following is

THE REPORT:

"CHICAGO, April 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with John H. Tedens and John Thormahlen for the purchase from them for the corporate purposes of this District, of the land hereinafter described, for the sum of $5 965.30.

Your Committee recommend that the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to said John H. Tedens and John Thormahlen, the sum of $5,965.30 in full of payment for the following described land, to-wit:

All that part of the south half (½) of Section sixteen (16) in Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian, lying between the center thread of the current of the Desplaines River and a straight line drawn northeasterly from a point in the south line of said Section sixteen (16) 431 39-100 feet east of the southwest corner of said Section to a point in the east line of said section 688 11-100 feet south of the east quarter corner of said section, containing 70 18-100 acres, more or less. Said land lying and being situate in the County of DuPage, in the State of Illinois.

Respectfully submitted,

(Signed) L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
THOS. KELLY,

Joint Committee on Finance and Engineering."

COMMITTEE'S REPORT ON TAIL RACE—LOCKPORT TO JOLIET.

Mr. Cooley, Chairman, presented the completed minority report from the Joint Committee on Engineering and Finance, permission to print the same having been given by unanimous consent at the last meeting of the Board, held April 12, 1893, (page 1,151 of the Proceedings).

Mr. Boldenweck, seconded by Mr. Kelly, moved that the minority report just presented be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE MINORITY REPORT, AS COMPLETED:

"*Lockport-Joliet Reach—Statement.*

The Main Channel of the District now terminates about 1,500 feet south of the north line of Section 14, Lockport Township, (T. 36, N., R. 10 E) where the surface of the rock is some 7½ feet below Chicago datum, and on the slope which descends for 8¼ miles through Joliet to Lake Joliet at a level 77 feet below datum. Over this entire reach works of some character will be required of the District. All routes must, however, pass over the same course through Joliet below Dam No. 1, which forms what is known as the "upper basin"—an artificial pool, some 4,000 feet long, occupied jointly by the canal and by the Desplaines' River.

The present consideration is limited to the stretch between the two fixed points, viz., the present terminus of the channel at Station 1480 and Dam No. 1 at Station 1760, 5.3 miles by the East route, and some

600 feet farther by the line along the west side of the valley.

The lowest line of the valley is by the natural course of the river. Beginning at the present end of the channel where the rock is 7½ feet below datum, and the bottom of the channel at 29.92 feet below, in a distance of 1¼ miles, the level of Norton's pool is reached at 20 feet below datum; in two miles, at a point below the Wire Mills a level of 30 feet, and one half mile farther a level of 34 feet. In a direct course of 3½ miles, the level of the upper basin at 40½ feet below datum is practically reached about one fourth mile above the E. J. & E. Ry. bridge, and 1¾ miles above Dam No. 1. The normal water surface at Dam No. 1 is 41 feet below datum, and the bed rock is 13 feet lower. The course of the river is crooked, some three-fourths mile longer than a direct line, making a deep easterly bend at Lockport, where it is within a short distance of the Canal, thence detouring to the west about one-half mile, and returning to the canal 2½ miles below Lockport, near the E. J. & E. Railway crossing.

Enclosed within this bend, and adjacent to the canal, is an area of higher ground, nearly two miles long, the upper half of which is slightly above the level of Norton's Pool, thence dropping rapidly through deep and extensive quarries to the level of the upper basin above the E. J. & E. Railway. Sweeping along the foot of the west bluffs, below the wire mill and down to a point opposite the upper basin is a bench of some regularity and generally in the vicinity of 25 feet below datum the immediate vicinity of the river opposite Lockport is flat, but for one (1) mile below the wire mill the river in floods is within reasonable limits, thence it spreads out widely to the upper basin.

The land along the west bluff is most favorably situated for any use to which the valley is adapted, as manufacturing sites and railway location, and for some of it, a mineral value is claimed. That along the river is subject to overflow, and much of it is under water, or so low as to be practically in servitude to the river. None of the lands have agricultural value other than for pasturage.

The Santa Fe Railway traverses the valley from Lockport to the E. J. & E. Railway, sweeping the edge of the low ground between the river and canal. A new location was projected and right of way secured, several years since, from the bend below the Wire Mill to the west side of the upper basin, with a view to a bridge crossing below the Steel Works, but this right of way is not yet occupied.

The E. J. & E. Ry. crosses the Valley some 30 feet above the back water of the upper basin, and one and one-half miles above Dam No. 1. The switch crossing which formed the old line below the bridge has been pulled up once and abandoned.

The industries are the Oat Meal Mill and Wire Mill located around the water power at Lockport lower highway bridge over the river. Pitt's Agricultural Works lie to the west of the upper basin and half way to the bluffs, and the Horseshoe Works are located one fourth mile to the north. Aside from the quarries by the canal on the east these are the only industries in actual operation.

The extreme range for the location of the channel is from the Illinois and Michigan Canal, which is under the bluff on the east, to the opposite bluff on the west. The route curving to the west from the end of the present channel, and thence sweeping the bluff to Dam No. 1, would form a symmetrical bow of which the route on the east in direct prolongation of the channel, and thence parallel to the canal, would form the string, the depth of the bow at the middle point being nearly two-thirds of a mile. Within these limits several locations are feasible, according to the purpose to be achieved and the character of the work required, but each route will differ in the special treatment best adopted thereto.

CHOICE OF ROUTE.

Railway lines, industries, right of way and facility in bridging, are practical considerations, bearing immediately on location and cost. The disposition of the river and its floods, the best results for navigation and the utilization of water power are questions affecting both the character of the work as well as the location. A route that will lend itself most readily to a deeper and more capacious Main Channel is in harmony with sound public policy for the future. A route that involves the minimum of expenditure in disposing of the water from the Main Channel and that is adapted to unlimited development, best

lends itself to what it is now practicable to achieve.

These several considerations at once narrow the choice to three locations, each of which is typical in manner of treatment and which will be considered more in detail later.

But one location is practicable west of the river, viz., that running west of the river will, skirting the bluffs and passing behind the Horseshoe and Agricultural works and terminating about the middle of the upper basin.

This route necessarily carries a high level down to Joliet, on account of the lay of the land, and involves a long and expensive retaining embankment. It necessarily receives the Desplaines River and its floods, discharging them along with the water from the Main Channel, over weirs opposite the upper basin, and it necessarily flows several hundred acres of land, while the natural river course is abandoned, except as water may be wasted thereto through special works near Lockport. The Summit level of the Main Channel is necessarily terminated and regulating works and a guard lock established in the vicinity of Lockport, on account of cost and also to avoid the very extensive flowage (upward of 1,000 acres of land, to Goose Lake on the north and up Big Slough on the west), which would result from carrying the level to Joliet, and the water power is impaired. A raising of the grade and a low draw bridge is necessitated for the E. J. & E. Railway, and other railway solutions are complicated. This location seems also to have rendered expedient the proposition to take flood waters into the Main Channel at Summit, and to lessen the grade and reduce the capacity of the Main Channel. Finally, the route is not adapted to a channel of the greatest capacity, and it involves the largest present investment.

A route directly to the Wire Mill, thence by river to near the E. J. & E. Railway, thence south to the upper basin, has many merits and readily lends itself to progressive treatment. This would necessitate suppressing the Wire Mill property. The Summit level would be continued to the vicinity of the lower highway, and the river received into the level below, some 20 feet below datum. A second lock near the E. J. & E. Railway would drop to the Joliet level. This route is capable of the simplest treatment, as for a large part of the way it occupies the very lowest ground, thus requiring moderate embankments against rising ground. The route lends itself to the largest future development and involves a small present investment.

The east route is an extension of the Main Channel to a point near the canal, thence parallel to the canal. The Summit level is to be continued to a point opposite Lock No. 2 of the Illinois and Michigan Canal, midway between the end of the present Channel and Dam No. 1, and then dropped by one or two locks through the quarries to the Joliet level. The course of the river is to be diverted on the west and it may join the Joliet level at the E. J. & E. Bridge or at the upper basin, as preferred. Until such time as the works are to be fully completed, the waste waters are to follow the river below the Wire Mills. This route predicates certain changes in the location of the Santa Fe Railway, as proposed in the communication to this Board of June 7th last. No industrial interests are disturbed, except the quarries along the canal, which must ultimately be taken; meantime, quarrying will be so much done against the future.

Between the river and the east route several variations of line can be made, all passing the E. J. & E. bridge and all possessing merit. All of these involve changing the location of the Sante Fe, over to the Canal or to the west, as proposed by that corporation.

It will be perceived that the westerly line carries a high level to Joliet, while all other lines drop to the Joliet level above the E. J. & E. bridge. The westerly line picks up the river bodily, and and gives it a new course along with the channel water. The river route is virtually a river improvement and correction below the Wire Mill, while a route east of the river is free from the variable flow of the stream until it reaches the Joliet level at the E. J. & E. bridge or below. All routes except the west are moderate in first expenditures, and lend themselves to any future requirement.

An ideal location is one which permits the shortest extension of the Summit level on good supporting ground, thence a drop in the least distance practicable to the Joliet level, and that also excludes all variations due to floods. This combines all

the best requirements for regulation, for navigation and for water power. It also has manifest advantages in permitting high bridges on the Joliet level. It lends itself best to an enlarged future channel. These conditions are most nearly met on the east route.

A further condition, in view of the limited expenditure for the present disposition of the water, is that the location of the ultimate works shall be free from water, or easily capable of being unwatered, thus facilitating and cheapening future construction. This condition is also most fully met in the easterly line.

THE ESTIMATES.

Estimates are submitted in Memorandum No. 1 (see page 1160 of Proceedings) for the cheapest plan of wasting the water by the course of the river, and also for the future construction of a navigable channel by the east route. In memorandum No. 2 (see page 1163 of Proceedings) estimates for the west route are submitted for the disposition of the water in such a manner as to develop the water power and also for the works required to make the channel available for navigation in the future. These estimates are complete to Dam No. 1 at Joliet. No estimate is submitted for the river route as a navigable channel, but it is believed that in cost it will compare most favorably with either of the others.

The works estimated are of a conservative character and such as are proper in view of the great interests in life and property at stake in the valley below. The full depth of water in the Main Channel is carried throughout. The estimates are submitted for the grade of the Main Channel as now let to contract and also, for the grade proposed in special report (see page 1066 of Proceedings). The results are as follows:

WEST ROUTE.

WORK.	Proposed Grade.	Established Grade.
Extending Main Channel 900 feet and regulating works	$ 694,194	$ 769,514
Waste channel and land	1,461,726	1,586,326
Completing channel for navigation	2,715,920	2,759,320
Total	$ 4,871,840	$ 5,115,160

EAST ROUTE.

Work.	Proposed Grade.	Estab'd. Grade.
Extending Main Channel 2,500 feet and regulating work	$ 333,600	$ 354,600
Waste Chan'l and Land	349,400	403,400
*Navigable Channel	3,794,000	3,892,000
Total	$4,477,000	$4,650,000

*The estimate in memorandum No. 1 (page 1163 of the Proceedings) is in excess by $100,000 on account of taking the price of rubble masonry at a higher rate than for the west route. It is herein corrected.

The east route costs least as a navigable channel. This is due in part to the better treatment in regard to locks. In all estimates for navigation heretofore made, the locks have exceeded all other items for this reach. In the foregoing estimates they have been taken at the lowest permissible figure without making detailed estimates for each structure. Reducing the number of locks contributes to efficiency as well as economy, as each lock is equivalent to lengthening the channel for navigation from three to five miles.

The estimate for present expenditure is $758,000 for the east route as against $2,355,840, or less than one-third. If five years be assumed as the minimum time before the water power will be available for rental, and the navigation development will be undertaken, and ten years as the maximum, with interest at 5 per cent, the investment will stand as follows, when the work is finally completed:

Investment.	East Route.	West Route.
Present Investment	$ 758,000	$2,355,840
Interest for 5 years	208,589	652,568
Navigation	3,892,000	2,759,320
Total 5 years from date	$4,858,589	$5,767,728
Total 10 years from date	$5,126,953	$6,598,983

If the matter be considered further on an investment basis it is found that the water power scheme by the west route calls for an excess of capital above that for the simplest disposition of the water as follows:

At the end of five years.....$2,041,819
At the end of ten years..... 2,605,710

Again, if the estimate be compared on the basis of depth and grade, it is found

that each increase of two feet in depth in the Main Channel adds as follows:

West route	$243,000
River route	80,000
East route	119,000

The tail race will be affected $54,000 by two feet change of bottom grade at the lower end, provided the surface grade is correspondingly changed; but an increase of depth that leaves the water level unchanged will affect it only to the extent of the additional capacity of the Main Channel.

The inference from the above is that the the west route is least available for a channel of enlarged capacity and finds its best adaptation to channels of less capacity than 600,000 cubic feet per minute; and also, that it is least available for progressive development.

DISCUSSION OF ESTIMATES.

All the errors appear to have grown out of one primary assumption, viz.: Water power within or adjacent to the limits of the city of Joliet. The only route which lends itself readily to this scheme is the west, all other waters dropping naturally to the Joliet level above the E. J. & E. Ry. This dominent thought seems to have rendered all other considerations of minor moment. It has necessitated needless complications with the Desplaines River and wide flowage of land, occasioned a reduction in grade and capacity of the Main Channel to suit the exigencies of the west site, caused low bridges and a radical change in the grade of the E. J. & E. Ry. and shut out railways from the west side of the valley, except at greatly increased cost, and required unprecedented embarkments and a treatment which is actually a detriment to the fullest development of water power and a positive injury to navigation as compared to what is feasible elsewhere.

As all these considerations have vanished in the glare of the primal thought, great difficulties have appeared to vex any other solution. An abandoned railway line is rehabilitated and a projected railway which has lain dormant for four years, is thrown across the path; lands fit only for pasture on one side of a river, take on mineral qualities, on the opposite bank water lots assume side-hill values, manufacturing sites are discovered and industries are to be injured, necessitating extraordinary work, and finally, to allow water to run down hill over solid rock and in the natural channel which it has followed for ages without great embankments and dams, is in violation of engineering principles.

Further than this, having fixed on a solution which is the "summum bonum" of all things for the west route, the conception is made to do duty on all other lines without regard to adaptation and at great additional cost, and having decided that the west route has no disadvantages, the avoidance of any of its difficulties of course makes no compensation.

1. *Water Power*—The primary assumption is at fault in making the best development incident to the location proposed and in exaggerating the commercial value. Water power is preferably developed above the E. J. & E. Railway, where the full head of the channel may be utilized at all times and where ample land is available, and such location presents no great difficulties.

The minimum horse-power will be from 25,000 to 30,000 net, according to the way the problem is treated and the efficiency of wheels. The statistics of water-power towns show from three to five thousand people and from three to five millions of valuation in the community per thousand horse-power. That means in this location a city of not less than 75,000, with a valuation of $75,000,000.

Such a growth requires space outside of present city occupation, and moreover, a large element of time is involved in the development. Certainly the location proposed is not the most available. Even in the use suggested for water-power in supplying the Steel Works, it is proposed to distribute the power of electricity and on this view of the question, the site of the power is far less important. The same would be true should the power be transmitted to Chicago.

Water-power and manufacturing sites have been let on long leases by the Niagara Water Power Co., at a rental of $8.00 per net horse-power per year, and at Sault Ste Marie at a rental of $5.00 per annum. The Canal authorities in this State have leased for years at Lockport, Joliet and other points, at rates not exceeding $4.00, and developed water powers have been sold as

low as $50.00 per horse-power. It is doubtful if, with the very low cost of coal and the high development of steam machinery, the water-power will command a rental value much exceeding $6.00 net for the water itself at the site, and a long period of development will be required before it is fully utilized.

The transmission of large power long distances by electricity may so far develop in the future as to change these conclusions, but at present such a project on the scale here required would be experimental and decidedly speculative. No rights or opportunities need be lost in the premises, as all routes except that on the west lend them to the development of water power when commercially justified. On that route, the expenditure must now to be made, and rental on 17,000 horse-power collected in five years from the expenditure to pay the the interest on the extra investment.

2 *Embankments*—A dam 8.4 miles long, 20 to 25 feet high above the ground surface for much of the distance, and up to 30 feet in localities, and against a depth of 20 feet of water which may be increased in floods and under special conditions to 23 feet, is always a serious structure in no wise lessened by calling it an embankment. When this embankment impounds 500 acres of water on a side hill, in close proximity and 35 to 40 feet above a city, the character of structure is a matter of very grave concern. Such a reservoir will contain upward of 240,000,000 cubic feet in flood time when 1,500,000 feet per minute might be passing, and would be capable of supplying 4,000,000 feet per minute additional for an hour. Its sudden failure would certainly give a maximum of over 8,000,000 feet per minute on top of channels already choked to their full capacity, or not less than 10,000,000 cubic feet per minute through Joliet. It is needless to speculate on the fate of a city through which a flood of 600,000 cubic feet per minute is now a serious matter. It is not to be supposed that in such a situation any one will insist on a character of structure that would raise even a remote contingency of doubt as to its sufficiency.

When it is actually proposed to construct this embankment of the loose debris from the channel with an earth core or filling obtained from the right of way, and make a shallow cut in the rock for a concrete rib two feet wide and two feet high, the proposition is one demanding the most searching consideration.

It may be said at once that no material is found in river valleys suitable for a core or filling, as such material will not stand continuous saturation. It may also be said that any construction is faulty that does not reach to the solid rock below the seams opened by frost, and that in this respect the shallow trench with its rib of concrete two feet in height is not sufficient. If the whole structure were carried out in the most thorough manner and of the best material, it would hardly excel the practice in mining and irrigation regions where an occasional failure is not attended with grave disaster, and where risks can be properly taken.

It is argued that levees are built and that canals are naturally carried along the sides of the river valleys and wind around slopes, all of which is true. It is also true that the depths of water seldom exceed seven feet, that no great body is turned loose by a crevasse, and that the resulting damages from failure are small. The extraordinary repairs on canal systems, like the Erie, are nearly constant year by year, showing that failures occur with the same regularity as any class of accidents recognized as insurable. The Illinois and Michigan Canal has also suffered from bank failures, and even the retaining embankment on the east side of the upper basin failed in 1867, flooding a portion of Joliet.

Dams of the height and character proposed for impounding water have been usually very short, the sites prepared with great care, the material well selected and the work done with extraordinary thoroughness. When such a dam is prolonged to a length of several miles, the chances of defective construction are correspondingly increased.

The structure proposed may find professional endorsement, but it may be submitted that every structure that has failed has been designed and built by engineers, and the integrity of some certified to by eminent gentlemen hired for the purpose.

The best practice is against structures of this character in critical locations for heads of water upward of twenty feet. Indeed, high heads against any earthy material *per se* always involve an element

of risk. In this locality and for the purpose required, the best structure that human ingenuity can provide is none too good. The structure should not only be safe but beyond suspicion.

The following from report of Capt. W. L. Marshall, Corps of Engineers, U. S. A., on "Survey of Waterway from Lake Michigan to Illinois River" (see page 48, Ex. Doc. No. 264. H. R. 51st Congress, 1st ses.), submitted in 1890, bears upon the matters under discussion:

"As the proposed waterway passes out of the limestone excavation near Lockport it is carried along the west side of the valley in embankment, the aim being to keep the bottom near the surface of the ground in order to avoid, as much as possible, rock excavation. It is proposed to make this embankment by means of a rubble masonry wall, backed by waste stone"

"An alternative project for constructing these embankments is to make them of earth brought from the hills on the west side of the valley."

"This method of constructing these embankments is not recommended especially for the 14-foot project above Lock No. 1, as the embankments there would be all that prevented the water of Lake Michigan from passing down the valley. The sudden failure of any of these embankments would probably entail loss of life in the valley below."

The report of the United States officer considers the solid clay from the hills as essential to this embankment and then rejects a safer structure than the one under discussion, for a solid wall of rubble masonry, and this for depths of eight and fourteen feet only and under conditions far less exacting than those to which the Main Channel is subject.

It is proposed to strengthen the embankment by a solid face wall, leaving the other items as estimated, as the figures are certainly not too high. Such a wall makes available dockage, may be safely pierced for water-power flumes, is proof against vermin that infest earth embankments, and is better suited to the service required of the channel.

It will be interesting to recapitulate the cost of embankments between the end of the Main Channel and Dam No. 1, for the complete project, a distance of 23,700 feet, as against 24,800 feet by the government project over substantially the same ground.

COST OF EMBANKMENT.

Project.	Earth.	Masonry.	Rem'ks.
Eight feet project.	$ 132,840	$382,800	U. S.
Fourteen feet project..... ...	323,430	717,700	U. S.
Twenty feet project	385,805	983,805	San. Dis.

Although the government estimates are high, and the things compared are not strictly the same, they serve to illustrate the difference between safe structures and earth embankments and the inadequacy of the estimates under discussion.

3. *Change of Grade*—This has been referred to at some length. It is proposed to take out the bottom to the standard depth at a cost of $56 000, as the cost of unwatering the channel and doing this work in the future will be very great.

The estimates proceed on the assumption of raising the grade two feet above that already fixed for the Main Channel. This change, and the above item, amount to $299,820. As already shown, such change of grade affects other routes to a much less extent.

It thus appears that the proposed change of grade is helpful to the estimates for the west route; in fact, as before stated, the west route is not adapted to a channel of the largest capacity.

Such change of grade, however, reduces the capacity of the Main Channel by about 20 per cent, and makes its capacity for 600,000 feet under low water conditions, more than doubtful, to say nothing of what will obtain when the channel is covered with ice.

It may be desirable to have a higher water surface at Lockport, but this can be best accomplished by a deeper channel, and with great improvement in the hydraulic conditions. The logic of the west route is also against any increase of depth.

As this question is made the subject of a special report, it will no doubt be fully considered by the Board, and need not now be entered into further. That estimates should be submitted on the presumption that a radical change of this character will be made in the work already under way, carries with it its own comment.

In another place will be found authority to show how inadequate are present projects to meet the requirements of a sanitary condition.

4. *Land and Damage*—The estimates for the west route are believed to be too low, as land for which mineral value is claimed is included, and the most available land between Lockport and Joliet is occupied, thus placing other lands not taken between the river and channel in a position to claim substantial damages.

The land required along the river is over one fourth under water, and half of it is too low for practical uses, while much of the remainder is subject to overflow. Relative to the west route it has a small value, although rated higher in the estimates.

The east route involves the future acquirement of 260 acres, part of which has claims to mineral value. This is believed to be largely worked out, and its value will decrease with further working. The value estimated is much above any estimates by experts.

An assumption is also made which is designed to predicate the future of the railway solution. It is not in evidence that this is based on any positive knowledge in the premises, but as it is contrary to the expression of officials and also to a communication to this Board, it may be taken in the light of advice only, although it has intruded itself in a manner to show that the simplest solution is very expensive. It may be well to mention that it is good policy to encourage a railway location up the west side, as the property interests of the District are all on that side of the valley.

5. *Channel Extension*—The extension of channel to the distance proposed has increased the estimate. Owing to the peculiar terminus planned, the same economy is not obtained by a shorter channel, as would result from a different treatment.

It is not proper to apply this treatment to other routes, which are susceptible of a very different solution in view of future development to which the west route is not adapted.

6. *Locks*—The question of locks is important, as the number and location are matters largely affecting cost and efficiency for navigation. In the estimate of Captain Marshall for the stretch from Lockport to Lake Joliet, the cost of locks is nearly 60 per cent of the total cost, being a somewhat less proportion for the project of 14 feet than for that of 8 feet. The proportion will be still less for a depth of 20 feet, and can be greatly reduced by concentration of lift and reduction of number, thus decreasing cost and increasing efficiency. The west route lends itself least readily to the question of lockage, and the work therein necessitated is in excess of that for any other line. It may be a question, even with all the work executed as projected, whether it would not be both wise and economical to take a different route in extending deep navigation, leaving the investment to water power purposes alone, and as a river diversion for floods.

7. *Proposition No. 2*—It is proposed to waste the water down the natural river channel below the Wire Mill. This estimate involves an unnecessary extension of the Main Channel, and a treatment not best adapted to extension on the east route as proposed, nor by the river course, should that prove desirable. In the vicinity of the Wire Mill most elaborate works are projected, so as not to injure the water power, involving some $270,000, or much more than the value of all the property it is designed to save, and about three times what are needed for a different treatment. Aside from the extension of the Main Channel, the work and right of way are both estimated at double what will be sufficient to meet the situation, and the estimate for the Main Channel extension may be greatly reduced, and need not exceed 60 per cent of that submitted.

8. *Proposition No. 3*—This is a variation of No. 1, or the west route, designed to waste the water down the natural river from a point near the E. J. & E. Ry:, and has been amended to a point of discharge three-fourths mile below the Wire Mill.

As far as it goes it is complete on the basis of Proposition No. 1.

If any object is to be served by wasting the water a course to the west of the Wire Mill, this may be effectively accomplished in a much simpler manner and at a cost much less than estimated, without complicating the question of future extension of channel for purposes of navigation and water power.

9. *Conclusion as to Estimates*—Throughout all the estimates, discussion

and argument, there runs a profound, and, perhaps, unconscious optimism toward the solution favored, and are equally insidious pessimism against all other projects, and it is sufficient to say that this has attracted the designs and the estimates in a manner truly phenomenal. In technical matters is recognized under the term "personal equation;" the bias of individual estimate and judgment from the true mean. Questions of this character, with judicial temperaments, may involve discrepancies of five per cent, but it is difficult to escape the conviction in this case that in projects favored the estimate should be increased 50 per cent, while those opposed should be halved, a "personal equation" entirely without precedent.

COMPLICATIONS WITH RIVER.

It is proposed to take part of the flood waters of the Desplaines into the Main Channel at Summit, and the remainder into the channel below the Regulating Works at the Lockport road.

To the extent to which flood waters interfere with the flow of the channel from the populated area will the efficiency be impaired, for in flood time the filth of the city is swept most largely into the stream and sedimentation through a stagnated currert is most probable.

The District is investing about $1,000,000 in construction and in land for the correction of the Desplaines river from above Summit to Lockport. As further expenditure, upward of $100.000 will provide substantially for the entire flood volume by the river course and independent of the Main Channel. As soon as the present river diversion can be completed, the additional investment will have the highest possible justification, as the only practicable measure of moment feasable for the relief of the city pending the completion of the main works.

This then solves for present purposes the flood question of the Desplaines River, and removes from consideration the diversion north of the city. The Main Channel will be free from this complication of variable flow, and the necessity of regulating works to meet rapid changes therein. The channel will be subject solely to the servitude of the District, as it will be guarded from intrusion outside of the District by the river on the west and by the canal on the east.

The flood waters would be received below the regulating works and would not affect the Main Channel except as they might raise the level of the pool and back up at the regulating works; but all this variable flow, with drift, ice and flood, is thus added to the flow of the Main Channel, to fluctuate against and be sustained by high embankments and wasted over weirs largely increased in cost thereby. The justification, therefore, is not apparent when the river may be allowed to seek the lowest level at Joliet without complicating the works of the District in its descent.

It is conceived that this is also sound policy as well as sanitary and engineering sense. The Sanitary District is responsible for the sanitary condition of its channel, and presumably at the point where its main works terminate, and the water is delivered to the public river, at or near Joliet. It is unnecessary to assume obligations for outside territory by permitting drainage therefrom into the channels of the District. Nor is it necessary or desirable to put the District in position to subject its channel to regulation on account of floods therein which may be readily excluded, and when the full service of the channel is most needed at such times by the District.

THE SETTLING BASIN.

The proposition, to construct a settling basin of some 500 acres, above Joliet, is a matter for consideration. As to what effect such a basin will have depends on the character of water therein. As evidence upon this point, very full testimony is presented in a phamplet bearing date, Springfield, May 5, 1891, and entitled "Testimony given before the Committees on Canals, River Improvement and Commerce, of the Senate and House of Representatives of the General Assembly of Illinois, meeting in joint session."

The following are extracts therefrom:

'Benezette Williams was called and gave evidence as follows:

'If we take the sewage of Chicago where it leaves the sewers, and include that going into the lake, we may say that approximately Chicago with its 1,200,000 people produces nearly as much organic matter at certain seasons of the year as does the city of London with its 4,000.000 people. These statements seem astounding, but they are borne out by the facts. I see no way of

their being controverted without impeaching the chemical analyses, or by hydraulic measurements upon which they are based.'

'The signification is, that if all the sewage was delivered at the mouth of the canal in the condition in which it reaches the river, and water enough added to swell 50,000 cubic feet per minute to 150,000 cubic feet per minute, the condition of the canal would not be materially changed.'

'By the time a channel for 250,000 cubic feet capacity per minute is put into use, all the stockyards and other sewage being emptied into it, it is questionable whether its condition will to the senses be appreciably better than that of the Illinois and Michigan Canal where the pumps were first started some years ago. This was known to be bad.'

'When a channel is discolored and foul smelling from decomposition, a slight change in its thickness does not materially affect it.'

'I feel justified, therefore, in asserting, and have no fear but that the best judgment of scientific men will bear me out, that a channel of 250,000 cubic feet per minute capacity will not materially improve the sanitary condition of Chicago. It may remove some of the worst smells from certain localities in the Chicago River, to transfer them in somewhat diluted form further down the canal, and to that extent prove a benefit, but further than that it will not go.'"

These statements would seem to be conclusive as to the character of water in the Main Channel when opened for a capacity of 300,000 cubic feet, and as it is increased to 600,000 feet with growth of population, and indicates the condition which is to occur in the stagnant water of the basin. They also bear on the proposition to reduce the capacity of the Main Channel some 20 per cent through a change in grade, and in the face of the prospective growth of the city.

The attempt to justify the west route has led to inconsistencies most strange.

EARLY CONSIDERATIONS.

A route was considered up the west side of the valley for the Illinois & Michigan Canal, but the easterly route was chosen, presumably to avoid river complications on the Summit level. The easterly route was followed by the Wilson project in 1866, and by the Macomb project in 1874, the first lock being placed at Lock No. 2 of the present canal and opposite the point proposed for the terminus of the Summit level for the east route.

None of the projects have considered the river below the wire mill as a route, except as a tail race for waste water as used in the estimate for the Drainage and Water Supply Commission, and also for the same purpose by S. G. Artingstall when Chief Engineer of the District.

The west route was followed by the Marshall project of 1891, a most natural line in view of the course taken through the river above, and well adapted to the treatment and magnitude of his project, but the Summit level was not carried more than a half mile below the lower highway at Lockport. Substantially the same course was taken by the Worthen-Newton project in 1891, as a result of a course west of the river above, and this is the only project which proposed to carry the Summit level to Joliet prior, to that of February, 1892. The force of the recommendation was somewhat impaired by the proposition to continue farther through Joliet by tunnel or by boiler iron flume 24 feet in diameter. The Artingstall route followed substantially the Marshall line to a point above the Lockport road, from which the water was wasted down the natural course of the river.

The project under consideration is *sui generis* in that it follows alongside the canal for twenty miles, connecting the river on the west at large cost and finally crosses the valley to the west side and swallows the river entire. The great trouble and expense of securing and protecting a route free from floods is thrown away at the very point where the continued separation is most valuable.

The full logic of the situation would be to continue the Summit level to Joliet, as proposed in report submitted February 17, 1892 (see page 357 of Proceedings), and then over the west bluff through Joliet to Lake Joliet, as suggested in that connection. This project would certainly be as startling and novel as that submitted in the Worthen-Newton report. (See Page 140 of the Proceedings.)

CONCLUSIONS.

The purpose of this report has been attained if the following points are established:

1. It is practicable to waste the waters from the proposed terminus of the Main Channel, down the slope to Dam No. 1, in a safe and efficient manner for the sum of $400,000 and with the established grade, and such disposition may be made without complicating the future development of navigation and water-power.

2. Any development for water-power purposes can as well await the completion of the Main Channel and no rights in the premises need be lost. Any prospect of revenue therefrom will not justify an investment at this time, and this development should be incidental to the best requirements for navigation.

3. The extension of deep navigation down the slope to Lake Joliet will cost not far from three-quarters of a million dollars per mile for the entire reach and no extension, even as a river navigation in the presence of the large volume of water can be made for less than two-thirds that rate. Meantime any investment can be partial only and is likely to prejudice rather than assist the future. In view of the large sum required for a complete solution, it is not wise to predicate the character of work on a minor question that has no immediate value, and that it is not now necessary to determine.

4. It is practicable by the smallest permissable expenditure to make such extension of the Main Channel as is essential to economy and to waste the waters, without losing any rights or opportunities in the premises, and so as to leave open any solution by any route that may ultimately prove desirable.

5. The only point at which the main works of the district can now stop and leave a work complete in any sense, is above Lockport.

In entering on the works below, no stage of completion is reached short of a very large expenditure, justifiable solely on commercial grounds and for which the money is not available.

6. The situation permits a variety of solutions by several routes and it would be unwise to say at this time that any line or any treatment combines is all that may be desirable.

In the report of the Engineering Committee of January 9, 1892, (see Page 814 of the Proceedings,) adopted by the Board, it is stated that one million dollars will probably cover all the necessities below the Main Channel and through the city of Joliet. No reason has since appeared to change this figure, or to change the policy set forth in that report, and the minority has repeatedly affirmed its conclusions.

In view of the resources available and cost of the main works of the district, the Chicago end and its connection with the lake, and in view of the sanitary problems of the gravest concern which should receive the earliest consideration that the resources permit, it is more than unwise to contemplate any expenditure at the lower end at this time that is not strictly necessary to care for the waste waters, and even this has no claims on the present attention of the Board as compared with other problems. It is extremely unfortunate that the attention of the Engineering Department and of this Board should be distracted for months by a question of secondary importance, one that has little bearing on the sanitary efficiency of the works of the district, or the perpetuity of that efficiency, and that should not now be a matter of concern.

It is not wise to buy baskets to market a crop before the fruit trees are even grown. While the commercial considerations must always be recognized in laying out the work, it is submitted that the actual expenditure for dockage, water power, harbor and navigation should wait on sanitary necessities. The minority is unwilling to actually enter upon projects of expenditure for which no necessity now exists and which are beyond the resources, until it is clearly seen how such resources may be made adequate. In other words, the achievement must consult the cash box, though this should be guided by a policy which works ultimately to developing all the possibilities.

I conclude that the District should now contend itself with an extension of the Main Channel for 2,000 to 3,000 feet in a direct line, to a point economical for wasting water, and purchase the lands required for that purpose along the river, thence to Dam No. 1 at Joliet, thus leaving the ultimate solution open and without prejudice to any route, method of solution and business interest.

THE MAJORITY REPORT.

The recommendations of the Chief Engineer are based on a scheme of ultimate

navigation and a present development of water power, by the west route.

The majority report proposes to receive bids on this scheme, and also on a modification thereof, complete as far as it goes, which wastes the water to the river at a point three-fourths of a mile below the Wire Mill.

This modification contemplates a character and extent of work entirely unnecessary and undertakes to predicate the ultimate solution of the problem below Lockport.

For the reasons herein set forth, I am opposed to the project of the Chief Engineer, and to the modification thereof; and object to temporizing with the question through alternative bids, as both propositions involve needless expenditures, and for purposes not now justifiable.

Memorandums Nos. 1 and 2, submitted at the last meeting, are included as appendices to this report.

Very respectfully submitted,

(Signed) L. E. COOLEY,

Chairman, Joint Committee on Engineering and Finance."

OFFICIAL HISTORY OF DISTRICT.

Mr. Eckhart, for the Special Committee on Ceremonies, presented a report (accompanied by one enclosure), recommending the payment of certain money to George P. Brown, on account of work done, in accordance with contract, on the official history of the Sanitary District; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with enclosure, placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed in accordance with the same.

On roll-call the vote stood: Yeas—Messrs Altpeter, Boldenweck, Eckhart, Kelly and Wenter—five (5). Excused and not voting—Mr. Cooley—one (1). Nays—Mr. Prendergast—one (1).

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosure, placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed in accordance with the same.

The following is

THE REPORT:

"CHICAGO, April 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Special Committee on Ceremonies, appointed August 24, 1892, respectfully report:

That on the eleventh day of February, 1893, in pursuance of the authority given it, it entered into a contract with George P. Brown, by the terms of which said Brown is to prepare the manuscript for a history of this District.

That said Brown has submitted to us, and we have approved, manuscript for the first fifty thousand words of said history.

That by the the terms of said contract there is now due said Brown the sum of four hundred ($400) dollars.

Your Committee further report that while said contract provides for the payment to said Brown an of extra allowance of one hundred ($100) dollars for 'typewriting said manuscript of said history,' and arranging newspaper clippings and other unbound documents and memoranda in the District's possession, it recommends payment of said extra allowance in full now.

Your Committee further recommend that said Brown be now paid the sum of five hundred ($500) dollars on said contract, a copy of which said contract is hereto attached; and that the Clerk be authorized and ordered to pay said Brown the said amount in accordance with this report.

(Signed) FRANK WENTER,

B. A. ECKHART,

Special Committee on Ceremonies."

(Accompanied by contract.)

PLANS AND SPECIFICATIONS FURNISHED CANAL COMMISSIONERS

President Wenter made a verbal report, stating that he had received a communication from the President of the Board of Canal Commissioners with reference to the examination of plans and specifications for dredging the Illinois and Michigan Canal, and that he expected that this examination would be made within a week

PAYMENT FOR "BURKE LANDS."

Mr. Eckhart presented an order authorizing and directing the Clerk to pay

John C. Burke and James C. Burke, on the voucher of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. John C. Burke, James C. Burke et al.; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay John C. Burke and James C. Burke, on the voucher of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. John C. Burke, James C. Burke et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to John C. Burke and James C. Burke, the sum of forty-five thousand seven hundred and fifty ($45,750) dollars, in pursuance of the order entered in the Circuit Court of Cook County in the condemnation proceedings by this Sanitary District vs. said John C. Burke and James C. Burke, for the taking and appropriation of the following described lands, to-wit:

All that part of the northeast fractional quarter (¼) of Section twenty-two (22), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying and being east of the Government line of survey along the easterly bank of the Desplaines River.

That part of the northwest quarter (¼) of Section twenty-three (23), Township Thirty-eight (38), North Range twelve (12) East of the Third Principal Meridian lying northwesterly of the northwesterly reserve line of the Illinois and Michigan Canal.

That part of the southwest quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at the southeast corner of said quartersection running thence west along the south line of said quartersection to the southwest corner of said quartersection, thence north along the west line of said quartersection to the southeasterly margin of the Desplaines River; thence northwesterly at right angles with the general course of said river there to the center thread of the current of said river, thence northeasterly along said center thread to its intersection with a line drawn northwesterly from the point of contact of the west line of the east half (½) of said quartersection with the southeasterly margin of said river and at right angles with the general course of said river there, thence southeasterly along said line to said southeasterly margin, thence south along said west line of said east half (½) of said southwest quartersection to a point which is fifty (50) feet from the bank of said river there, thence northeasterly along a line parallel to and fifty (50) feet from the bank of said river to the north line of said southwest quartersection, thence east along said north line to the center of said section, thence south along the east line of said quartersection to the place of beginning.

That part of the west half (½) of the southeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying north and west of the northwesterly reserve of the Illinois and Michigan Canal, except the right of way of the Chicago & Calumet Terminal Railway Company.

All that part of the northwest quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying and being southeast of a line drawn fifty (50) feet from and parallel to the southeasterly bank of the Desplaines River.

All that part of the northeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point on the dividing line between Lots two (2) and three (3) in Spaulding's Family Subdivision of the southeast fraction of the northeast quarter (¼), the southeast quarter (¼) of the northwest quarter (¼), the northeast fraction of the southwest quarter (¼), and the west half (½) of the southeast quarter (¼) of said Section fourteen (14), five hundred and forty (540) feet north of the south line of said Lot two (2), thence

south 62 degrees 50 minutes west 9.56 chains to a point two (2) feet south of an angle of the government meander 3.56 chains north of the south line of the southwest fraction of the northeast quarter (¼) of said section, thence parallel with the government meander and two (2) feet south of it 9.79 chains, thence southwesterly on a line fifty (50) feet from and parallel with the southeasterly bank of the Desplaines River to the west line of said northeast quartersection, thence south along said west line to the center of said section, thence east along the south line of said quartersection to the line between said Lots two (2) and three (3) in said Subdivision, thence north along said last mentioned line to the point of beginning, except the right of way of the Chicago & Calumet Terminal Railway Company.

All of said premises lying and being situate in the County of Cook, in the State of Illinois.

Said sum being the aggregate of the amounts awarded by the verdict and report of the jury, in the case of the Sanitary District of Chicago vs. John C. Burke, James C. Burke, et al., in the Circuit Court of Cook County, Illinois, general No. 106,951, for said premises and order of judgment thereon, and to be under and in accordance with the additional order entered in said cause on April 19, 1893."

PAYMENT FOR "ABBITT LAND."

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay to the County Treasurer of Cook County, Illinois, on the voucher of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, moneys as a deposit for right of way land in said county, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Adeline E. Abbitt, et al., and further directing the Clerk to deposit with the Treasurer of the District, to the credit of the District, Warrant No. 2,860, heretofore drawn in favor of Adeline E. Abbitt, for said lands; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay to the County Treasurer of Cook County, Illinois, on the voucher of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, money as a deposit for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Adeline E. Abbitt, et al., and the Clerk directed further to deposit with the Treasurer of the District, to the credit of the District, Warrant No. 2,860, heretofore drawn in favor of Adeline E. Abbitt, for said lands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to the County Treasurer of Cook County, Illinois, the sum of three hundred and forty ($340) dollars, for the use and benefit of the owners of or persons interested in Sub Lot five (5) in Lot six (6) in the subdivision of (with other property) the fraction of the southwest quarter (¼) of Section thirty-three (33), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, lying north of the Illinois and Michigan Canal, per plat recorded, etc., in Book 43 of Plats, page 2.

Said premises lying and being situate in the County of Cook in the State of Illinois, in accordance with the modified order of the Circuit Court of Cook County, in the case of the Sanitary District of Chicago vs. Adeline E. Abbitt, et al., General No. 106,951, entered April 19, 1893, and that the Clerk deposit with the Treasurer to the credit of this District Warrant No. 2,860, dated January 11, 1893 in the sum of three hundred and forty ($340) dollars, payable to the order of Adeline E. Abbitt, heretofore issued in accordance with the order of this Board of December 21, 1892."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

APRIL 26, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, April 26, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6), and subsequently Messrs. Kelly and Gilmore, making a total of eight (8) members were present.

MINUTES.

The minutes of the regular meeting held April 19, 1893, were approved as printed, on motion of Mr. Eckhart, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending April 22, 1893	$1,038 57	
Eng. Dept., Div. No. 2, week ending April 22, 1893	171 60	
Eng. Dept., Div. No. 3, week ending April 22, 1893	322 88	
Eng. Dept., Div. No. 4, week ending April 22, 1893	49 20	
		$ 1,582 25
Clerical Dept., office roll, week ending April 22, 1893		39 00
Law Dept., office roll, week ending April 22, 1893		63 00
Total		$ 1,684 25

ENGINEERING DEPARTMENT.

Ebin J. Ward, (emergency)		75

LAW DEPARTMENT.

John J. Coburn, (legal services)	$2,000 00	
C. E. Cook, (expert services)	200 00	
Jas. H. Gilbert, Sheriff, Cook Co. (service)	38 25	
Haynie R. Pearson, (traveling)	10 53	
		$2,248 78

GENERAL ACCOUNT.

The Chicago Edison Co. (electric lighting)	29 17
Grand total	$3,962 95

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 327, Engineering Department, (drawing tables)	$10 00
No. 328, Engineering Department, (iron pipe)	20 00
Total	$30 00

Mr. Cooley, seconded by Mr. Eckhart, moved that Requisitions Nos. 327 and 328, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 327 and 328, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending April 22, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, April 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending April 22, 1893, as the same have been reported to me:

Engineering Department	86
Clerical Department	3
Treasury Department	1
Law Department	8
Total employes	98

Respectfully submitted,

(Signed) THOMAS F. JUDGE,

Clerk."

FINAL REPORT OF CLERK ON SALE OF BONDS.

The Clerk presented a final report, accompanied by twelve (12) enclosures, with reference to the completion of the delivery of the issue of $2,000,000 bonds, sold to Messrs. Blair & Co., of New York, and the return of all checks deposited with bids for the purchase of said bonds; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be printed and referred to the Committtee on Finance.

The motion prevailed unanimously, and the report was so referred.

The following is

THE REPORT:

"CHICAGO, April 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—With reference to the sale to Messrs. Blair & Co., of New York, of the issue of $2,000,000 of 5 per cent bonds of this District on October 12, 1892, and the amount deposited by said firm with their bid ($60,000) I have the honor to report, that in conformity with the letter of Messrs. Blair & Co., of January 11, 1893, which is hereto attached, that on the regular days set for the delivery

of said bonds, I turned over to Mr. Melville E. Stone, the Treasurer of the District, for Blair & Co., the proportionate amount of the whole deposit represented by the portion of the bonds, paid for by and delivered to said firm, to the whole issue, viz:

On November 2, 1892	$15,000 00
On December 6, 1892	15,000 00
On December 9, 1892	300 00
On January 6, 1893	14,700 00
On February 6, 1893	7,500 00
On March 1, 1893	7,500 00
Total	$60,000 00

for all of which payments the receipts of Treasurer Stone are hereto attached.

I have also returned to Messrs Kuhn, Loeb & Co., N. W. Harris & Co., Lamprecht Bros. & Co. and G. H. Rollins & Son, the checks deposited on October 11, 1892, by each of the said firms, with their bids for said bonds, and the receipts for same are hereto attached.

The Treasurer has reported to me to and including the month of March, 1893, the total amount received from the sale of bonds, as follows:

From 2,000 bonds, Nos. 1 to 2,000	$2,000,000 00
From premium and accrued interest on same	43,160 96
Total	$2,043,160 96

All of which is rspectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

(Twelve enclosures).

FINAL REPORT OF TREASURER ON SALE OF BONDS.

The Clerk presented a final report from the Treasurer, with reference to the completion of the delivery of the issue of $2,000,000 bonds, sold to Messrs. Blair & Co., of New York; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be printed, and referred to the Committee on Finance.

The motion prevailed unanimously, and the report was so referred.

The following is

THE REPORT:

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—I have the honor to report on the sale to Messrs. Blair & Co., of the first issue of two million dollars' ($2,000,000) worth of Sanitary District Bonds, as follows:

The deliveries of said bonds and payments for the same were made in accordance with the terms of the contract of sale.

The total receipts on account of the first issue of Bonds is as follows:

Principal, 2,000 bonds	$2,000,000 00
Premium on the same	30,250 00
Accrued interest	12,910 96
Total	$2,043,160 96

This money has been deposited in banks, as received, to the credit of the Sanitary district, as shown by the Treasurer's Monthly Reports already on file.

Respectfully submitted,

(Signed) MELVILLE E. STONE,
Treasurer.

By W. G. STANFORD,
Assistant Treasurer.

CHICAGO, April 12, 1893."

PURCHASE OF "JANE S. MARTIN LAND."

Mr. Eckhart Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Cook County, owned by Mrs. Jane S. Martin, and authorizing and directing the Clerk to pay for said lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mrs. Jane S. Martin, on the voucher of the Attorney, for said lands, as provided in the report.

On roll call the vote stood: Yeas—Messrs. Altpeter; Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mrs. Jane S. Martin, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, April 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with Jane S. Martin for the purchase from her, for the corporate purposes of this District, of the land hereinafter described, for the sum of fourteen hundred ($1,400) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said Jane S. Martin, the sum of fourteen hundred ($1,400) dollars in full payment for the following described land, to-wit;

All those parts of Lots three (3) and four (4) of a subdivision of the southeast fractional quarter (¼) of Section eleven (11), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, as per plat recorded in the Recorder's office of Cook County, Illinois, in Book 173 of Maps, page 27, lying easterly of a line drawn from the northeast corner of said southeast fractional quarter (¼) to a point in the south line of said southeast fractional quarter (¼) 900 feet east of the southwest corner of said southeast fractional quarter (¼), together with the riparian rights thereof.

Said land lying and being situate in the County of Cook, in the State of Illinois.

As part of the consideration for said land, the Sanitary District is to construct and build a levee on the north side of the new river channel, to be constructed by the Sanitary District in Sections D, E and F, as set forth in the contracts let by said Sanitary District for the construction of the proposed work on said Sections D, E and F, and also is to construct and continuously maintain from the time when its Main Channel shall have been completed, such an outlet or drain from the ditch provided for on the outside of said levee, as will carry all the water from said ditch into said Main Channel.

The dyke, ditch and drain, already provided for in the contract for the purchase of the Prescott land, will be the same dyke, ditch and drain provided for in the purchase of this land, and no extra expense will be caused by the agreement herein contained as to the construction of the dyke, ditch and drain in the purchase of the land herein described.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
THOMAS KELLY,

Joint Committee on Finance and Engineering."

INTENTION OF CANAL COMMISSIONERS.

Mr. Eckhart presented a resolution concerning the intention of the Canal Commissioners, with reference to the use by the District of a part of the Illinois and Michigan Canal within Cook County; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the resolution.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—Mr. Cooley—one (1).

Upon which result the President declared the motion carried, the resolution adopted, and the Clerk directed in accordance with same.

The following is

THE ORDER:

"*Resolved*, That unless a definite answer be given by the Commissioners of the Illinois and Michigan Canal by Saturday next, April 29, 1893, at 2 o'clock P. M., relative to the position of said Commissioners in regard to the use by this District of a part of the Illinois and Michigan Canal within Cook County, it will be assumed by this Board that said Commissioners deny the right of the District to use said portion of said Canal, and will resist any attempt on the part of the District to take possession of any part of the canal.

Resolved, further, That a copy of the foregoing resolution be at once delivered to said Commissioners by the Clerk of this District."

BOARD TO ADJOURN TO SPECIAL TIME.

Mr. Eckhart, seconded by Mr. Russell, moved that when this Board adjourn, it do adjourn to meet Saturday, April 29, 1893, at 2 o'clock P. M.

The motion prevailed unanimously and it was so ordered.

OFFICES TO BE CLOSED MAY 1ST, 1893, (OPENING DAY).

Mr. Russell presented an order, directing that the offices of the District be closed on May 1, 1893, in honor of the opening of the World's Columbian Exposition of 1893; and the order was read.

Mr. Russell, seconded by Mr. Kelly, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the offices of the District ordered closed on May 1, 1893, in honor of the opening of the World's Columbian Exposition of 1893, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the offices of the Sanitary District of Chicago, be and they are hereby directed to be closed on the first day of May, 1893, in conformity with the proclamation of the Governor and in honor of the opening of the World's Columbian Exposition of 1893."

REPORT ON ALL UNFILLED ORDERS.

Mr. Cooley presented an order directing the Chief Engineer to report at the next meeting on all unfilled orders and state of progress on same, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter- eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Chief Engineer insructed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer report at the next regular meeting in regard to all special orders still unfilled, in whole or inpart, and that he state in connection with each of such orders the present state of progress, the force engaged thereon, and the time required to carry out the same, and that he report in general upon the force and the time required to complete such special orders as a whole."

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the Board then adjourned to Saturday, April 29, 1893, at 2 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

APRIL 29, 1893.

OFFICIAL RECORD.

ADJOURNED MEETING.

The adjourned session of the one hundred and sixty-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Saturday, April 29, 1893, at 2 o'clock P. M., pursuant to motion.

President Wenter called the Board to order.

Upon roll-call Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6), and subsequently Messrs. Gilmore and Prendergast, making a total of eight (8) members were present.

FILLING OF CHICAGO RIVER AT JACKSON STREET.

The President announced that any business might be brought before the Board, and the Clerk then presented a report from the Chief Engineer, (accompanied by three (3) enclosures and tracing,) with reference to the filling of the Chicago River, south of Jackson Street Bridge; and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report (with enclosures and tracing), be referred to the Committee on Engineering, in conjunction with the Chief Engineer and Attorney, with power to act, and directions to report back to the Board.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the report referred to the Committee on Engineering, in conjunction with the Chief Engineer and Attorney, with power to act,

and directions to report back to the Board.

The following is

THE REPORT:

"CHICAGO, April 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith a letter from Trustee Prendergast, dated April 27th, which refers to filling that is being done in the Chicago River south of Jackson Street Bridge. In compliance with Mr. Prendergast's request I directed Mr. T. T. Johnston to investigate the matter and report fully such information as he was able to gather relative thereto. The results of Mr. Johnston's inquiries are set forth in his communication dated April 28th, and the accompanying communication and sketch from Mr. A. E. Kastl, Assistant Engineer, which are transmitted herewith.

From these it appears that the actual work of filling is being done by Joseph Downey & Co., contractors for the street railway tunnel north of Van Buren street, but by whose authority or permit does not appear, and whether the work is to enable the contractors to get rid of the surplus material more readily, or for the purpose of creating land for the P., Ft. W. & C. Ry., is not rendered apparent. At any rate the river is being encroached upon at this point south of the bridge, just as has been done in the past north of the bridge, and the material will ultimately have to be removed at the expense of the Sanitary District of Chicago, or otherwise.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Three (3) enclosures and tracing).

OPINION ON CANAL QUESTIONS.

Mr. Wenter presented an order, directing the Attorney and General Counsel to prepare and submit to the Board for record an opinion with reference to certain legal questions concerning possession by the District of the Illinois and Michigan Canal, as provided in the order; and the same was read.

Mr. Wenter, seconded by Mr. Kelly, moved the adoption of the order.

The motion prevailed unanimously, and the Attorney and General Counsel were directed to render an opinion in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Attorney and General Counsel be and they are hereby directed to prepare and submit to this Board for record at our next regular meeting their opinion heretofore furnished to this Board on the following questions:

1. In the event of the Sanitary District taking the Illinois and Michigan Canal as the site of its Main Drainage Channel between Summit and Bridgeport in Cook County, will this District be compelled to pay, either the Canal Commissioners or the State of Illinois, any compensation for the land known as the Canal Reserve on both sides of the open channel of the canal?

2. If the Illinois and Michigan Canal is widened and deepened between Summit and Bridgeport, and made a part of the Main Drainage Channel, who will own and control the dockage which may be incidentally created between Bridgeport and Summit in constructing said Drainage Channel?

3. And on all the legal questions raised at the conference with the Canal Commissioners, held at the Grand Pacific Hotel on March 18, 1893."

REPLY FROM THE PRESIDENT OF CANAL BOARD TO RESOLUTION ON INTENTIONS OF THAT BOARD.

The Clerk presented a communication from President Alt. Gerdes, of the Board of Canal Commissioners, in reply to the resolution concerning the intention of that body, passed at the regular meeting held April 26, 1893 (Page 1,195 of the Proceedings); and the communication was read.

Mr. Eckhart, seconded by Mr. Russell, moved that the communication be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, April 29, 1893.

Honorable Frank Wenter, President, and Board of Trustees, Sanitary District Cook County:

GENTLEMEN—We have received a copy of a resolution passed by the Trustees of the Sanitary District in Cook County, informing us that unless said Trustees were

informed by the Board of Canal Commissioners of their position in regard to the use by the Sanitary District of that part of the Illinois and Michigan Canal in Cook County, that said Trustees will assume that the Canal Commissioners "deny the right of the District to use said portion of said canal and will resist any attempt on the part of the District to take possession of any part of the canal." This Board are advised that it is not responsible for the positions which may be assumed by the Trustees of the Sanitary District, but are advised that when it shall be necesssry, in making any improvements which said Sanitary District is authorized to make, it may enter upon any public property, or property held for public use, and acquire the necessarv right of way for such improvement over it in the manner of acquiring such right over private property for like purpose under the Eminent Domain Act, said District not unnecessarily interrupting or interfering with such public property, or its use, and restoring it to its former usefulness as soon as practicable. And that said District will be required to make compensation for the use of the Canal in said County only for transportation purposes. But Canal lands owned by the State along both sides of the Canal and elsewhere in Cook County now used for facilitating transportation on said Canal, and otherwise, which are in possession and control of this Canal Board, they are required to preserve and protect them from trespass and can relinquish the possession, custody and right of the State therein only upon a legal condemnation thereof, and on proper order of the Court in the premises.

Very respectfully,

(Signed) ALT. GERDES,

Board of Canal Commissioners, Illinois and Michigan Canal."

PURCHASE OF STONE ON SECTION EIGHT.

The Clerk presented a communication from Mr. Joseph W. Latimer, with reference to the purchase of stone, excavated on Section 8.

Mr. Kelly, seconded by Mr. Altpeter, moved that the communication be referred to the Joint Committee on Finance and Engineering.

The motion prevailed unanimously, and the communication was so referred.

RECESS.

By unanimous consent, the Board then took a recess, during which General Counsel Wilson appeared before the Board with reference to legal questions concerning the possession of the Illinois and Michican Canal by the District.

ADJOURNMENT.

On reassembling at the close of the recess, on motion of Mr. Cooley, seconded by Mr. Altpeter, the Board adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MAY 3, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-eighth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, May 3, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9) members—were present.

MINUTES.

The minutes of the regular meeting held April 26, 1893, were approved as printed, on motion of Mr. Eckhart, seconded by Mr. Boldenweck

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, April, 1893	$ 2,527 59	
Eng. Dept., Div. No. 1, week ending April 29, 1893	1,064 70	
Eng. Dept., Div. No. 2, week ending April 29, 1893	171 60	
Eng. Dept., Div. No. 3, week ending April 29, 1893	316 50	
Eng. Dept., Div. No. 4, week ending April 29, 1893	49 20	
		$ 4,129 59
Clerical Dept., Clerk's roll, April, 1893	$ 483 33	
Clerical Dept., office roll, week ending April 29, 1893	39 00	
		$ 522 33

Law Dept., Attorney's roll, April, 1893.....	$ 1,508 33	
Law Dept., Joliet roll, April, 1893.....	333 34	
Law Dept., office roll, week ending April 29, 1893.....	63 00	
		$ 1,904 67
Treasury Dept., Treasurer's roll, April, 1893.....		166 67
General Account, Sanitary Inspector's roll, April, 1893.....	$ 200 00	
General Account, Trustee's roll, April, 1893.	2.333 34	
		$ 2,533 34
Total.....		$ 9,256 60

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery).....	$ 37 04	
Jacobs, Coles & Co. (stationery).....	48 10	
S. D. Childs & Co. (stationery).....	100 79	
J. M. W. Jones Stat'y. & Ptg. Co. (stationery)	35 55	
Keuffel & Esser Co. (drafting material)..	1 16	
Keuffel & Esser Co. (drafting material)..	7 33	
E. Dietzgen & Co. (drafting material)..	16 09	
F. Mayer & Co. (blue prints).....	12 75	
Geo. H. Benedict & Co. (hektograph prints).	40 57	
Emil Rudolph (surveying street lines).....	762 50	
H. S. Norton, (coal)...	4 28	
C. H. Adams & Co. (stove).....	12 00	
A. M. Munson, (rent, Mt. Forest).....	20 00	
O. W. Moon, (rent, Lockport).....	20 00	
D. C. Dunlap, (horse and buggy).....	45 00	
J. H. Banks, (oil, etc.)	3 35	
F. Cortez Wilson & Co. (map cases).....	6 30	
Chicago Toilet Supply Co. (toweling).....	5 40	
Chas. L. Harrison, (expense).....	22 50	
E. J. Murphy, (expense)	2 76	
A. R. Benson, (expense)	6 20	
A. C. Schrader, (emergency).....	30 75	
A. C. Schrader, (emergency).....	35 75	
A. C. Schrader, (emergency).....	35 75	
A. C. Schrader, (emergency).....	35 75	
Alex. E. Kastl, (emergency).....	1 25	
Alex. E. Kastl, (emergency).....	8 40	
E. J. Murphy, (emergency).....	21 88	
A. R. Benson, (emergency).....	$24 00	
D. C. Dunlap, (traveling).....	93 08	
A. C. Schrader, (traveling).....	16 62	
L. J. Myers, (traveling)	6 30	
J. B. Rohrer, (traveling)	11 14	
T. F. Richardson, (traveling).....	5 00	
		$ 1,535 34

CLERICAL DEPARTMENT.

John Underwood & Co. (stationery).....	2 95

LAW DEPARTMENT.

Joseph Donnersberger, (expert—right of way services).....	$ 250 00	
H. Schultz & Co. (paper boxes).....	11 55	
Orrin N. Carter, (expense).....	39 50	
		$ 301 05

LAND ACCOUNT.

Orrin N. Carter, (taxes on land purchased)..	188 05
Grand total.....	$11,283 99

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 329, Engineering Department, (postage stamps).....	$20 00
No. 330, Engineering Department, (pens).....	5 28
No. 331, Engineering Department, (repairing typewriter).....	15 00
No. 332, Engineering Department, (hand axes).....	4 20
Total.....	844 48

Mr. Eckhart, seconded by Mr. Kelly, moved that Requisition No. 329, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 329 for the Engineering Department, as read and shown above, allowed.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that Requisition No. 331, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering, with power to act and directions to report back to the Board.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 331, for the Engineering Department, as read and shown above, referred to the Committee on Engineering with power to act and directions to report back to the Board.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that Requisitions Nos. 330 and 332, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering.

The motion prevailed unanimously, and Requisitions Nos. 330 and 332, for the Engineering Department, as read and shown above, were so referred.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending April 29, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending April 29, 1893, as the same have been reported to me:

Engineering Department.....	86
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	8
Total employes.....	98

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

REPORT ON ALL UNFILLED ORDERS.

The Clerk presented a report from the Chief Engineer, made in response to an order passed at the meeting held April 26, 1893 (Page 1,196 of the Proceedings), with reference to a report on all unfilled orders, and the state of progress on same; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was so referred.

The following is

THE REPORT:

"CHICAGO, May 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In conformity with the order passed by your Honorable Board at the meeting of April 26th:

"That the Chief Engineer report at the next regular meeting in regard to all special orders still unfilled in whole or in part, and that he state in connection with each of such orders the present state of progress, the force engaged thereon, and the time required to carry out the same, and that he report in general upon the force and the time required to complete such special orders as a whole." I have to report as follows:

Chicago River Survey—

The field work for the main portion of this survey was completed some months ago, since which time the location of street lines has been going on. This has now been completed in the field and there only remains the office work connected therewith to comply with the original order.

Map Work—

Under the various orders of the Board this Department now has in hand, in ad-

dition to the Chicago River work, a Water Shed map covering the basins of the upper Desplaines, the Chicago and Calumet rivers; a Sanitary District map, on a scale 2 inches equal to a mile, covering the territory of the Sanitary District and some adjacent areas; a map showing the location of sewers in Chicago and suburbs, and a map on a uniform scale from Lake Michigan to Lake Joliet through the Desplaines Valley which will show the topography and the location of the Sanitary District work as determined upon.

The office force employed upon these several maps amounts to 8 men, and it is estimated that this force will finish the Chicago River and Sewer map in three or four months; the water shed map in about eight months; the Sanitary District map in about one year, and the topographical map of the Desplaines Valley in about eight months, so far as the data may be in at that time for its completion.

There is also employed, when not withdrawn for special purpose, a topographical party which is, or has been making location of land monuments and the Main Channel with reference to the triangulation system.

Disposal of Flood Waters—

Under this head is included the order of October 24th, relative to the survey through the North Branch to Lake Michigan near Winnetka, and the other of Oct. 24th with reference to the control of the Desplaines River Flood Waters at Summit; also that part of the other of Nov. 23rd relative to the disposal of flood waters from the drainage areas which affect the sanitary condition of the District.

The survey from the North Branch to Lake Michigan was completed some time ago and the map for the same is nearly done.

In pursuance of the purpose of these several orders a survey is being made across the ridge from the Desplaines to the North Branch of the Chicago River on a line about a mile south of the north line of Maine Township. This work is being done by the force that was on the Chicago River survey, and will occupy but a few days. After it is completed there will be no further work, as far as known, for this force.

In further pursuance of the purpose of these orders arrangements are being made for the establishment of a gauge at Morris, Ills., on the Illinois River at a point where the river was gauged during the floods of May and June, 1892.

The order of Nov. 23rd relative to the work and treatment between the lower end of Section 14 above Lockport and Lake Joliet, has not been fully complied with and cannot be until some surveys are made in and through Joliet, which will be done as soon as the topographical party can be spared from other work.

Aside from the matters above enumerated I know of no special orders, except those of minor importance, such as raising Canal bridges, repair of bridges at Willow Springs, plan of bridges at Lemont, etc., that have not been complied with.

There is of course a considerable amount of work along the Main Channel which is in the nature of subsidiary and collateral works, such as designs for bridges, regulating works, dams, etc., which are not the subject of special orders, but they have been taken up by the department.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer.

OPINION OF ATTORNEY AND GENERAL COUNSEL ON CANAL QUESTIONS.

The Clerk presented a report from the Attorney and General Counsel, being an opinion on legal questions with reference to the possession of the Illinois and Michigan Canal by the District, requested by order passed at the adjourned meeting held April 29, 1893 (page 1,199 of the Proceedings); and the report was read.

Mr. Eckhart stated that through a misunderstanding, the opinion of the Attorney and General Counsel did not cover all the questions asked in the order, and that the Attorney and General Counsel would file a supplemental opinion on the remaining questions at the next meeting.

Mr. Eckhart, seconded by Mr. Boldenweck, then moved that the report as read be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, May 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We have considered the questions relative to the Illinois and Michigan Canal submitted to us for our

opinion by a resolution passed by your Honorable Board on the 29th day of April, 1893, and beg leave to report our conclusions thereon as follows:

First—We are of opinion that the Sanitary District has the right to take and use the ninety foot strip on both sides of the open channel of the Illinois and Michigan Canal in Cook County as the site of its Main Drainage Channel, without paying the Canal Commissioners or the State of Illinois any compensation therefor.

Second—We are of opinion that, if any part of the Illinois and Michigan Canal lying within Cook County is widened and deepened and made a part of the Main Drainage Channel of the District, the Sanitary District will own and control the dockage which may be incidentally created thereby, subject, however, to such interruption or interference with the enjoyment and ownership of said dockage as may be involved or required in the discharge of the obligation imposed by the law upon the District of restoring said channel to its former usefulness.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

(Signed) JOHN P. WILSON,
General Counsel."

HOSPITAL AT MOUNT FOREST.

The Clerk presented a communication from Dr. N. Re, inviting the members of the Board to inspect the Hospital erected at Mount Forest, for the treatment of contractors' employes; and the communication was read.

Mr. Eckhart, seconded by Mr. Gilmore, moved that the communication be referred to the Committee on Health and Public Order, with directions to report back at the next regular meeting.

The motion prevailed unanimously, and it was so ordered.

The following is

THE COMMUNICATION:

"MOUNT FOREST, April 25, 1893.

"*To the Honorable, the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—The hospital that I have erected at Mount Forest for the treatment of the sick and injured employes of the Drainage Channel is now completed and ready for the reception of patients.

I desire that the Sanitary Inspector should examine it, and see that it comes up to the requirements of my contract. If not, I am prepared to make such changes as he may suggest.

It would please me very much to have the Board of Trustees make a personal inspection, and if they would notify me when it would be most convenient for them to do so, I would appreciate the favor exceedingly.

Your most obedient servant,

(Signed) NICHOLAS RE, M. D "

COST OF SERVICE BOAT.

Mr. Cooley presented an order, directing the Committee on Engineering and the Chief Engineer to ascertain and report the cost of a "service boat," for the use of the District, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

The motion prevailed unanimously, the order was adopted and the Committee on Engineering and the Chief Engineer were instructed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Committee on Engineering, in conjunction with the Chief Engineer, be instructed to ascertain and report the cost of a suitable general service boat for the use of the District, and the time required to procure the same."

ACTION ON FILLING OF CHICAGO RIVER AT JACKSON STREET.

Mr. Boldenweck presented an order, empowering the Committee on Engineering, in conjunction with the Attorney and the Chief Engineer, to take such action in the matter of the filling of the Chicago River at Jackson street as they deem expedient, and as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

The motion prevailed unanimously, the order was adopted and the Committee on Engineering, in conjunction with the Attorney and the Chief Engineer, were empowered in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Committee on Engineering, in conjunction with the Attorney and the Chief Engineer, be, and they are hereby empowered to act in the matter of preventing the filling of the Chicago River at Jackson street, as indicated in the report of the Chief Engineer, presented at the adjourned meeting, held April 29, 1893, (page 1199 of the Proceedings.")

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MAY 10, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and sixty-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, May 10, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) and subsequently Mr. Prendergast, making a total of nine (9) members—were present.

MINUTES.

The minutes of the adjourned session of the regular meeting of April 26, 1893, held April 29, 1893, and of the regular meeting held May 3, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending May 6, 1893.....	$1,049 10	
Eng. Dept., Div. No. 2, week ending May 6, 1893.....	171 60	
Eng. Dept., Div. No. 3, week ending May 6, 1893.....	316 50	
Eng. Dept., Div. No. 4, week ending May 6, 1893.....	49 20	
		$ 1,586 40
Clerical Dept., office roll, week ending May 6, 1893.....		39 00

Law Dept., office roll, week ending May 6, 1893.....	$ 55 50	
Total		$ 1,680 90

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 3, May 1, '93).....	$2,433 37	
Agnew & Co. (Sec. 5, May 1, '93).....	1,157 62	
Agnew & Co. (Sec. 6, May 1, '93).....	1,512 00	
Agnew & Co. (Sec. 7, April 29, '93).....	669 25	
Agnew & Co. (Sec. 8, April 29, '93).....	1,657 91	
Agnew & Co. (Sec. 9, April 29, '93).....	955 48	
E. D. Smith & Co. (Sec. 10, April 29, '93).....	889 00	
Mason, Hoge & Co. (Sec. 11, April 29, '93)	4,063 55	
Mason, Hoge & Co. (Sec. 12, May 1, '93)	6.032 90	
Mason, Hoge & Co. (Sec. 13, May 1, '93)	5,951 97	
McCormick Const. Co. (Sec. 14, May 1, '93).	1,441 13	
		$26,764 18

ENGINEERING DEPARTMENT.

A. H. Abbott & Co., (drafting material)..	$81 80	
Philp & Jackson, (map rack).....	13 00	
Philp & Jackson, (moving map rack).....	7 30	
Robt. H. Cowdrey, (postage stamps)...	20 00	
John T. Allison, (rent, Summit).....	20 00	
H. S. Norton, (rent, Lemont).....	18 00	
Poutiot & Goulette, (repairing row-boats)..	15 75	
Geo. Brainard, (gauge reading).....	10 00	
Wm. Kirkham, (gauge reading).....	10 00	
Mary Rusk, (gauge reading).....	10 00	
Patrick McGinnis, (gauge reading).....	10 00	
Wagner Bros., (livery)	3 00	
Chas L. Harrison, (expense).....	3 15	
G. W. Wood, (expense)	13 34	
Hiram A. Miller, (traveling).....	4 08	
E. R. Shnable, (traveling).....	7 86	
		$ 247 28

CLERICAL DEPARTMENT.

Warner's Towel Supply (toweling).....	$ 1 50	
Trevor Spring Water Co. (ice).....	3 00	
		$ 4 50

LAW DEPARTMENT.

Cameron, Amberg & Co. (stationery).....	$ 4 83	
John P. Wilson, (legal services, March and April, '93).....	833 33	
Alexander White, (expert services—valuations).....	186 00	
		$1,024 16

GENERAL ACCOUNT.

The Chicago Edison Co. (wiring room 521)...	65 00	
Thos. F. Judge, (payroll and sundry expense).....	11 47	
John F. Higgins, (printing proceedings, April 4. '93)....	246 97	
Arcade Lunch Co. (lunch, Trustees' trip, May 1, '93.....	55 00	
		$ 378 44
Grand total.....		$30 099 46

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 455, Law Department (stationery and stamps).....	$27.95
No. 1045, Clerical Department (stamps, stationery, etc.).....	72.00
Total.....	$99.95

Mr. Eckhart, seconded by Mr. Boldenweck, moved that Requisitions No. 455, for the Law Department, and No. 1045, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 455 for the Law Department, and No. 1045, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending May 6, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending May 6, 1893, as the same have been reported to me:

Engineering Department	83
Clerical Department	3
Treasury Department	1
Law Department	8
Total employes	95

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of April, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of April, was $657.60, divided as follows:

Salaries	$ 639 33
Stationery	13.77
General expenses	4.50
Total	$ 657.60

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $750.

The total amount expended and charged to the General Account during the month of April was $5,446.39, divided as follows:

Salaries	$2,533.33
Official history	500.00
Printing and Stationery	335.92
Rent and janitor service	1,965 00
General expenses	112.14
Total	$5.446.39

There are no outstanding liabilities against the General Account, and the expenses for the present month will not exceed $3,500.

Respectfully submitted,

THOS. F. JUDGE,
Clerk.'

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of April, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I herewith submit the monthly report of the Law Department, for April, 1893. The total amount paid out during the month for this Department is as follows:

Salaries.

Attorneys	$1,550 00	
Right of way force	476 66	
Office force	192 00	
		$2,218 66

Expenditures.

Right of way	$ 524 55	
Court costs	645 95	
Legal services	2,000 00	
Stationery	32 20	
Sundries	40 87	
		$3,243 57

Land Account.

Right of way	$175,184 90
Total	$180 647 13

While the current expenses for May will doubtless be nearly the same as last month, it is impossible to estimate, at the present time what the expenses will be

in right of way matters. The probabilities are, however, that these expenses will be small, as compared with those of April.

Since the last report was made, settlements have been reached for all of the land between the Summit range line and the lower end of Contract Section 14, except about twenty-five acres, for which negotiations are now pending. During the present month the Department will be engaged largely in the investigation of questions touching our relations with the Illinois and Michigan Canal and the railroads to be crossed by the Main Channel, between Summit and the South fork of the Chicago River near Bridgeport.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of April, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report		$2,715,103.74
Received from Tax Account, Town of South Chicago Collector	$168,008 95	
Received from Law Department, Land Account, Abbitt Warrant No. 2860 redeposited	340 00	
Received from American Trust and Savings Bank, interest for April	1,386 70	
Received from Chicago National Bank, interest for April	1,095 41	
Received from National Bank of Illinois, interest for April	1,034 60	
Received from Metropolitan National Bank, interest for April	1,037 10	
Received from Ft. Dearborn National Bank, interest for April	1,031 36	
		$ 173,934 12
Total cash received for month		$2,889,037 86
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 764 88	
Treasury Department	166 66	
Engineering Department	8,928 54	
Engineering—Construction Department	53,003 32	
Law Department	5,864 62	
Law Department—Land Account	172,053 40	
General Account	4,061 39	
Bond Interest and Premium Account	50,000 00	
		$294,842 81
Balance this date, in banks as per schedule endorsed hereon		$2,594,195 05

(Signed) MELVILLE E. STONE,
Treasurer.

Chicago, May 3, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 501,122 08
Chicago National Bank	525,638 08
Metropolitan National Bank	503,859 95
National Bank of Illinois	501,962 61
American Trust and Savings Bank	561,612 33
Total	$2,594,195 05

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by three (3) enclosures and a classified statement) from the Engineering Department for the month of April, 1893. The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of April, including a table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of April were as follows:

Contractors estimates	$42,952.31
Pay rolls	9,111.82
Material, etc	1,995.52
Total	$54,059.65

I estimate that the expenses of the Department for the month of May, in-

cluding contractors estimates, will be $65,000.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Three (3) enclosures and classified statement.)

"CHICAGO, May 9, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—During the month of April but little has been accomplished in the field by the Division parties. The usual estimates have been taken and some cross-section work done. The balance of the time has been work in the office, putting notes in shape and copying.

The Lockport Division, with the assistance of Mr. Schrader's party has completed the location and taken levels of glacial drift and rock of the center line of the proposed channel between Section 14 and Joliet, and are now at work on cross-sections.

Mt. Forest and Sag Divisions are in charge of G. W. Wood and J. B. Rohrer respectively, pending the appointment of Assistant Engineers.

H. A. Miller, Assistant Engineer, has been placed in charge of the Lemont Division.

Expenses for the Division are as follows:

Pay roll	$ 5,057.90
Contractor's estimates	42,952.31
Total	$48,010.21

The following tables will give amount of work done, appliances in service, etc.

Amount of work done to May 1st on the different sections is as follows:

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
1, Main Channel	1 000	.....
2, Main Channel	24,800	.....
2, River Diversion	26,600	.....
3, Main Channel	59,000	.....
4, Main Channel	31,500	.....
5, Main Channel	31,800	.....
6, Main Channel	33 100	.....
7, Main Channel	19 700	.....
7, River Diversion	11,800	7,570
8, Main Channel	7,500	1 470
8, River Diversion	47,600	38,380
9, Main Channel	10,400	6 310
9, River Diversion	37,700	4,690
10, Main Channel	18,900	5,950
10, River Diversion	27,400	38,240
11, Main Channel	32,600	41,170
11, River Diversion	2,600	4,810
12, Main Channel	15,553	73,500
13, Main Channel	32,822	83,700
14, Main Channel	17,200	26,300
Totals	489,575	332,090

Total amount of material moved to May 1, 1893:

	Cubic Yards.
Main Channel, Glacial Drift	335,875
Main Channel, Solid Rock	238,400
River Diversion, Glacial Drift	153,700
River Diversion, Solid Rock	93,690
Total amount of estimates paid previous to May 1, 1893	$311,124.95

FORCE REPORT—DAILY AVERAGE.

Section.	Men.	Teams.	Steam Shovel.	Steam Car Shifter.	Locomotives.	Steam Pumps.	Steam Scrapers.	Channelers.	Steam Drills.	Steam Hoists.	Air Drills.	Air Pumps	Cableways.	Cantilever Cranes.
Section A	3	.2	....	....	....	....	....	....	....	....	....	....	....	....
Section B	9	2	....	....	....	....	....	....	....	....	....	....	....	....
Section C	16	.6	....	....	....	....	....	....	....	....	....	....	....	....
Section D	14	3	....	....	....	....	....	....	....	....	....	....	....	....
Section E	5	1	....	....	....	....	....	....	....	....	....	....	....	....
Section 1	24	3	....	....	....	....	....	....	....	....	....	....	....	....
Section 3	44	3	.8	.5	.8	1.8	....	....	....	.3	....	....	....	....
Section 4	3	.5	....	....	....	....	....	....	....	....	....	....	....	....
Section 5	14	1	.6	.5	.6	1	....	....	....	.1	....	....	....	....
Section 6	12	....	....	....	....	1.9	1.6	....	....	....	....	....	....	....
Section 7	12	.8	....	....	....	.7	....	.5	.3	.05	....	....	....	....
Section 8	61	3	....	....	....	.9	....	.6	1	.5	....	....	....	....
Section 9	58	3	....	....	....	2	....	1	2	.2	....	....	....	....
Section 10	14	.3	....	....	....	.4	....	.1	.2	.05	....	....	....	....
Section 11	101	12	....	....	....	1.9	....	2	....	.7	5	1.5	.6	....
Section 12	136	10	....	....	....	....	....	3	5	....	....	....	1.7	....
Section 13	165	17	....	....	....	....	....	4	5	....	....	....	.4	.4
Section 14	35	4	....	....	....	....	....	.6	2	....	....	....	.8	....
Totals	726	64.4	1.4	1.0	1.4	10.6	1.6	11.8	16.5	1.9	5	1.5	3.5	.4

CONDITION OF WORK MAY 1, 1893.

Section.	Contractor.	Total amount done May 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done May 1, 1893.	Amount short as per contract May 1, 1893.
1	Alfred Harley	$ 270	$ 20,867	$ 36,517	$ 36,247
2	McArthur Bros	14,392	15,611	46,834	32,442
3	McArthur Bros	15,930	18,983	94,915	78,985
4	McArthur Bros	8,505	15,780	63,122	54,617
5	Agnew & Co	8,586	12,476	43,666	35,080
6	Agnew & Co	8,937	14,233	49,817	40,880
7	Agnew & Co	13,754	17,816	62,357	48,603
8	Agnew & Co	44,114	22,760	113,801	69,687
9	Agnew & Co	20,965	19,348	96,740	75,775
10	E. D. Smith & Co	46,927	23,291	116,457	69,530
11	Mason, Hoge & Co	47,087	19,395	96,977	49,890
12	Mason, Hoge & Co	62,954	18,781	93,907	30,953
13	Mason, Hoge & Co	71,099	18,461	92,307	21,208
14	McCormick Constr'n Co.	22,639	19,846	99,232	76,593
	Totals	$ 386,159		$1,106,649	$ 720,490

Total amount required to be done May 1st, 1893.....$1,106,649
Total amount done May 1st, 1893..... 386,159

Amount short as per contract May 1st, 1893.....$ 720,490

Sections A, B, C, D, E and F have been under water most of the month—more or less work has been done in the way of ditching.

A start was made on River Diversion on B and C.

Contractors on all of the other sections are preparing their camps and getting machinery on the ground. It is not probable that much work will be done on these sections during May on account of water.

Section 1, Main Channel, has been under water during the month, but there has been a force at work clearing the right of way, the heaviest timber being on this section, which is to a large extent now cleared.

Section 2 has also been under water, the quality of the material in the levee not being sufficient to keep the water from passing through it. The clearing has about all been done on this Section.

McArthur Bros. have two steam shovels at work—two others are in yard at Sag.

On Section 5, Agnew & Co. have one steam shovel at work and on Section 6 two steam scrapers. Where steam shovels can be used there should be at least five to every two sections; otherwise there should be night shifts in order to keep up with requirements.

On Sections 7 and 8 there is a slight increase in plant since April first—no increase on Section 9.

Section 10 has been under water most of the month. There is now about half a mile of Main Channel leveed and about two hundred men are at work; also the cantilever crane is in operation.

Sections 11, 12 and 13 have not been hindered by water, except on the small piece of River Diversion.

On April 7th the cantilever crane on Section 13 was destroyed by a cyclone; otherwise this Section would be keeping up its proportion of work.

On Section 14 but a small amount of work has been done the last four months, and not very much evidence that it will be increased for some time to come.

McArthur Bros., E. D. Smith & Co., and Mason, Hoge & Co., are showing every indication that they propose to faithfully carry out the condition of the contract, and as soon as the plant contracted for is all on the ground, with night shifts for a few months, will enable them to come up to the requirements.

At the present time the other contractors on the work between Willow Springs and Lockport are not showing as good evidence that they mean business. For the kind of plant they propose using ample time has elapsed to have it on the work.

No work is being done on River Diversion on the original contract, on account of high water, except on Section 8 and that is between the two rights of way of the Santa Fe Railway at Lemont. The two rights of way contain about 10,000 yards of rock. At the present rate of progress it will take about two and a half months to take out the balance of the rock between the rights of way. Except a few hundred feet the River Diversion work between Summit and Willow Springs is under water.

Yours truly,

(Signed) D. C. DUNLAP,
Assistant Chief Engineer."

"CHICAGO, May 8, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of April has been:

The work of reducing the notes pertaining to floods in the Illinois Valley was continued.

The survey of street lines adjacent to the South Branch of the Chicago River was continued, and the field work was completed, except to correct any errors that may develop as the notes are reduced.

Certain compilations and plats were made for the comparison of the flow of the Desplaines River in various years, at various places.

The subject of a design and arrangement of details for regulating works near Lockport was taken up and some progress made.

The care and maintenance of the various river gauges was continued.

Very respectfully,

(Signed) THOS. T. JOHNSTON,
First Principal Assistant Engineer."

"CHICAGO, May 8, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I herewith submit the following report of Division 3 for the month of April:

A map and profile of the Main Drainage Channel, showing the corrected field notes of the lines was completed.

A map of the right of way between Joliet and the E., J. & E. R. R., and a large scale contour map of the territory between Section 14 and Joliet lying west of the Desplaines River, were platted.

Work was done at Joliet in collecting information for the Sanitary District and Watershed maps, and for the right of way between Lockport and Joliet.

The surveying party located section corners north of Romeo until the 15th of April, when it was transferred to Division 1 to survey proposed lines south of Section 14.

Platting was also continued during the entire month on the Chicago River survey, Sanitary District, water-shed and sewerage maps, and on the main topographical maps of the route from Lake Michigan to Joliet, and this work will be continued together with the routine work of the Division, during next month.

Very respectfully,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

DEPOSITS MADE FOR PLANS.

The Clerk presented a report from the Chief Engineer, accompanied by a list of contractors who had deposited for, taken out and retained plans of the work between Willow Springs and Summit and Summit and Ashland avenue, and enclosing check for the amounts deposited with the same; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file, and the Clerk directed to deposit the enclosed check ($92.00) with the Treasurer to the credit of the District.

The motion prevailed unanimously, and the Clerk was so directed.

The following is

THE REPORT WITH ENCLOSURES:

"CHICAGO, May 10, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN — I transmit herewith check for $92, being the amount received for plans of work between Willow Springs and Summit and between Summit and Ashland avenue, during the last letting. The accompanying statement gives the names of the parties from whom money has been received and the amount.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer.

(One enclosure, with check.)

"Statement of payments made by contractors for plans of work between Willow Springs and Summit, and between Summit and Ashland avenue:

Cox Brothers	$ 8 00
San Francisco Bridge Co.	4 00
Green Dredging Co.	4 00
John Griffiths	12 00
J. C. Wright	8 00
McArthur Bros.	12 00
Chicago Dredging & Dock Co.	4 00
Colonel Burke	4 00
C. D. Streeter	8 00
Remington & Co.	8 00
H. B. Hurd	4 00
Lester, Qualey & Co.	8 00
John Griffin	8 00
	$92 00

(Check enclosed)

(Signed) ROBT. H. COWDREY,

Record Clerk."

SPECIFICATIONS FOR STEPHENS STREET BRIDGE.

The Clerk presented a report from the Chief Engineer, accompanied by specifications and two blue prints for the Stephens Street Bridge at Lemont, over the River Diversion, presented in accordance with an order passed at the meeting of the Board, held April 5, 1893, (page 1139 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report with enclosure and blue prints, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report, with enclosure and blue prints, was so referred.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit specifications for the Stephens Street Bridge

at Lemont, across the new channel of the Desplaines River, in accordance with the order of your Board, dated April 5, (page 1139 of Proceedings). Two plans for said bridge have been made, one for an iron-plate girder bridge and one for a wooden bridge.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

(Enclosing specifications and two (2) blue prints).

NOMINATION OF ASSISTANT ENGINEERS.

The Clerk presented a report from the Chief Engineer, transmitting the names of persons nominated as Assistant Engineers to fill vacancies, and requesting the concurrence of the Board in same; and the report was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be referred to the Committee on Engineering.

The motion prevailed unanimously, and the report was so referred.

The following is

THE REPORT:

" CHICAGO, May 10, 1893.

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—I hereby withdraw the names of L. J. Myers and T. F. Richardson, nominated by me on March 8th, for the position of Assistant Engineers, and submit in their stead G. W. Wood and J. B. Rohrer, who are Sub Assistant Engineers in the employ of the Sanitary District and at present assigned to charge of the Willow Springs and Sag divisions of work respectively. These gentlemen having performed the duties of their office satisfactorily, I respectfully ask your concurrence in their nominations.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,

Chief Engineer."

MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of April, 1893; and the same was read.

Mr. Boldenweck, seconded by Mr. Russell, moved that the report be ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since my previous report the main hospital of the Drainage Channel has advanced towards completion to the extent of being able to accommodate some sixty patients, with a certainty that this month will witness its completion, when one hundred and twenty can be taken care of.

After a thorough inspection I can report that it complies with the agreement entered into between Dr. Re and the various contractors in every particular. The location is most excellent, admitting of thorough drainage of grounds. Ample provision has been made for sufficient air space, the light and ventilation are unusually good. It will be heated by steam, and water will be piped to every floor. There will be bath rooms and closets throughout. In fact, all of the sanitary arrangements that are regarded as essential in an institution of this kind will be provided.

There is an ambulance which will make daily trips along the line. Telephone communication will be established with each section, so there can be prompt action in case of accident. The location at Mount Forest will be of easy access to that part of the Channel lying between Chicago and Lemont, where, from the character of the soil to be excavated, we would anticipate the prevalence of malarial and kindred diseases, and can safely caculate that most of the prevailing disease will be on this portion of the line. There have been a few cases of sickness in the past month, and those were of a mild character.

I desire to call the attention of the Board to the fact that in Section 9 there is no adequate provision made for procuring good water. What they use is hauled to the camp in barrels from some adjacent spring for drinking purposes. For use in the kitchen it is dipped from the Desplaines River. There is no excuse for this condition. I have notified them twice of the necessity of sinking a well, but have received nothing but promises to do so. Promises are a poor substitute for sanitary requirements. I am of the opinion that a note from the Board of Trustees in regard to this matter would

have a more stimulating effect than mine has had.

Trusting that it may, this report is most

Respectfully submitted,

(Signed) WM. MARTIN, M. D.
Sanitary Inspector."

APPOINTMENT OF SANITARY INSPECTOR AS OFFICER OF STATE BOARD OF HEALTH.

The Clerk presented a communication, received by President Wenter from Dr. F. W. Reilly, M. D., Secretary of the State Board of Health, announcing the appointment of the Sanitary Inspector of the District as an officer of the State Board of Health, and enclosing copy of "air space order," adopted by the State Board of Health at the suggestion of the Sanitary Inspector of the District.

The same were read, and by unanimous consent were ordered printed and placed on file.

The following is

THE COMMUNICATION, WITH ENCLOSURE:

"SPRINGFIELD, May 5, 1893.

Hon. Frank Wenter, President Board of Trustees, Sanitary District of Chicago, Chicago, Ill.

DEAR SIR—In accordance with your request of March 15, Dr. William Martin was appointed, at the recent (April, 1893) meeting of the Illinois State Board of Health, Sanitary Inspector of the Board, with power and authority to enforce all necessary measures for the proper sanitation of the right of way of the Chicago Sanitary District. It was suggested in this connection that he should procure, and, when on duty, wear a star or badge inscribed "Sanitary Inspector Illinois State Board of Health."

Will you kindly transmit to Dr. Martin the enclosed copy of Air Space Order, adopted by the Board at his suggestion.

Very Respectfully,

(Signed) F. W. REILLY, M. D.,
Secretary."

(One (1) enclosure).

(Enclosure.)

"SPRINGFIELD, May 5, 1893.

At the recent (April, 1893) meeting of the State Board of Health, State of Illinois, the following resolution and orders were adopted:

Resolved, That for the proper protection of the health of laborers, workmen and others, the State Board of Health of the State of Illinois hereby orders and ordains that the air-space in the sleeping quarters of bunk-houses or other structures in which workmen, laborers and others are housed by employers or contractors shall not be less than two hundred and fifty (250) cubic feet for each occupant of such bunk-house or structure; and it is further ordered that the Sanitary Inspectors of the Board shall enforce this resolution in cases within their purview

Attest:

(Signed) F. W. REILLY, M. D.,
[Seal] *Secretary.*"

OPINION OF ATTORNEY AND GENERAL COUNSEL ON CANAL QUESTIONS.

The Clerk presented a report from the Attorney and General Counsel, being an opinion supplemental to that presented on May 3, 1893, (page 1205 of the Proceedings) on legal questions with reference to the possession of the Illinois and Michigan Canal by the District, requested at the adjourned meeting of the Board, held April 29, 1893, (page 1199 of the Proceedings); and the report was read.

By unanimous consent, the report was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 9, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with a resolution passed by your Board asking for our opinion upon certain legal questions arising in relation to the Illinois and Michigan Canal in the event that a portion of the same in Cook County should be included in the site of its Main Drainage Channel by the Sanitary District of Chicago, we beg leave, in addition to the opinion already given, to report our conclusions, as follows:

First—The Trustees of the Sanitary District of Chicago have only such powers as are vested in them by the act under which the District is incorporated, and such act, in our opinion, does not confer any power or authority upon the said Trustees to make any contract or

agreement with the Canal Commissioners in regard to the conditions upon which the Sanitary District may use said Canal as a part of the site for its Main Channel. The Canal belongs to the State of Illinois and the General Assembly has by statute given the District the right to use any portion of such Canal within the County of Cook as a part of the site of said channel upon certain terms specified in said act. In our opinion said terms cannot be altered or modified either by the Trustees of the District or the Canal Commissioners.

Second—In our opinion the Commissioners of the Illinois & Michigan Canal will continue to control the navigation and the charging of tolls upon that part of the Canal which may be included in the Main Channel of the Sanitary District. The act creating the Sanitary District requires that the public "use "thereof shall not be unnecessarily in- "terrupted or interfered with, and that "the same shall be restored to its former "usefulness as soon as practicable" There is no provision of the act creating the District authorizing the Trustees of the Sanitary District to regulate navigation or collect, regulate or abolish tolls upon that part of the canal which may be included in the Main Channel of the Sanitary District. In our opinion the power of the Canal Commissioners over the navigation of that portion of the canal used by the Sanitary District will remain unaffected by such use.

Third—The obligation to restore the canal to its former usefulness, and that the public use thereof shall not be unnecessarily interrupted or interfered with, impose the obligation upon the Sanitary District to do whatever is necessary to restore and maintain that portion of the canal which they may use in such a condition that the same may be as advantageously used for navigation as before its use by the Sanitary District. If to that end a tow-path shall be necessary and pumping works at the Summit, in our opinion the Sanitary District will be under obligation to construct such tow-path and erect and maintain said pumping works.

In our opinion the Sanitary District will not be under obligation to furnish any land along the new channel except such as may be necessary to enable navigation to be maintained thereon as hereinbefore stated.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney.

(Signed) JOHN P. WILSON,
General Counsel."

PURCHASE OF "GAMBLE LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Cook County, owned by Mrs. Hannah Gamble in her own right and as trustee, and authorizing and directing the Clerk to pay for said lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mrs. Hannah Gamble, in her own right and as trustee, on the vouchers of the Attorney, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Mrs. Hannah Gamble, in her own right and as trustee, on the vouchers of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement for the purchase of lands necessary for the corporate purposes of this District, hereinafter more particularly described, from the following persons, at the prices herein stated, to-wit:

From Hannah Gamble the land hereinafter described for the sum of twelve thousand, three hundred and fifty-six ($12,356) dollars.

From Hannah Gamble, trustee, the land hereinafter described, for the sum of three thousand, seven hundred and forty-four ($3,744) dollars.

Your Committee recommend that the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to said Hannah Gamble the sum of twelve thousand, three hundred

fifty-six ($12,856) dollars in full payment for the following described land, to-wit:

That part lying northwesterly of the northwesterly reserve line of the Illinois and Michigan Canal of Lot one (1) in the division by Cook & Dickey of the east fraction of the southwest quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, excepting the north ten (10) acres thereof and also excepting therefrom that part thereof bounded by a line beginning at the northeast corner of the right of way of the Illinois and Michigan Canal and the turnpike road, and running thence northeasterly along the north line of said right of way 417 42-100 feet; thence northwesterly parallel with said road 208 71-100 feet; thence southwesterly parallel with the north line of said right of way 417 42-100 feet to said road; and thence southeasterly along said road 208 71-100 feet to the place of beginning.

To Hannah Gamble, trustee, the sum of three thousand, seven hundred forty-four ($3,744) dollars in full payment for the following described land, to-wit:

The north ten (10) acres of that part lying northwesterly of the Northwesterly Reserve line of the Illinois and Michigan Canal of Lot one (1) in the division by Cook & Dickey of the east fraction of the southwest quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian.

All of the above described premises lying and being situate in the County of Cook in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL.
THOMAS KELLY,
L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

PURCHASE OF STONE ON SECTION EIGHT.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, with reference to the communication from Mr. James Dullaghan, concerning the purchase of stone excavated on Section eight (8) referred to that Committee at the meeting held March 15, 1893, (Page 1101 of the Proceedings); and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, May 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—Your Committee on Finance have considered the communication from Mr. James Dullaghan, with reference to the purchase of stone excavated on Section 8 of the Main Channel, presented and referred to this committee at the meeting held March 15, 1893, (page 1101 of the Proceedings) and return the same herewith with the recommendation that no action be now taken for the disposition of any stone excavated on the Main Channel.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance."

REPORT ON COMPLETION OF SALE OF $2,000,000 BONDS.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, on the final reports from the Treasurer and Clerk, concerning the completion of the sale of $2,000,000 bonds of the District to Blair & Co., which reports were referred to that Committee at the meeting held April 26th, 1893, (Pages 1193 and 1194 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the report adopted, ordered printed and placed on file and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, May 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—Your Committee on Finance have duly considered and examined the final reports of the Treasurer and Clerk (with enclosures) on the purchase and delivery of the issue of $2,000,000 bonds, sold to Blair & Co., of New York, under bid of Oct. 11, 1893, which reports were presented and referred to that Committee at the meeting held April 26, 1893, (pages 1193 and 1194 of the Proceedings) and have to report that they find same to be correct.

Your Committee on Finance therefore recommends that the above reports (which are returned herewith) be approved and placed on file.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance."

REVISION OF RULES.

President Wenter, Chairman, presented a report from the Committee on Rules, transmitting the entire rules of the Board of Trustees, as revised and amended by the Committee; and the report was read.

Under the rules the report, with enclosure, was ordered printed and laid over.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, May 10, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—The Committee on Rules have had under consideration the Rules of the Board of Trustees, and present herewith the same revised and condensed as the result of such consideration.

Respectfully,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
(Enclosure) *Committee on Rules.*"

RULES OF THE BOARD OF TRUSTEES.

The law establishes a municipality called "The Sanitary District of Chicago," of which the Board of Trustees is the legislative and administrative body.

MEETINGS.

1. The Board shall proceed to business without delay, but the members thereof shall incur no individual liability in any respect.

2. The meetings of the Board shall be open and accommodations shall be provided for the press.

3. Regular meetings of the Board of Trustees shall be held on Wednesday of each week, at half-past one o'clock P. M. sharp.

4. Special meetings shall be called by the Clerk at the request of any three members, or of the President. Written notice shall be given by the Clerk to each Trustee of the time of each special meeting at least 24 hours previous thereto. Roberts' rules of order shall be followed in parliamentary practice unless otherwise ordered.

5. The call for special meetings shall state the purpose thereof. At every special meeting the call for the same shall be read and afterward filed by the Clerk, and no business other than that proposed by the call shall be in order at such meeting.

6. The annual meeting of the Trustees shall be held at 2 P. M. on the first Tuesday after the first Monday in December of each year, at which meeting the President for the ensuing year shall be elected in such manner as the Board may then determine.

7. A majority of the whole number of Trustees elected shall constitute a quorum. A quorum shall vote on every question submitted to the Board. If the question pertains to the expenditure of money, five (5) affirmative votes shall be required to carry same and shall be entered

of record. A *viva voce* vote may be taken on any question by unanimous consent, but the yeas and nays shall be taken if asked for by any member.

COMMITTEES.

8. The following Standing Committees shall be appointed by the President of the Board at the beginning of his term:

A Committee on Finance, consisting of three members.

A Committee on Engineering, consisting of five members.

A Committee on Judiciary, consisting of three members.

A Committee on Federal Relations, consisting of five members.

A Committee on Health and Public Order, consisting of three members.

A Committee on Rules, consisting of three members, of which the President of the Board shall be Chairman.

9. Any Trustee may attend any committee meeting.

10. A record shall be kept of the business done by each committee.

11. The duties of a committee are to examine and report upon all matters that may be referred to it or upon which it may be instructed by the Board; to take cognizance of and report matters within its province that may be of interest and importance to the Board; to keep itself informed in regard to the departmental work to which its duties are related, and to co-operate with and facilitate the ame.

12. Prior to each regular meeting of the Board and on the same or the preceding day, at some stated time, each departmental committee shall hold a regular meeting for the purpose of taking cognizance of matters within its province, and considering any pending departmental business. But requisitions, reports, returns, vouchers and communications and documents for the use of the Board shall not be delayed in transit on account of any Committee. It shall be the duty of each head of department, in addition to all other requirements, to bring to the attention of the appropriate committee all matters connected with his department, and the Clerk shall lay before the appropria e committee all matters in transit to the Board.

13. The Committee on Engineering, prior to each regular meeting of the Board, shall approve all vouchers for estimates on work for the Main Channel. If for any reason such vouchers are not approved, the Board shall be so informed.

14. The Committee on Finance shall examine and approve all bills and vouchers before they are acted upon by the Trustees prior to each regular meeting of the Board. If any bills or vouchers are not approved by the Committee, the reasons therefor shall be reported to the Board.

OFFICERS.

15. The President of this Board shall be elected by the Board for the term of one year, and shall serve until his successor is elected and enters upon the duties of the office. It shall be the duty of the President to preside at all meetings of the Board, and to see that the rules and instructions of the Board are complied with and enforced. The salary of the President shall be four thousand ($4,000) dollars per annum.

16. The Board shall select a Clerk, a Treasurer, a Chief Engineer, and an Attorney for the municipality, who shall hold their offices during the pleasure of the Board. Each of these officers shall subscribe to the oath of office and give bond with sureties to be approved by the Board.

17. The Board shall select a Sanitary Inspector, who shall be a regular physician, and who shall have charge, under the rules and the direction of the Board, of the sanitary condition of the camps along the right of way. The salary of the Sanitary Inspector shall not exceed twenty-four hundred ($2,400) dollars per annum.

18. All vacancies occurring in these offices shall be filled by the Board of Trustees as soon as practicable after they occcur.

DEPARTMENTS.

19. There shall be organized under the supervision of the Board of Trustees four executive departments, each under the authority of a general officer, governed by the rules of the Board, viz: A Clerical Department, in charge of the Clerk; a Treasury Department, in charge of the Treasurer; an Engineering Department, in charge of the Chief Engineer, and a Law Department, in charge of the Attorney.

CLERK.

20. The duties of the Clerk shall be to keep all the accounts, papers, books and records of the municipality, and he shall

devote his time to the duties of his office. He shall attend all meetings of the Board, whether regular or called, and keep the records of the same, keep the corporate seal and affix the same to all papers which require it, and shall perform such other duties as are required by law, or by the ordinances, orders or resolutions of the Board. His salary shall be the sum of five thousand dollars ($5,000) per annum and his bond shall be in the sum of one hundred thousand ($100,000) dollars.

21. The Clerk shall select, subject to confirmation by the Board, one Assistant Clerk, who shall be Acting Clerk when authorized by the Clerk and in his absence. The salary of said Assistant Clerk shall not exceed the rate of eighteen hundred ($1,800) dollars per annum.

22. The Clerk may appoint as required, a stenographer, who is also a typewriter, at a rate not exceeding $100 per month, and may employ any additional force as authorized by the Board and as needed to carry out its instructions.

23. All requisitions for supplies and materials required to carry out any project approved by the Board shall be made upon the Clerk, except as otherwise provided in the regulations; and all requisitions shall state the purpose for which the articles are required.

24. All purchases, auditing of vouchers, and issuing of warrants for the same as ordered by the Board shall pertain to the Clerical Department and be in charge of the Clerk. He shall file and transmit to the Board all requisitions, audit all vouchers and check all returns, and shall keep the records of the Board and of its Committees.

25. All reports, documents, returns and communications for the use of the Board shall be addressed to the "Board of Trustees," and shall be filed in the Clerical Department.

26. The Clerk shall keep a record of the proceedings of the Board and shall print the same, and send a copy to each member and officer as soon as practicable.

27. At each meeting of the Board the Clerk shall provide each Trustee with a schedule of the vouchers subject to approval at that meeting.

28. The Clerk shall keep a record for each committee, and shall cause a verbatim report to be taken of the hearings and other proceedings before committees when required by the committee.

29. The Clerk shall submit at each meeting a summary schedule, showing the number of employes in each department.

30. The general care of the offices of the District and of the Board shall be in charge of the Clerk.

31. There shall be an office in the Clerical Department for the President.

TREASURER.

32 The Treasurer shall receive all moneys of the municipality, and make such payments as shall be ordered by the Board upon warrants drawn by the President and countersigned by the Clerk. He shall sign all checks drawn for account of the District. He shall negotiate all bonds as directed by the Board, and make all payments of interest and for redemption of same at maturity, and he shall cover into the treasury all sums received as interest on any deposits of the funds of the District. He shall make such reports as required, and generally act as the financial adviser of the Board of Trustees. The office of Treasurer shall be at the headquarters of the Sanitary District. The salary of the Treasurer shall not exceed twenty-five hundred ($2,500) dollars per annum, and he shall give bond in the sum of two million ($2,000,000) dollars, and shall file a supplemental bond to cover any liability in excess of this amount when required by the Board.

33. The Treasurer may appoint an assistant at a salary not to exceed twenty-five hundred ($2,500) dollars per annum, whose duties shall be prescribed by the Treasurer and performed under his direction. He may employ any additional assistance as required and as authorized by the Board.

34. The Treasurer's office shall be opened for business during banking hours.

35. The Treasurer shall file with the Clerk between the first and third day of each month, a detailed statement for the preceding month of receipts, disbursements and balances, including all sums received as interest on any deposit of the funds of the District.

36. The Treasurer shall submit an annual report showing the receipts and disbursements of money during the preceding fiscal year.

CHIEF ENGINEER.

37. The Chief Engineer shall have charge of all engineering work and shall devote his time to the Sanitary District. He shall do all surveying an civil engi-

neering necessary or ordered by the Board, and shall perform such other duties as may be imposed upon him from time to time by ordinances, orders or resolutions of the Board, and shall attend the meetings of the Board when required. His salary shall not exceed the sum of nine thousand ($9,000) dollars per annum, and his bond shall be in the sum of twenty thousand ($20,000) dollars.

38. The Chief Engineer shall have entire charge of the work of the Engineering Department, and shall organize and administer the same so as to secure a full record of the nature and cost of all operations, and full responsibility of all employes.

39. The Chief Engineer shall select the following assistants as needed by him, subject to confirmation by the Board: One Assistant Chief Engineer at a salary not exceeding the rate of $3,600 per annum; one Principal Assistant at a salary not exceeding the rate of $3,000 per annum; one Principal Assistant at a salary not exceeding the rate of $2,700 per annum; one Record Clerk at a salary not exceeding the rate of $1,500 per annum; Assistant Engineers at the rate of $1,800 to $2,400 per annum and in such number as may from time to time be authorized. Said assistants to be in charge of such operations as may be assigned by the Chief Engineer. The Assistant Chief Engineer shall be Acting Chief Engineer when authorized by the Chief Engineer and in his absence.

40. The Chief Engineer shall appoint, as authorized by the Board, such employes as the needs of the service may require, who shall be men of technical competence and training for the duties assigned them as engineers or draftsmen.

	Per month.
Sub-Assistant Engineers at the rate of	$125 to $150
Instrument men at the rate of	100 to 125
Recorders at the rate of	75 to 100
Draftsmen at the rate of	75 to 150

41. The Chief Engineer may employ an Assistant Record Clerk at the rate of not over one hundred ($100) dollars per month; a typewriter at the rate of not over seventy-five ($75) dollars per month, and an office boy at not over thirty-six ($36) dollars per month. He may also employ as authorized and at current rates for the service rendered, such rodmen, chainmen, axmen, flagmen, computers, inspectors and other employes as may be needed to organize surveying parties and to carry on the general work ordered by the Board.

ATTORNEY.

42. The Attorney shall have charge of all litigation to which this District shall be a party and shall devote his time to the Sanitary District. He shall draft all papers required by the Board; attend upon its meetings when required; give written opinions upon all questions referred to him by the Board or its officers in the discharge of their duties and generally attend to all law business of the Board. His salary shall be the sum of five thousand ($5,000) dollars per annum, and his bond shall be in the sum twenty thousand ($20,000) dollars.

43. The Attorney may appoint the following assistants as needed by him, subject to confirmation by the Board:

One Principal Assistant Attorney at a salary not to exceed the rate of three thousand six hundred ($3,600) dollars per annum.

One Assistant Attorney at a salary not to exceed three thousand ($3,000) dollars per annum

One Assistant Attorney at a salary not to exceed fifteen hundred ($1,500) dollars per annum.

The Attorney may employ one typewriter and stenographer at a salary not to exceed seventy-five ($75.00) dollars per month. The Attorney may employ any additional assistance as required and as authorized by the Board.

The duties of the Assistant Attorneys and other employes of the Law Department shall be prescribed by the Attorney and performed under his direction.

The Principal Assistant Attorney shall be Acting Attorney when authorized by the Attorney and in his absence.

44. There shall be appointed by the Board upon consultation with the Attorney, a General Counsel at a salary not exceeding the rate of five thousand ($5,000) dollars per annum. His duties shall be to advise and consult with the Attorney of the Board in all matters pertaining to the legal business of the Sanitary District; when requested by the Board to give written opinions in connection with the Attorney of the Board, upon such matters as may be submitted to him and the Attorney, and generally to advise and consult with all members of the Board concerning the legal affairs of the District.

SANITARY INSPECTOR.

45. The Sanitary Inspector shall devote his entire time to the duties of his

office. He shall have an office in the rooms of the Board, and his office hours shall be from 1 to 3 o'clock, provided he is not engaged otherwise in the performance of his duties to the Board.

46. He shall be in readiness to hold daily consultations with the Board in reference to all matters pertaining to his department, providing he is not out on the route on duty.

47. He shall make a thorough inspection of the various camps and hospitals along the route twice a week, and oftener if so ordered by the Board.

48. He shall be subject to the order of the Board at all times in case of necessity (such as the occurrence of epidemic in the camps), and in such emergency shall be on the ground in order to give his personal attention to the means of suppressing the same.

49. He shall make a monthly report to the Board on the sanitary condition of the camps under his supervision.

AMENDMENTS TO RULES AND REGULATIONS.

50. All amendments and changes in these rules and regulations must be proposed in writing, at a regular meeting of the Board, and shall not be acted on before the next regular meeting of the Board. The vote of a majority of the Trustees constituting the Board shall be necessary to their adoption.

MISCELLANEOUS.

51. The salary of each Trustee, except that of the President, shall be the sum of three thousand ($3,000) dollars per annum.

52. The fiscal year shall be from the first day of January to the thirty-first day of December, inclusive, and correspond with the calendar year.

53. The Board of Trustees shall approve all requisitions, vouchers and returns.

54. All requisitions, vouchers, returns and reports shall be signed by the head of a department, and shall be in duplicate, a copy to be preserved in the department originating the same, and one to be filed in the Clerical Department. The accounting of each department shall be separate and distinct.

55. All stationery and special departmental forms shall be provided and charged to the department requiring the same. The Board shall approve all blanks.

56. All general and miscellaneous expenditures which do not pertain specifically to a department shall be governed by the same general rules as a department and referred to a general account. All vouchers and requisitions shall state specifically the authority for incurring the liability.

57. All employes subject to confirmation by the Board shall hold their office during the pleasure of the Board. All other employes shall be subject to discharge by the head of the department employing them.

58. Requisitions shall be made for employes and shall include the rates of compensation proposed, except as specifically provided for in the regulations.

59. Pay-rolls shall be made up in the department in which the service was rendered as soon after the close of the month or week as practicable and turned in to the Clerk for audit, and on approval by the Board, payment and receipt of employe; *provided*, that discharged employes shall be paid currently from a fund provided for the purpose.

60. The classification of employes on pay-rolls and returns, except as fixed by the regulations, shall indicate the duties performed so far as practicable.

61. Specialists may be employed for any purpose approved by the Board, and at such rates of compensation as may be agreed upon and authorized.

62. Each department shall make out a semi-annual property return, which shall exhibit all property of whatever character under the following designations:

On hand per last return.....Received during the half year.....
Total to be accounted for.....Disposed of during the half year.....
On hand.....day of.....189..
From what source the property was received and its disposition shall be noted.

63. An annual report shall be made by each department as soon after the close of the fiscal year as practicable, and said report shall give a review of the operations of the year, a classified exhibit of departmental expenditures, the operations proposed for the current year and an estimate of the probable expenditure.

64. Each department shall make a monthly report, giving a distributed labor account, an abstract of departmental liabilities and expenses, and an estimate of liabilities for the current month; said report shall review the operations of the month and those proposed for the current month.

65. A project shall be submitted for the approval of the Board for all operations which involve liabilities; said project shall set forth the operations proposed and the reasons therefor and the time required, with an approximate estimate of the cost.

66. Each head of department shall file in the office of the President a statement in regard to each employe of the regular force in his department not subject to confirmation, and such statement shall set forth all needful information in regard to the fitness of the employe for the duties of his position and such other information as shall be prescribed on a blank provided for the purpose, and such statement shall be accompanied by copies of any papers pertaining to the qualifications of the said employe. When any employe is promoted or his pay increased the reason therefor shall be filed. When an employe is discharged, or his pay reduced, a record of cause shall also be filed. All such statements and papers shall be accessible to the Trustees and officers of the Board.

This regulation shall not apply to employes required to meet temporary exigencies, and any force specially authorized for service of limited duration may be excepted by the Board on request of the departmental chief.

67. Expenditures for minor purchases, temporary employment and current field expenses, as demanded by the exigencies of the service and such as cannot be reasonably anticipated and provided for in the usual way, may, at the discretion of an officer of the Board, be made from an emergency fund and returned on an emergency voucher. All emergency vouchers shall be drawn to the assistant by whom the liability is directly incurred.

68. All officers and employes when traveling upon duty and under orders shall be allowed actual and necessary expenses. All officers and employes shall be allowed their actual and necessary expenses in the field, except when assigned to some local station, or when the time in one locality is equivalent to a local assignment (which shall be considered as thirty (30) days), or when the salary is stipulated to cover the expenses in whole or in part. When assignments are temporary or other than local, the fact shall be so noted on the pay-roll for said person so assigned and the Chief Engineer immediately upon the assignment of such person shall notify the Clerk of such assignment. All vouchers for field expenses shall be drawn to the assistant in immediate charge, and shall exhibit the items of liability incurred on account of each employe of the party for which the assistant is responsible.

69. The offices of the Clerk and Attorney shall be open from 9 A. M. to 5 P. M., and close on Saturday at 4 P. M.

That of the Chief Engineer from 8:30 A. M. to 5 P. M., and close Saturday at 3 P. M.

RULES OF ORDER.

RULE 1. At the hour appointed for the meeting the Clerk, or some one appointed to fill his place, shall procced to call the roll of members, mark the absentees and announce whether a quorum (i. e., a majority of all the members elected) be present. Upon the appearance of a quorum, the Board shall be called to order, the presiding officer taking the chair, if present, and the Board appointing a temporary chairman, if he is absent. If a quorum do not appear for thirty minutes after the time of meeting the Board shall thereby stand adjourned to the next regular meeting, unless by a vote of the members present an adjournment be had to a subsequent date. When a quorum is present the Board shall proceed to the business before it, which shall be conducted in the following order:

1. The reading of the minutes of the proceedings of the last meeting or meetings, amendment or approval of the same, unless dispensed with by the Board.

2. Receiving reports of officers.

3. Unfinished business of preceding meetings.

4. Reports of committees.

5. Presentation of petitions and communications.

6. Miscellaneous and new business.

Rule 2. All questions relating to the priority of business shall be decided without debate.

Rule 3. The acts of the Board shall be expressed by Ordinances, Orders and Resolutions.

Rule 4. The presiding officer shall preserve order and decorum and shall decide all questions of order subject to an appeal to the Board, on which appeal no member shall speak more than once.

Rule 5. Smoking shall be strictly prohibited in the room during the session of the Board.

Rule 6. When a member wishes to present a communication, petition, order, resolution or other original matter, he shall briefly state its nature before presenting the same.

Rule 7. No member, without leave of the Board, shall speak more than once upon the same subject until every member desirous of speaking shall have spoken, and no member shall speak longer than ten (10) minutes at any one time, except by consent of the Board.

Rule 8. While a member is speaking no member shall hold any private discourse, or pass between the speaker and the Chair.

Rule 9. Every member who shall be present when a question is stated from the Chair shall vote thereon unless excused by the Board, and no member shall be recorded as voting unless present when the roll is called.

Rule 10. Any matter before the Board may be set down as as a special order of business at a time certain, if a majority of the Trustees vote in the affirmative, but not otherwise.

Rule 11. No motion shall be put or debated unless it be seconded. When a motion is seconded it shall be stated by the presiding officer before debate, and every such motion shall be reduced to writing, if required by a member.

Rule 12. In all cases where a resolution, order or motion is entered on the minutes of the Board, the names of the members moving and seconding the same shall be entered also.

Rule 13. A motion to lay a question on the table is not debatable.

Rule 14. A motion to lay any particular proposition on the table shall apply to that proposition only.

Rule 15. When a motion is postponed indefinitely it shall not be again taken up at the same meeting.

Rule 16. On an amendment to "strike out and insert," the paragraph to be amended shall first be read as it stands; then the words proposed to be stricken out and those to be inserted; and, finally, the paragraph as it will stand if so amended, shall be read.

Rule 17. A substitute for any original proposition in debate may be entertained when further amendment is not admissible; and, if accepted by the mover of such original proposition or by the Board by vote, it shall entirely supersede such original proposition, and cut off all amendments appertaining thereto.

Rule 18. A vote or question may be reconsidered at any time during the same meeting, or at the first regular meeting held thereafter.

Rule 19. It shall be the privilege of any Trustee to have his vote recorded on any one or more vouchers when presented to the Board for approval.

HOSPITAL AT MT. FOREST.

Mr. Gilmore, Chairman, stated with reference to the communication from Dr. Re, concerning the hospital at Mount Forest, presented and referred to the Committee on Health and Public Order at the meeting held May 3, 1893, (Page 1206 of the Proceedings) that the communication was simply in the nature of an invitation, and that there is no contract between the District and Dr. Re.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MAY 17, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and seventieth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, May 17, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) members were present.

MINUTES.

The minutes of the regular meeting, held May 10, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending May 13, 1893	$1,051 70	
Eng. Dept., Div. No. 2, week ending May 13, 1893	171 60	
Eng. Dept., Div. No. 3, week ending May 13, 1893	316 60	
Eng. Dept., Div. No. 4, week ending May 13, 1893	49 20	
		$ 1,589 00
Clerical Dept., office roll, week ending May 13, 1893		39 00
Law Dept., office roll, week ending May 13, 1893		$ 48 00
Total		$ 1,676 00

ENGINEERING DEPARTMENT.

Goodwillie Bros. & Co. (pine stakes).....	$100 00	
Emil Rudolph (surveying street ends).....	550 00	
		$ 650 00

CLERICAL DEPARTMENT.

Wyckoff, Seamans & Benedict (typewriter and desk).....		$ 62 50

LAW DEPARTMENT.

Murray & Co. (awnings)	$ 28 50	
Haynie R. Pearson (expense).....	8 80	
		$ 37 30

LAW DEPARTMENT.

Land Account—

Orrin N. Carter (Williams taxes, Will Co.)	$ 23 45
Grand total.....	$2,449 25

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 333, Engineering Department, (stationery and drafting material).....	$67 00

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisition No. 333, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 333, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending May 13, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending May 13, 1893, as the same have been reported to me:

Engineering Department.....	84
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	95

Respectfully submitted,

(Signed) THOMAS F. JUDGE,

Clerk."

REVISION OF RULES.

Under the head of "Unfinished Business," action on the report of the Committee on Rules, transmitting revised rules of the Board, presented and ordered printed and laid over at the meeting held May 10, 1893, (Page 1220 of the Proceedings) was deferred, on motion of Mr. Eckhart, seconded by Mr. Boldenweck.

PURCHASE OF "BRUCE LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase of right of way lands in Will County, owned by James Bruce, and authorizing and directing the Clerk to pay for said lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay James Bruce, on the voucher of the Attorney, for said lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay James Bruce, on the voucher of the Attorney, for said lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, May 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with James Bruce for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of six thousand ($6,000) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said James Bruce the sum of six thousand ($6,000) dollars in full payment for the following described lands, to-wit:

That part of the southwest quarter (¼) of Section thirty-five (35), Township thirty-seven (37) north, Range ten (10) East of the Third Principal Meridian, bounded and described as follows:

Beginning at a point in the south line of said southwest quarter (¼) 594 feet west of the intersection of said south line with the westerly ninety (90) foot reserve line of the Illinois and Michigan Canal; thence north along a line parallel with the north and south center line of said Section thirty-five (35), 1,319.10 feet; thence east along a line parallel with the south line of said southwest quarter (¼) to the westerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company; thence southerly along said westerly boundary line of said right of way to the south line of said southwest quarter (¼); thence west along said south line to the point of beginning, containing 11.72 acres, more or less.

Said premises lying and being situate in the County of Will, in the State of Illinois.

As part of the consideration for said land, said Bruce is to have the privilege of taking and removing from the right of way of this District such stone as shall be suitable for fluxing purposes, from the stone excavated from that part of the Main Channel of this District which lies within said Section thirty-five (35). The amount of stone so taken is not to exceed 20,000 tons per month, and this privilege is to terminate with the termination of the contract now existing between said Bruce and the Illinois Steel Company for the delivery by him to it of fluxing stone, to-wit: On or about the 1st day of October, A. D. 1894, and is subject to the rights of the contractors, Mason, Hoge & Co., under their contract with this District, with whom said Bruce is to make such arrangements as he may be able and shall deem desirable for the separation of the stone suitable for his purposes from the other stone and dirt taken from said excavation, and for the taking of the same in such manner and at such time as shall not interfere with the work of said contractors.

He is also to have the privilege of removing from the above described land within forty (40) days from the date hereof, all the buildings and improvements thereon.

Your Committee also recommend that the President and Clerk be authorized and directed to execute on the part of the District a contract with said Bruce containing such of the above provisions as, in the opinion of the Attorney, may more properly be contained in a contract, than reserved in the deed herein provided for.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
L. E. COOLEY,
WM. BOLDENWECK,
W. H. RUSSELL,
JOHN J. ALTPETER.

Joint Committee on Finance and Engineering."

CONSIDERATION OF ROUTE—ASHLAND AVENUE TO SUMMIT.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to a reconsideration of the route of the Main Channel between Ashland avenue and Summit; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

"CHICAGO, May 17, 1893.

GENTLEMEN—In view of the present condition of affairs in relation to the route of the Main Channel from the waters of the Chicago River to Summit, the Joint Committee deems it proper to report back without recommendation such matters as have been referred to it, and call the attention of the Board to the subject for such further action as may seem proper. In so doing, the Committee will present briefly the various steps taken by the Board and by the Committee, up to this time.

On June 7th, 1892, (page 542 of the Proceedings), the Chief Engineer presented a report, covering all routes deemed feasable, between Chicago and Willow Springs, which was referred to this Committee. After certain borings had been so far completed as to enable a recommendation to be made, the Committee reported back a definite location between Summit and Willow Springs on August 10th (page 670), and the same was adopted by the Board and contracts advertised therefor and subsequently let. On that portion of the route between Chicago and Summit, the Committee made a provisional recommendation in the following language:

"The Committee deems the canal route to be expedient under all the circumstances, on the supposition that to procure the necessary right of way will present no special difficulties. In order to settle this question beyond doubt, the Committee has already entered upon the necessary negotiations, and will report finally in the premises as soon as conclusions are reached.

The Committee had repeated conferences with railway officials with a view to such railway changes as would render the route more available and received two reports upon the subject from the Chief Engineer under date of August 20 and September 27th. No conclusion had been reached when, by instruction of the Board, this Committee reported on the subject of temporary relief on October 12 (page 792). The immediate utility of an enlargement of the canal in conjunction with pumping works near Summit, appealed so strongly to several of the members that the President, by message of same date (page 783) urged definite action with a view to contracting the work at the earliest practicable date.

A report on the subject matter of the message was received from the Chief Engineer on October 24 (page 822), and referred to this Committee, which was reported back on November 2 (page 851), with a specific recommendation for the adoption of the route and the preparation of an ordinance for right of way and specifications for work, all of which was concurred in by the Board.

On November 9 (page 864) the ordinance was submitted and adopted. This was framed to cover the Canal and a right of way on either side, according as it might be found most practicable to shift the Santa Fe or the Alton railway.

On November 16 (page 874) the Chief Engineer submitted specifications for enlarging the Canal to a capacity of 100,000 cubic feet per minute, between Bridgeport and Summit. These were referred to this Committee, and reported back and adopted on November 23 (page 908).

The work was at once advertised in conjunction with the work re-advertised between Summit and Willow Springs, and bids received on January 25th, 1893, which were referred to this Committee on January 26th, (pages 1018 and 1024). On February 1st, (page 1033) the Committee reported on bids below Summit. The bids for the canal enlargement were not reported, owing to the question then pending with the Canal Commissioners in regard to the possession of the canal, a matter still undecided. The lowest bid on alternative propositions was $777,380, and $668,300 for the removal of 1,800,000 cubic yards of earth, in enlarging the canal prism.

Meantime, this Committee continued the railway investigation and negotiations, and certain alternative propositions were submitted to the Santa Fe Railway for estimate, on January 14, 1893. To these no reply was received, and all matters under consideration were virtually suspended until a recent date, owing to the death of Mr. Manvel, the President of the Santa Fe system.

As early as February 10, 1892, (page 355) and prior to any determination of route, an order was passed for a conference with the Commissioners of the Illinois and Michigan Canal, with a view to a determination of our rights in the Canal and the attitude of the Canal

Board, and a special committee was appointed on March 30th, (page 465). The conference was held on April 9th, and subsequently certain legal questions were formulated for the consideration of the Attorney of the Canal Board, to which no reply was ever received.

On November 9th (page 867), the President was directed to arrange a conference between the Commissioners of the Illinois and Michigan Canal and the Board, for the purpose "of acquiring legal possession of the Canal and the Canal Reserve." This conference was held on November 18 (page 883), and on November 30 (page 927) the Board passed a resolution requesting the Canal Commissioners "to take such action or proceedings as they may deem advisable or proper preparatory to the District entering upon, using, widening and deepening that portion of the Illinois and Michigan Canal mentioned in the preamble to this resolution, in accordance with the provisions of and for the purpose specified in the act under which the Sanitary District of Chicago is incorporated." By letter of December 10 (page 948) the Board is advised that the Canal Commissioners will submit the subject matter to the Attorney General "for his opinion and advice in the matter."

Owing to a change of administration, the matter was not promptly considered. On invitation of the Attorney General, the Attorney and President, with several of the Trustees, visited Springfield on January 23, 1893, for a conference, and subsequently the Attorneys and General Counsel filed briefs. The Attorney General's opinion was given out on February 28, and the Canal Commissioners by letter of March 15 (page 1111) advised the Board that they accept the opinion "as expressive of the reciprocal rights and powers of our respective bodies."

A conference with the Canal Commissioners was held on March 18, in which the legal points are fully presented by our Attorney and General Counsel, and by letter of the 25th (page 1130), the Canal Board transmit the opinion of their Attorneys as their further conclusion, and request that the plans and specifications be submitted for their inspection. By resolution of March 29 (page 1132), the President is authorized and directed to present all needful information, but the legal position of the Canal Commissioners is not conceded. Several informal conferences were held and the matter fully discussed between members of the two Boards, and finally the President of the Canal Board appeared by special attorney with further legal objections. As definite results seemed improbable, the Board, on April 26, (page 1195) called for a definite reply by April 29, and in the absence of such answer assumes that the Canal Commissioners "deny the right of the District to use said portion of the Canal, and will resist any attempt on the part of the District to take possession of any part of the Canal." No satisfactory reply being received, the Attorney and General Counsel are directed on April 29th, (page 1199) to submit for record "their opinion heretofore furnished to this Board." This was submitted on May 10th, (page 1217).

Meantime, the Committee, acting through a sub-Committee, on May 5th, received through the authorized agent of the Santa Fe Railway, a general proposition, covering the entire route from a point west of Halsted street, in the City of Chicago, to the City of Joliet. At a meeting of the Committee on May 6th, the Chief Engineer, in conjunction with the Chief Engineer of the Santa Fe Railway, and the two right of way experts of the District, is instructed to submit various estimates of cost under the proposition. A memorandum by the Chief Engineer, bearing upon part of the information called for, was submitted to the Committee on May 15. The foregoing review brings down to date the entire efforts of the Board and of this Committee to secure possession of the Canal and to remove railway complications. In view of developments of both a legal and engineering character, the Committee has taken under advisement the whole question of policy in respect to the route between Bridgeport and Summit. The consideration has turned on adhering to the adopted route or changing to a line a few hundred feet north and independent of the canal right of way.

If the adopted line is adhered to, it will be necessary at once to instruct the Law Department to go on with the legal proceedings on the basis of a friendly suit as arranged with the Canal Commissioners and the Attorney General, and further instructions should be given in regard to railway negotitation.

On the other hand, should it be concluded to change the line, the ordinance of November 9, 1892, should be rescinded, the bids received for the enlargement of the canal on January 25th rejected, and the necessary action taken to determine a new ordinance and final location.

The Committee is unable to reach an agreement, and has concluded to report

the entire subject matter back to the Board without recommendation.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOS. KELLY,
WM. BOLDENWECK,
B. A. ECKHART,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

PURCHASE OF STEEL RAILS ON "SWIFT PLANT."

The Clerk presented a communication from Messrs. Ricker, Lee & Co., offering to purchase the steel rails on the Swift & Co. ice plant; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the communication be ordered printed and referred to the Joint Committee on Finance and Engineering, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the communication ordered printed and referred to the Joint Committee on Finance and Engineering, with power to act.

The following is

THE COMMUNICATION:

"CHICAGO, May 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the suggestion of members of your Committee on Finance, we make the following proposition for the purchase of the old rails in the two spur tracks, projecting northward from the end of the "Swift" bridge over the Illinois & Michigan Canal. These tracks are 800 feet in length, and contain about 25 tons of steel rail; about 60 per cent of these rails are in condition to be used again. If the Trustees will sell them to us, we will take such of the rails as are in condition to be used, at the rate of $26.00 per ton.

The above price is the present market value of old steel rail.

Very respectfully yours,

(Signed) RICKER, LEE & Co.
W."

LEASE WITH A. M. MUNSON TO BE PREPARED.

Mr. Kelly presented an order, instructing the Attorney to prepare a lease with Annie M. Munson for land and building at Mt. Forest, for the use of the Engineering Department, and authorizing and directing the President and Clerk to execute the same as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Cooley, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, the Attorney instructed and the President and Clerk authorized and directed in accordance with same.

The following is

THE ORDER:

"*Ordered*, That the President and Clerk be authorized and directed to execute on the part of the District a lease, to be prepared by the Attorney, leasing for the use of the Engineering Department from Annie M. Munson, a portion of Lot eight (8), in Block twenty-six (26) in Mount Forest, Cook County, Illinois, described as follows, to-wit:

Seventy-five feet front on Oakwood avenue by one hundred (100) feet on Vinewood avenue, together with one and one-half story frame building thereon. Said lease to bear date April 1, 1893, and to be for a term of one year at a rental of twenty ($20) dollars per month for said term."

ADOPTION OF "NORTH ROUTE" FROM ASHLAND AVENUE TO SUMMIT.

Mr. Cooley presented a resolution, repealing the ordinance adopting the Canal Route, rejecting the bids received on same, and directing the return of checks deposited with said bids, the preparation of an ordinance for the North Route and the stoppage of all pending negotiations with the Canal Commissioners and the Santa Fe Railway; and the resolution was read.

Mr. Cooley, seconded by Mr. Gilmore, moved the adoption of the resolution, and the orders therein contained.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Gilmore, Russell and Wenter—five (5.) Nays—Messrs.

Boldenweck, Eckhart and Kelly — three (3).

Upon which result the President declared the motion carried, and the resolution and the orders therein contained adopted.

The following is

THE ORDER:

"WHEREAS, The Canal route and the use of the Illinois and Michigan Canal, in conjunction therewith and as a part of the Main Channel of the Sanitary District between Bridgeport and Summit, has been under constant advisement by this Board and by its Committees since August 10, 1892, and no conclusion has yet been reached in regard to the occupation of said Canal or in regard to the railway complications that pertain to this route; and

WHEREAS, No understanding can be reached with the Board of Canal Commissioners in regard to the occupation and use of said Canal except through legal proceedings against the Sanitary District, carried to the Supreme Court by the Canal Board and by the Attorney General of the State, and the latter part of June or the first part of July will be the earliest date at which a decision can be expected on the basis of a friendly suit, and said decision may be delayed to the October term; and it also appears that should the opinions of our Attorneys be fully sustained, the use of said Canal will be subject to conditions and State control for certain purposes. and, furthermore, it appears doubtful if the question of ownership and control of the banks and the dockage incident thereto will be decided; and

WHEREAS, The railway complications are of such a character as to make it necessary to reach a friendly agreement in regard to certain changes, and if these changes cannot be made, it will be necessary to greatly restrict the right of way which will add to the cost of executing the work and be of great detriment to future developments; and it does not appear that a proper and equitable understanding is probable in the near future; and

WHEREAS, The right of way and the work between Summit and Lockport is now provided for, and the executive departments are now free to undertake and carry on expeditiously all proceedings necessary to acquire the right of way and inaugurate the work between Bridgeport and Summit, and that the beginning of construction should not be delayed beyond this season in order to keep this portion of the Main Channel abreast of that now under way; and, also, that the same proceedings and the same time will be required along the Canal line in acquiring right of way after matters in controversy in regard to the use of the Canal and in regard to railway changes are settled as will be required to procure the entire right of way on an independent route; and, furthermore, that contracts now under way will be delayed on account of the uncertainties of the use of the Canal; and

WHEREAS, It appears that a route is available immediately north of and parallel to the Canal, which will involve no increase of cost to the District, about which there can be no question of ownership and control, and which leaves the District free to adjust its differences with railway corporations by mutual agreement or by court proceedings as may be expedient when the time to settle such questions arrives; and, moreover, which can be entered upon and prosecuted without the delay attending canal or railway controversies; and

WHEREAS, The proposed enlargement of the Illinois & Michigan Canal, with pumping works at Summit, for purposes of temporary relief, involves a large extra cost and the benefit therefrom is problematical, especially in view of the very short use which could be made of any such works before the opening of the Main Channel, and the legal propriety of this work has been questioned; therefore, be it

Resolved, That this Board rescinds and repeals the ordinance of November 9th, 1892, and all action had in regard to the adoption of the Illinois & Michigan Canal as a route, and as a part of the Main Channel.

2. That this Board rejects all bids for the enlargement of the canal between Bridgeport and Summit, received January 25th, and directs the Clerk to return the checks deposited on account of the same.

3. That the Attorney and Chief Engineer, under the supervision of the Joint Committee on Engineering and Finance, are directed to prepare forthwith an ordinance for the necessary right of way for the Main Channel, north of the Illinois and Michigan Canal, and between the range line of Summit and the west fork at Robey street, said ordinance to include all of Section 7, north of the Canal, near

the range line, and to be bounded on the north generally, east of said Section 7, by a line (1100 feet) eleven hundred feet from and parallel to the northerly reserve line of the Illinois and Michigan Canal.

4. That the Attorney is hereby instructed to drop all action looking to a legal contest in respect to the possession of the Illinois and Michigan Canal, and that the Chief Engineer is likewise instructed to cease all negotiations looking to an adjustment of railway questions.

5. That the President notify the Board of Canal Commissioners and the Santa Fe Railway of the action taken."

REPORT ON NEW ROUTE AT NEXT MEETING.

Mr. Eckhart presented an order, directing the Joint Committee on Engineering and Finance to report at the next meeting on the new North Route in accordance with the resolution just adopted; and the order was read.

Mr. Eckhart, seconded by Mr. Russell, moved the adoption of the order.

The motion prevailed unanimously and the Joint Committee on Engineering and Finance was instructed in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Joint Committee on Engineering and Finance report at the next meeting on the new North Route in accordance with the resolution just adopted."

SATURDAY CLOSING OF OFFICES.

Mr. Russell presented an order, directing the closing of the offices of the District at noon on Saturday, from May 20th to October 28th, 1893; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the order be referred to the Joint Committee on Engineering and Rules.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore and Kelly—six (6). Nays—Messrs. Russell and Wenter—two (2).

Upon which result the President declared the motion carried, and the order referred to the Joint Committee on Engineering and Rules.

The following is

THE ORDER:

"*Ordered*, That the offices of the District be and they are hereby ordered closed at 12 o'clock noon on every Saturday from May 20 to October 28, 1893."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOMAS F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MAY 24, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and seventy-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, May 24, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members were present.

MINUTES.

The minutes of the regular meeting, held May 17, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending May 20, 1893	$1,108 60	
Eng. Dept., Div. No. 2, week ending May 20, 1893	171 60	
Eng. Dept., Div. No. 3, week ending May 20, 1893	316 50	
Eng. Dept., Div. No. 4, week ending May 20, 1893	49 20	
		$ 1,645 90
Clerical Dept., office roll, week ending May 20, 1893		39 00
Law Dept., office roll, week ending May 20, 1893		33 00
Total		$ 1,717 90

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 2, May 16, '93).....	$1,396 50	
McArthur Bros. (Sec. 3, May 16, '93).....	921 38	
McArthur Bros. (Sec. 4, May 16, '93).....	1,134 00	
Agnew & Co. (Sec. 5, May 16, '93).....	685 13	
Agnew & Co. (Sec. 6, May 16, '93).....	1,181 25	
Agnew & Co. (Sec. 7, May 15, '93).....	623 83	
Agnew & Co. (Sec. 8, May 15, '93).....	1,857 24	
Agnew & Co. (Sec. 9, May 15, '93).....	1,836 95	
E. D. Smith & Co. (Sec. 10, May 15, '93).....	2,408 00	
Mason, Hoge & Co. (Sec. 11, May 15, '93).	5,984 37	
Mason, Hoge & Co. (Sec. 12, May 15, '93)	6 795 69	
Mason, Hoge & Co. (Sec. 13, May 15, '93)	6,540 62	
McCormick Const. Co. (Sec. 14, May 15, '93).	1,859 37	
Streeter & Kenefick (Sec. E, May 15, '93).	1,161 74	
		$34,386 07

ENGINEERING DEPARTMENT.

Will J. Jones & Co. (lumber, Willow Springs bridge).....	$205 36

CLERICAL DEPARTMENT.

Thos. F. Judge (postage stamps and cards)...	25 00

LAW DEPARTMENT.

Ossian Guthrie (expert services).....	755 00	
Charles Kern (expense, jury and witnesses, Columbia Park case)	134 25	
Orrin N. Carter (postage stamps).....	10 00	
Haynie R. Pearson (expense).....	14 28	
		$ 913 53

GENERAL ACCOUNT.

The Chicago Carpet Co. (carpet, etc., Board room).....	159 66	
John Morris Co. (inkwells, Board room)..	4 00	
Chicago Edison Co. (electric light).....	19 87	
The Chicago Deposit Vault Co. (janitor service, April, 1892)....	80 00	
		$ 263 53
Grand total... ..		$37 511 30

Mr Boldenweck, seconded by Mr. Kelly, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

(Mr. Prendergast voted "yea" on all vouchers except those for "Construction," on which he was excused).

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 334, Engineering Department, (vault fittings, room 513).....$100 00	
No. 335, Engineering Department, (stationery).....	8 15
No. 336, Engineering Department, (electric buzzers).....	17 25
No. 337, Engineering Department, (typewriting).....	3 90
No. 338, Engineering Department, (plumbing changes).....	6 55
No. 339, Engineering Department, (electric light changes).....	45 10
Total.....	$180 95

Mr. Kelly, seconded by Mr. Cooley, moved that Requisition No. 334, for the Engineering Department, as read and shown above, be referred to the Committee on Rules, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 334, for the Engineering Department, as read and shown above, referred to the Committee on Rules, with power to act.

Mr. Cooley, seconded by Mr. Boldenweck, moved that Requisitions Nos. 335 and 337, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requi-

sitions Nos. 335 and 337, for the Engineering Department, as read and shown above, allowed.

Mr. Cooley, seconded by Mr. Boldenweck, moved that Requisitions Nos. 336, 338 and 339, for the Engineering Department, as read and shown above, be referred to the Committee on Rules, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 336, 338 and 339, for the Engineering Department, as read and shown above, referred to the Committee on Rules, with power to act.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending May 20, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 24, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending May 20, 1893, as the same have been reported to me:

Engineering Department	90
Clerical Department	3
Treasury Department	1
Law Department	6
Total employes	100

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

REVISION OF RULES.

Under the head of "Unfinished Business" the report of the Committee on Rules, transmitting the entire rules of the Board, presented and ordered printed and laid over at the meeting held May 10, 1893 (page 1220 of the Proceedings), action on which was deferred at the last meeting of the Board, was then taken up.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the entire rules of the Board, as presented by the Committee on Rules (page 1220 of the Proceedings, be adopted, except those referring to the Chief Engineer, Nos. 37 to 41 inclusive, action on which was deferred pending further consideration by the Committee on Rules.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the entire rules of the Board, as presented by the Committee on Rules (page 1220 of the Proceedings) adopted, except those referring to the Chief Engineer, Nos. 37 to 41 inclusive, action on which was deferred pending further consideration by the Committee on Rules.

PURCHASE OF POWDER COMPANY LEASES.

Mr. Eckhart, Chairman, presented a a report from the Joint Committee on Finance and Engineering, with reference to the purchase from John T. Allison, Agent of the American Forcite Powder Manufacturing Company, and William I. Cronin, agent of the Independent Powder Company, of certain leaseholds on right of way lands in Cook County, and authorizing and directing the Clerk to pay for said leaseholds on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John T. Allison, agent of the American Forcite Powder Manufacturing Company, and William I. Cronin, agent of the Independent Powder Company, on the vouchers of the Attorney, for said leaseholds, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John T. Allison,

agent of the American Forcite Powder Manufacturing Company, and William I. Cronin, agent of the Independent Powder Company, on the vouchers of the Attorney, for said leaseholds, as provided in the report.

The following is

THE REPORT:

"CHICAGO, May 24, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with John T. Allison, agent of the American Forcite Powder Manufacturing Company for the cancellation and surrender by said company of its lease of certain land hereinafter described for the sum of thirteen hundred and seventy-five ($1375) dollars.

Also with William I. Cronin, agent of the Independent Powder Company for the cancellation and surrender by said company of its lease to certain land hereinafter described, for the sum of thirteen hundred and seventy-five ($1375) dollars.

Your Committee recommend that the Clerk of this District be directed to pay on the vouchers of the Attorney to said John T. Allison, agent as aforesaid, the sum of thirteen hundred and seventy-five ($1,375) dollars in full payment for all the interest of said American Forcite Powder Manufacturing Company in and to the use and occupation of any part of that portion of the east half (½) of the southeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) east of the third Principal Meridian, lying northwesterly of the northwesterly reserve line of the Illinois and Michigan Canal and northerly of the right of way of the Chicago & Calumet Terminal Railroad Company, in Cook County, Illinois.

To William I. Cronin, the sum of thirteen hundred and seventy-five ($1,375) dollars in full payment for all the interest of the Independent Powder Company in and to the use and occupation of any part of that portion of the east half (½) of the southeast quarter (¼) of Section fourteen (14), Township thirty-eight (38) North, Range twelve (12) east of the third Principal Meridian, lying northwesterly of the northwesterly reserve line of the Illinois and Michigan Canal and northerly of the right of way of the Chicago & Calumet Terminal Railroad Company, in Cook County, Illinois.

Said parties agree to remove from the powder houses belonging to said respective powder companies all the powder stored therein, and to deliver up to this District the full and free possession of said land on or before June 9, 1893, and they may at their option, by said date, remove said powder houses from said land.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
JOHN J. ALTPETER,
WM. BOLDENWECK,
L. E. COOLEY,

Joint Committee on Finance and Engineering."

REPORT ON REQUISITIONS NOS. 322 TO 326 AND 330 TO 332.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, with reference to Requisitions Nos. 322 to 326 inclusive, and Nos. 330 to 332, inclusive, referred to that Committee at the meetings held April 19 and May 3, 1893 (pages 1171 and 1203 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in and the action of the Committee approved.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the action of the Committee approved.

The following is

THE REPORT:

"CHICAGO, May 24, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to Requisitions Nos. 322 to 326, inclusive, of April 19, referred to this Committee with power to act, and in regard to Requisition No. 331, of May 3, referred to this Committee also, with power to act, and in regard to

Requisitions Nos. 330 and 332, of May 3, referred to this Committee, the Committee reports back as follows:

Requisitions Nos. 322 to 325, inclusive, have been allowed.

Requisition No. 326 has been denied.

Requisition No. 331, for repairs for typewriting machine, has been allowed, after the requisition has been modified so as to substitute a new machine for the old one at the same cost as estimated for repairs.

Requisitions Nos. 330 and 332, are reported back with the recommendation that they be allowed.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

(Eight (8) requisitions accompanying).

SATURDAY CLOSING OF OFFICES.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Rules, (accompanied by amended order,) with reference to the order directing the closing of the offices of the District at noon on Saturdays from May 20th to October 28th, 1893, presented and referred to that Committee at the meeting held May 17th, 1893, (Page 1235 of the Proceedings); and the report and amended order were read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in and the order passed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter- eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in and the order passed.

The following is

THE REPORT AND ACCOMPANYING ORDER:

"CHICAGO, May 24, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Engineering and Rules, to whom was referred the order closing the offices of the District on Saturdays from May 20th to October 28th, 1893, presented at the meeting held May 17th, 1893, (page 1235 of the Proceedings) respectfully report that they have considered the same, and return herewith the said order as amended, with the recommendation that it do pass.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
JOHN J. ALTPETER,
W. H. RUSSELL,
THOMAS KELLY,
WM. BOLDENWECK,
B. A. ECKHART,
Joint Committee on Engineering and Rules."

"*Ordered*, That the offices of this District be and they are hereby ordered closed at 12 o'clock noon on every Saturday, from June 1st to October 1st, 1893, and that the said half holiday is extended to all the employes of the District."

RIGHT OF WAY ORDINANCE—BRIDGEPORT TO SUMMIT.

Mr. Cooley, Chairman, presented from the Joint Committee on Engineering and Finance, a report with certain recommendations concerning the right of way for the Main Channel from Bridgeport to Summit, accompanied by an ordinance laying out and establishing said right of way; and the report and accompanying ordinance were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, and, with accompanying ordinance, be ordered printed and placed on file, the recommendations made therein be concurred in, and that the ordinance do pass.

Mr. Prendergast, seconded by Mr. Altpeter, moved as an amendment to the report that the width of the right of way be increased to 1000 feet.

On roll-call on the amendment the vote stood: Yeas—Messrs. Altpeter and Prendergast—two (2) Nays—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—six (6)

Upon which result the President declared the amendment lost.

Mr. Prendergast, seconded by Mr Alt-

peter, then moved that further consideration of the report and ordinance be deferred until the Law and Engineering Departments be prepared to present a complete report on all damages and railroad difficulties on the proposed line.

On roll-call the vote stood: Yeas—None. Excused and not voting—Messrs. Altpeter and Prendergast—two (2). Nays—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—six (6).

Upon which result the President declared the motion lost.

Mr. Cooley, seconded by Mr. Boldenweck, then moved the previous question.

The motion prevailed unanimously, and the previous question was then ordered.

On roll-call on the original motion of Mr. Cooley, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

(By unanimous consent, Mr. Prendergast explained his vote as follows:

"On the motion for the adoption of the last mentioned ordinance, I voted 'aye' for the repeal of the former ordinance, locating the so-called Canal route, for the reason that the so-called Ogden Ditch route is the better, and as the advantages of economy and promptness urged in support of the Canal route are not now attainable, I think the Ogden Ditch route has the most merit among all the routes considered. I vote 'no' on the adoption of the remainder of the ordinance for the additional reasons that the width of the proposed route is insufficient and that the City of Chicago is now pushing the Chicago River to Corwith.")

Upon which result the President declared the motion carried, the report adopted, and with accompanying ordinance, ordered printed and placed on file, the recommendations made therein concurred in, and the ordinance passed.

The following is

THE REPORT WITH RIGHT OF WAY ORDINANCE ACCOMPANYING:

"CHICAGO, May 24, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—By order of the Board of May 17th, (page 1234 of the Proceedings) the Attorney and Chief Engineer were directed to prepare, under the supervision of this Committee, an ordinance for the necessary right of way for the Main Channel, north of the Illinois and Michigan Canal, between the range line at Summit and the west fork at Robey street; said ordinance to include all of Section 7 north of the Canal, near the range line, and to be bounded on the north generally, east of said section, by a line 1,100 feet from and parallel to the northerly reserve line of the Illinois and Michigan Canal. In accordance with these instructions, an ordinance has been prepared and submitted to this Committee, and is hereby transmitted to the Board. This ordinance provides for a clear right of way of about 800 feet throughout, north of the Santa Fe Rail way.

In considering this matter, the Committee finds that 800 feet is the very least upon which it is practicable to work out the channel of the full capacity required by law.

The Committee concludes that the center line of the Main Channel, when developed to full capacity, should be located on the center line of the right of way and parallel with the north boundary of the same from a point at or near Western avenue to the point of curve, joining the straight line below Summit, and that the southern portion of said Main Channel be now excavated, so that the future enlargement to full capacity shall be on the north.

The center line will thus be located 400 feet from the north boundary of the right of way.

The ordinance prepared in accordance with the instructions of the Board is submitted herewith.

Very respectfully,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
THOS. KELLY,
WM. BOLDENWECK.
W. H. RUSSELL,

Joint Committee on Engineering and Finance."

I believe that the needs of the District demand a right of way of one thousand feet, as recommended by the Chief Engineer.

(Signed) JOHN J. ALTPETER.

The following is

THE ORDINANCE:

"*Be it ordained by the Board of Trustees of the Sanitary District of Chicago:*

SECTION 1. That the Main Channel or outlet of the District be and the same is hereby ordered to be constructed and maintained from the easterly end of that part of said Main Channel heretofore laid out and established by said Board by its ordinance of August 10th, 1892, to the north and south center line of Section thirty (30), Township thirty-nine (39), North, Range fourteen (14), East of the Third Principal Meridian, in the City of Chicago, over, across and upon the following described lands, situated, lying and being in the County of Cook and State of Illinois, to-wit:

Beginning at the intersection of the center thread of the current of the West Fork of the South Branch of the Chicago River, in said Cook County, with a straight line running in a southwesterly direction, through a point on the east line of Section twenty-five (25), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, five hundred twelve (512) feet north of the southeast corner of said Section twenty-five (25) and through a point on the west line of Section five (5), Township thirty-eight (38) North, Range thirteen (13) East of the Third Principal Meridian, five hundred forty-one (541) feet north of the southwest corner of said Section five (5); thence running southwesterly in a direct line on said straight line, passing across Section thirty (30), Township thirty-nine (39) North, Range fourteen (14), East of the third Principal Meridian, Sections twenty-five (25), thirty-six (36), thirty-five (35) and thirty-four (34), Township thirty-nine (39), North, Range thirteen (13), East of the Third Principal Meridian, and Sections three (3), four (4), five (5) and six (6), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, through the said points on the said east line of Section twenty-five (25), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, five hundred twelve (512) feet north of the southeast corner of said Section twenty-five (25) and on said west line of Section five (5), Township thirty-eight (38) North, Range thirteen (13) East of the Third Principal Meridian, five hundred forty-one (541) feet north of the southwest corner of said Section five (5) and to the intersection of the said straight line with the north line of Section seven (7), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian; thence west in a direct line to the northwest corner of said Section seven (7); thence south on said west line of said Section seven (7) to its intersection with the northerly reserve line of the Illinois and Michigan Canal; thence northeasterly on said northerly reserve line through Sections seven (7), eight (8) and five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, to the north and south quarter line of said Section five (5); thence north on said quarter line to its intersection with the northerly line of the right of way occupied by the main line of the Chicago, Santa Fe & California Railway; thence northeasterly on the said northerly line of the said right of way of said main line through Sections five (5), four (4) and three (3), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, and Sections thirty-four (34) and thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, to its intersection with the east line of the west half of the southwest quarter of said section thirty-five (35); thence north on the east line of said west half, eighteen and three-tenths (18.3) feet: thence northeasterly in a direct line to the intersection of the northerly line of the right of way occupied by the main line of the Atchison, Topeka & Santa Fe Railroad in Chicago, with the north and south quarter line of said Section thirty-five (35); thence northeasterly on said northerly line of the right of way occupied by the main line of the Atchison, Topeka & Santa Fe Railroad in Chicago in said Section thirty-five (35) to the east line of said section; thence northeasterly in a direct line to a point on the north and south quarter line of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, said point being fifty-seven (57) feet south of the northeast corner of the southeast quarter of the northwest quarter of said Section thirty-six (36); thence northeasterly in a direct line to a point on the East line of said Section thirty-six (36), said point being three hundred thirty-five and three-tenths (335 3-10) feet south of the northeast corner of said Section thirty-six (36); thence northeasterly in a direct line to a point two hundred ninety (290) feet east of the west line of said Section thirty-one (31), Township thirty-nine (39) North, Range fourteen (14), east of the Third Principal Meridian, measured on a

line parallel to the north line of said Section thirty-one (31) and one hundred eighty-six (186) feet south of the north line of said Section thirty-one (31), measured on a line parallel to the west line of said Section thirty-one (31); thence northeasterly in a direct line to a point on the east line of the west half of the southwest quarter of Section thirty (30), Township thirty-nine (39) North, Range fourteen (14), East of the Third Principal Meridian, said point being seventy-two (72) feet north of the south line of said Section thirty (30), thence to a point which is eight hundred twenty-seven and six-tenths (827 6-10) feet west of the south quarter corner of said Section thirty (30), measured on the south line of said Section thirty (30) and two hundred one (201) feet north of the said south line of said Section thirty (30), measured on a line at right angles to said south line; thence to a point on the north and south quarter line of said Section thirty (30), said point being five hundred thirty (530) feet north of the south quarter corner of said Section thirty (30), thence north on said north and south quarter line of said Section thirty (30) to the center thread of the current of the west fork of the South Branch of the Chicago River; thence westerly up said center thread of the current to the point of beginning.

SEC. 2. That all of the lands described in Section one (1) of this ordinance are required for the construction and maintenance of that portion of said channel described in said section, and that the same shall be appropriated and acquired by said Sanitary District for the purposes aforesaid, and that the cost of said improvement shall be paid for in part by general taxation and in part by special assessment.

SEC. 3. As to any of said lands the right to use which, as aforesaid, shall not be acquired by purchase, cession or otherwise, the Attorney of the Sanitary District of Chicago shall be and he is hereby directed to file petitions in the Circuit or County Court of the County of Cook in the name of the Sanitary District of Chicago, praying that the just compensation to be made for property, to be taken or damaged for said improvement or purpose, as specified in this ordinance, shall be ascertained by a jury.

SEC. 4. That an ordinance establishing a portion of the Main Channel or outlet of the District, adopted by the Board of Trustees of the Sanitary District, November 9th, 1892, be and the same is hereby repealed.

SEC. 5. This ordinance shall be in force from and after its passage."

EXPLANATION OF VOTES TO BE RECORDED.

Mr. Prendergast, seconded by Mr. Altpeter, moved that any member desiring to explain his vote with reference to the report and ordinance just passed, be permitted to have the same incorporated in the record.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Kelly, Prendergast and Russell—four (4). Excused and not voting—Messrs. Cooley, Eckhart, and Wenter—three (3). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, and any member desiring to explain his vote with reference to the report and ordinance just passed, permitted to have the same incorporated in the record.

RIGHT OF WAY ORDINANCE FOR LEMONT BRIDGE.

Mr. Cooley presented an ordinance laying out and establishing a right of way, being lands necessary for the construction of a fixed bridge over the River Diversion near Lemont, as provided in the ordinance; and the same was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the passage of the ordinance.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried and the ordinance passed.

The following is

THE ORDINANCE:

"Be it ordained by the Board of Trustees of the Sanitary District of Chicago:

SECTION 1. That there shall be acquired for the corporate purposes of said District, land in the County of Cook, in the State of Illinois, described as follows:

Commencing at the southwest corner of the northeast quarter (¼) of the northwest quarter (¼) of Section twenty (20) in Township thirty-seven (37) North, Range eleven (11) East of the Third Principal Meridian, and running thence northeasterly in a straight line to a point on

the north line of said section, which is one thousand and six and twelve one-hundredths (1006.12) feet east of the quarter (¼) corner of said north line of said section; thence east on said north line of said section to the northeast corner of said section; thence southwesterly in a straight line to the southeast corner of the northeast quarter (¼) of the northwest quarter (¼) of said section; thence along the south line of said northeast quarter (¼) of said northwest quarter (¼) of said section to the place of beginning; which said land is required and is hereby appropriated for the proper construction and maintenance of the works of said District.

SEC. 2. That all of the lands described in Section one (1) of this ordinance are required for the construction and maintenance of the works of said Sanitary District, and that the same shall be appropriated and acquired by said Sanitary District for the purposes aforesaid, and that the cost of said improvement shall be paid for in part by general taxation and in part by special assessment.

SEC. 3. As to any of said lands the right to use which, as aforesaid, shall not be acquired by purchase, cession or otherwise, the Attorney of the Sanitary District of Chicago shall be and he is hereby directed to file petitions in the Circuit or County Court of the County of Cook in the name of the Sanitary District of Chicago, praying that the just compensation to be made for property to be taken or damaged for said improvement or purpose, as specified in this ordinance, shall be ascertained by a jury.

SEC. 4. This ordinance shall be in force from and after its passage."

TRUSTEES' ILLINOIS VALLEY TRIP.

The Clerk presented a communication directed to President Wenter by C. L. Stinson, City Clerk of Marseilles, Ill., urging that the Trustees of the District make a trip by boat down the Illinois Valley; and the same was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the communication be referred to the Committee on Federal Relations.

The motion prevailed unanimously, and the communication was so referred.

The following is

THE COMMUNICATION:

"MARSEILLES, Ill., May 15, 1893.

Frank Wenter, President Board of Trustees, Chicago, Ill.:

DEAR SIR—At an adjourned regular meeting of the City Council of the City of Marseilles, held on May 5, the following resolutions were adopted:

WHEREAS, The Sanitary District of Chicago has now entered upon the construction of a large canal across the Chicago divide, to connect Lake Michigan with the Desplaines River; and

WHEREAS, The primary object of the said Sanitary District is to relieve the City of Chicago of the enormous quantity of disease breeding sewage which at present accumulates in the Chicago River and along the Lake Front; and

WHEREAS, The primary object of the people of the State in consenting to the enactment of the necessary laws creating Sanitary Districts was to bring about the construction of a great navigable waterway to connect Lake Michigan with the Mississippi River; and

WHEREAS, The completion of said waterway will be of immense benefit to the people of said Sanitary District, as well as to the people of the State and of the United States; therefore,

Resolved, By the City Council of the City of Marseilles, That the Board of Trustees of the said Sanitary District of Chicago be and they are hereby urged to make a trip by boat down the Illinois Valley, at as early a date as practicable, for the purpose of becoming personally acquainted with the condition of the valley so far as it relates to the Sanitary District and the complete fulfillment of the waterway project.

Resolved, That the Clerk be and he is hereby instructed to forward a copy of these resolutions to the President of the Board of Trustees of said Sanitary District of Chicago.

Respectfully,

(Signed) C. L. STINSON,

City Clerk."

UNITED STATES ENGINEER ON FILLING OF CHICAGO RIVER.

The Clerk presented a communication (accompanied by five enclosures) directed to President Wenter, as the result of a conference, by Captain W. L. Marshall, Corps of Engineers, U. S. A., with reference to the encroachments on the Chicago River; and the communication was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the communication be ordered printed, and with enclosures,

referred to the Committee on Engineering.

The motion prevailed unanimously, and the communication was ordered printed, and with enclosures, referred to the Committee on Engineering.

The following is the

COMMUNICATION:

"UNITED STATES ENGINEER OFFICE,
CHICAGO, Ill., May 23, 1893.

Hon. Frank Wenter, President Board of Trustees, Sanitary District of Chicago, Chicago, Ill.

SIR—I have to return herewith the tracing loaned me by you this afternoon, showing the encroachments upon the navigable channel of Chicago River, near Van Buren street, which tracing I have had copied.

I have to say for the information of your Honorable Body, that however I may differ from the local authorities as to the methods adopted by them for the amelioration or care of their defective sewerage and water supply, that I recognize their right and the authority and capacity of the commonwealth of Illinois and the municipality of Chicago to deal with their local matters in their own way, and that having declared their choice, United States officers shall place full faith and credence in their acts. This office then, as far as not called by law to express opinions, etc., shall work in accord with local laws to further, rather than obstruct, their ends and objects, as expressed clearly by the laws of the locality.

As far as the obstructions to navigation in Chicago River are concerned, we will deal with them under United States laws, but in case these laws are silent, or where questions arise where under these laws things may be done that may not be done under state and local laws, the custom of this office has always been to respectfully suggest to the Secretary of War that no action be taken until the local authorities expressed their assent, and that in no case should a permit be granted by the War Department until it be shown that the authorities of the State of Illinois expressed their concurrence in such action.

I have to enclose herewith copies of some endorsements relating to this matter of the Pennsylvania Railroad Company filling in in this vicinity, made on the various applications of this road for authority to encroach on the limits of the Chicago River.

I have to say that I desire the backing and co-operation of the Trustees of the Sanitary District of Chicago to prevent any encroachments whatever upon the present channel of Chicago River, and to express to the Trustees of the Sanitary District my disinclination to recommend to the Secretary of War any restriction by bridges, filling or otherwise upon the capacity of the Chicago River, except where imperatively demanded by the people of Chicago in crossing the river by bridges.

An examination of the locality in question will be made at the earliest practicable date, and if it be found that it comes within the purview of the instructions issued to the United States District Attorney to stop by injunction from an United States Court such encroachment this action will undoubtedly be taken on my application, by the District Attorney.

Very respectfully,

(Signed) W. L. MARSHALL,
Captain, Corps of Engineers."

(Five enclosures).

JOINT COMMITTEE ON FINANCE AND ENGINEERING TO PURCHASE RIGHT OF WAY LANDS.

Mr. Eckhart presented an order, authorizing the Joint Committee on Finance and Engineering to purchase all right of way lands necessary for the corporate purposes of the District under the ordinance just adopted, and directing the Attorney to institute condemnation proceedings for such lands as cannot be purchased; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the order adopted, the Joint Committee on Finance and Engineering and the Attorney authorized in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Joint Committee on Finance and Engineering be and it is hereby authorized forthwith to purchase, at such prices as said Joint Committee may deem just and fair, all lands necessary for the corporate purposes of this District included within the bound

aries of right of way fixed by ordinances this day adopted. and that the Attorne y be and he is hereby authorized and directed to institute and prosecute condemnation proceedings for the purpose of acquiring such portion of said lands as said Joint Committee may be unable to purchase under the authority hereby conferred on said committee."

By unanimous consent Mr. Russell was excused from the meeting.

RULE FOR RECORDING EXPLANATION OF VOTES.

Mr. Eckhart gave notice that at the next meeting he would present an amendment to the rules, providing that no explanation of the vote of any Trustee be recorde d in the minutes.

ATTORNEY TO CONTRACT FOR OPINIONS OF TITLE.

Mr. Kelly presented an order, authorizing and directing the Attorney to contract with the Title Guarantee and Trust Co., for opinions of title for all right of way lands necessary for the corporate purposes of the District under the ordinances just adopted; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter —seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney authorized to contract for opinions of title in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Attorney be authorized to enter into contract with the Title Guarantee and Trust Company to furnish opinions, in the same form as those heretofore furnished this District by said company, on titles to all lands necessary for the corporate purposes of this District and included within the boundaries of the right of way as laid out and established by ordinances this day adopted, on such terms as said Attorney may deem just and fair."

RE-LOCATION OF MAIN CHANNEL ON SECTIONS E AND F.

Mr. Cooley presented an order directing the Chief Engineer to re-locate the line of the Main Channel in Sections E and F, in accordance with the order, and the Clerk to notify contractors of such action of the Board; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter —seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer and Clerk directed. in accordance with the same.

The following is.

THE ORDER:

"*Ordered*, That the Chief Engineer relocate the Main Channel in Sections E. and F., at and near Summit, so as to join the straight line as now located below Summit and the straight line as determined by the Board from a point near Summit to a point at or near Western avenue, said straight line being four hundred (400) feet from and parallel to the northerly boundary of the right of way from the range line at Summit to Robey street, as this day established by ordinance; said straight lines or tangents to be joined by an easy curve, of a curvature conforming to that for the curves on the other portion of the main line, and not exceeding a curvature of thirty-six minutes for each 100 feet; and that the Clerk be directed to notify the contractors of the action of the Board in regard to said change of plans."

PROJECT FOR TEST PITS.

Mr. Boldenweck presented an order, directing the Chief Engineer to submit at the next meeting a project for test pits on the right of way between Robey street and Summit; and the order was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter —seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Chief Engineer directed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer

submit at the next regular meeting a project for such test pits as may be necessary to fully test the character of the material to be excavated on the Main Channel between the west fork at Robey street and the range line at Summit."

OFFICES TO BE CLOSED ON "DECORATION DAY."

Mr. Altpeter, on behalf and in the absence of Mr. Russell, presented an order directing that the offices of the District be closed on May 30, 1893, (Decoration Day); and the order was read.

Mr. Altpeter, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the offices of the District ordered closed on May 30, 1893, (Decoration Day).

The following is

THE ORDER:

"*Ordered*, That the offices of this District be and they are hereby ordered closed on Tuesday, May 30th, 1893, the same being Decoration Day, a legal holiday."

LEVEE TO BE BUILT ON SECTIONS D, E, AND F.

Mr. Cooley presented an order, authorizing and directing a levee to be built on the north side of the River Diversion on Sections D, E and F, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried and the order adopted.

The following is

THE ORDER:

"*Ordered*, That a levee be built on the north side of the new river channel, beginning with the high ground on the east end of Section "D," extending throughout Sections "E" and "F," and joining the high ground north of the Chicago, Santa Fe & California Railway and west of the Desplaines River. Said levee to be built parallel with the new channel and 120 feet north of the same measured to the foot of the slope. Said levee to be 20 feet wide on top with slopes of 1½ to 1 on the outside and 2 to 1 on the inside. Its grade to be 20 feet above datum at its lower end, and is to rise thence with a uniform grade to the Chicago, Santa Fe & California Railway, when its elevation is to be 24 feet above datum, and thence it is to rise to a height of 25 feet above datum at its upper end. On the outside of said levee a ditch 3 feet deep and 6 feet wide on the bottom with slopes of 1½ to 1 is to be cut, and that so much of said levee as falls within the respective contract sections be built by the contractors for the work on said sections respectively, in accordance with the provisions of the contracts for the work on said sections; and, be it further

"*Ordered*, That the Clerk be instructed to notify the respective contractors on said Sections "D," "E" and "F" of this action by the Board."

NO DYKES TO BE CONSTRUCTED BETWEEN SECTIONS 22 AND 33, T. 38 N., R. 12 E.

Mr. Cooley presented an order, directing that no dykes be constructed between Sections 22 and 33, Township 38 North, Range 12 East, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the order adopted.

The following is

THE ORDER:

"*Ordered*, That no dyke or dykes be constructed by this District northwesterly of the Desplaines River Diversion, between the north line of Section twenty-two (22), Township thirty-eight (38) North, Range twelve (12), East of the Third Principal Meridian, Cook County, Illinois, and the west line of Section thirty-three (33) in the same township."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOMAS F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

MAY 31, 1893.

OFFICIAL RECORD.

REGULAR MEETING.

The one hundred and seventy-second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, May 31, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held May 24, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Altpeter.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, May, 1893	$ 2,550 00	
Eng. Dept., Div. No. 1, week ending May 27, 1893	1,221 20	
Eng. Dept., Div. No. 2, week ending May 27, 1893	60 00	
Eng. Dept., Div. No. 3, week ending May 27, 1893	428 10	
Eng. Dept., Div. No. 4, week ending May 27, 1893	49 20	
Eng. Dept., discharged men's roll, May, 1893	5 00	
		$ 4,313 50
Clerical Dept., Clerk's roll, May, 1893	$ 504 85	
Clerical Dept., office		

roll, week ending May 27, 1893	$ 39 00	
		$ 543 85
Treasury Dept., Treasurer's roll, May, 1893		166 67
Law Dept., Attorney's roll, May, 1893	$ 1,502 33	
Law Dept., Joliet roll, May, 1893	333 33	
Law Dept., office roll, week ending May 27, 1893	40 50	
		$ 1,882 16
General Account, Sanitary Inspector's roll, May, 1893	$ 200 00	
General Account, Trustee's roll, May, 1893	2,333 33	
		$ 2,533 33
Total		$ 9,439 51

ENGINEERING DEPARTMENT.

Charles MacRitchie, (drawing table)	$ 10 00	
Trevor Spring Water Co. (ice)	9 00	
L. C. Howard, (typewriting)	3 90	
		$ 22 90

LAW DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 7 03	
John Morris Co. (stationery)	3 25	
Joseph Donnersberger, (expert services, right of way)	250 00	
		$ 260 28
Grand total		$ 9,722 69

Mr. Boldenweck, seconded by Mr. Kelly, moved that the vouchers as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 341, Engineering Department, (printing gauge cards)	$ 23 00
No. 342, Engineering Department, (furniture, Summit office)	81 50
No. 343, Engineering Department, (pine and oak stakes)	52 50
Total	$157 00

Mr. Kelly, seconded by Mr. Cooley, moved that Requisitions Nos. 341, 342 and 343, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 341, 342 and 343, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending May 27, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending May 27, 1893, as the same have been reported to me:

Engineering Department	104
Clerical Department	3
Treasury Department	1
Law Department	7
Total employes	115

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

PROJECT FOR TEST PITS.

The Clerk presented a report from the Chief Engineer, with reference to the submission of a project for test pits on the right of way, between Robey street and Summit, as directed by an order passed at the meeting held May 24, 1893, (page 1246 of the Proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—The order of the Board passed on the 24th inst. that "The Chief Engineer submit at the next regular meeting a project for such test pits as may be necessary to properly test the character of the material to be excavated on the Main Channel between the West Fork at Robey street and the range line at Summit" has had consideration, but there has not been time to prepare proper recommendations therefor. This subject will receive immediate attention.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

DEPOSIT FOR "NAGLE LANDS" RETURNED.

The Clerk presented a report from the Attorney, enclosing check from Messrs. Gary & Wheaton, for John and George Nagle's portion of the money deposited with Gary & Wheaton under order of September 7, 1892, (page 719 of the Proceedings), in the suit of the District vs. John H. Tedens, et al., for right of way lands in Du Page County, the said land having been purchased by the District since judgment; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, and the Clerk directed to deposit the enclosed check with the Treasurer to the credit of the District.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the Clerk directed to deposit the enclosed check with the Treasurer to the credit of the District.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I enclose you herewith a check payable to the order of the Sanitary District of Chicago for $310.00, being the amount of the judgment in favor of John Nagle and George Nagle in the case of the Sanitary District vs. John H. Tedens, et al., in DuPage County, Illinois. These judgments were sold and assigned to the Sanitary District on last September for $210.00, which amount was paid to said Nagles as shown by an expense voucher from this department, allowed September 21, 1892. The amount of the judgments in the Tedens' suit, including the $310.00 in favor of John Nagle and George Nagle, was deposited under the order of court with Gary & Wheaton, bankers, at Wheaton, Ill., by an order which passed this Board September 7, 1892. The said $310 00 in the enclosed check has been ordered paid back to the District by the court in accordance with said assigned judgment.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

(Enclosing check.)

REVISION OF RULES.

Mr. Russell, for the Committee on Rules and the Joint Committee on Rules and Engineering, pres nted a report, transmitting the revised rules governing the Chief Engineer and the Superintendent of Construction, which were referred to said committees at the meetings held May 24, 1893, (page 1238 of the Proceedings) and April 12, 1893, (page 1142 of the Proceedings); and the report and accompanying rules were read.

Under the rules the report and accompanying rules were ordered printed and laid over until the next meeting.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Rules have had under consideration the Rules of the Board concerning the Chief Engineer and the Superintendent of Construction, in conjunction with the Committee on Engineering (action on said rules having been deferred for further consideration by this Committe at the meeting held May 24, 1893, page 1238 of the Proceedings), and submit herewith the rules referring to the Chief Engineer and the Superintendent of Construction,

as amended, with the recommendation that same be adopted.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL.
Committee on Rules.

The Joint Committee on Rules and Engineering concurs in regard to the Superintendent of Construction, referred to this Committee April 12, 1893 (page 1142).

(Signed) FRANK WENTER,
Chairman.
WM. BOLDENWECK.
B. A. ECKHART,
L. E. COOLEY,
W. H. RUSSELL,
JOHN J. ALTPETER.
THOS. KELLY,
Joint Committee on Rules and Engineering."

"CHIEF ENGINEER.

37. The Chief Engineer shall have charge of all engineering work and shall devote his time to the Sanitary District. He shall do all surveying and civil engineering necessary or ordered by the Board, and shall perform such other duties as may be imposed upon him from time to time by ordinances, orders or resolutions of the Board, and shall attend the meetings of the Board when required. His salary shall not exceed the sum of seventy-two hundred ($7,200) dollars per annum, and his bond shall be in the sum of ..... thousand (.....) dollars.

38. The Chief Engineer shall have entire charge of the work of the Engineering Department, and shall organize and administer the same so as to secure a full record of the nature and cost of all operations, and full responsibility of all employes.

39. The Chief Engineer by the advice and consent of the Board, shall select the following assistants, as needed by him, subject to confirmation by the Board:

One Superintendent of Construction, at a salary not exceeding the rate of fifty-four hundred ($5,400) dollars per annum, who shall give a bond in the sum of.....($.....) dollars.

One First Assistant Chief Engineer at a salary not exceeding the rate of thirty-six hundred ($3,600) dollars per annum.

One Second Assistant Chief Engineer at a salary not exceeding the rate of twenty-seven hundred ($2,700) dollars per annum.

One Record Clerk at a salary not exceeding the rate of fifteen hundred ($1,500) dollars per annum.

The Superintendent of Construction shall have administrative charge of all the work of construction, and all employes engaged therein shall report to him and be subject to his orders. He shall perform such other duties as may be assigned to him by the Chief Engineer. He shall see that all contracts entered into by the District with various parties are efficiently carried out, and he shall make a report to the Chief Engineer at least once every two weeks, giving in detail the condition of the work in process of construction by the District, the progress made therein, and the manner in which same is being executed. A copy of the report shall be transmitted to the Board by the Chief Engineer, with such recommendations as the Chief Engineer considers proper to make relative thereto.

The First Assistant Chief Engineer shall have direct charge of the Division of Surveys, shall conduct all general and special surveys, and perform such duties as assigned to him by the Chief Engineer. He shall be Acting Chief Engineer in the absence of the Chief Engineer and by his authority, or when authorized by the Board.

The Second Assistant Chief Engineer shall have direct charge of the Division of Drafting and Records, and shall make and record all maps and plats, and file all note books and be custodian of the same, and shall conduct all land surveys as required by the Attorney, and generally shall be in charge of all platting and engineering except that which may pertain to and be necessarily confined to the other two Divisions, all under the general direction of the Chief Engineer.

The work of the Record Clerk shall be in direct charge of the Chief Engineer. In this Division shall be kept all administrative and financial records, and all reports from the several divisions.

40. The Chief Engineer shall nominate for the confirmation of the Board seven Assistant Engineers, at a salary of eighteen hundred ($1,800) dollars to twenty-four hundred ($2,400) dollars per annum, who shall be assigned to the sev-

eral divisions, with the concurrence of the Chiefs thereof, and at such rates of pay as may be fixed by order of the Board as follows:

Five Assistant Engineers on Division of Construction, who shall act as resident Engineers, whose nomination must be concurred in by the Superintendent of Construction.

Two Assistant Engineers for such duties as they may be assigned.

41. The Chief Engineer shall appoint such employes as the needs of the service may require.

	Rate per month.
Sub-Assistant Engineers	$125 to $150
Instrument men	100 to 125
Sub-instrument men	75 to 100
Draftsmen	75 to 150
Rodmen, not to exceed	75
Flagmen, Chainmen and Axemen, not to exceed	66
Laborers, not to exceed	54

Sub-Assistant Engineers, Instrument men, Sub-Instrument men and Draftsmen shall be men of technical competence and training for the duties assigned them.

All changes of grade, promotion and fixing of pay is to be done with the concurrence of the President and Committee on Engineering.

41*a*. The Chief Engineer may employ an Assistant Record Clerk at the rate of not over one hundred ($100) dollars per month, a typewriter at the rate of not over seventy-five ($75) dollars per month, and an office boy at not over forty ($40) dollars per month.

41*b*. For any special service of limited duration and for which the regular force is not available, employes are to be had by requisition on the Board, and any such requisitions shall state the number, grade, rate of compensation and duration of service required. All such employment shall be designated "Special" on vouchers and returns.

41*c*. All changes of plans, whatsoever, by which any work is to be carried out in any manner different from that provided in any contracts, shall be determined and authorized by the Board, and proper specifications and plats therefor shall be filed for record with the Clerk, and the President shall issue notice, attested by the Clerk, to the parties in interest.

41*d*. Before authorizing or allowing any extra work or fixing any price therefor or directing or passing upon any work not specifically described and provided for in any contracts, the Chief Engineer shall submit all matters in relation thereto to the Board or its duly authorized committees, sitting in an administrative capacity.

41*e*. All current estimates of work done under any contract and the certificate therefor shall be made by the resident engineer, and the same shall be certified by the Superintendent of Construction and by the Chief Engineer.

41*f*. The employes confirmed by the Board shall at all times be subject to call before the Board and its authorized committees, and it is made part of their duty to fully advise the Board through the President, or said committees, of any matters of administration, or engineering, which may be for the good of the District, when requested so to do."

REPORT ON REQUISITIONS NOS. 334, 336 338 AND 339.

Mr. Russell, for the Committee on Rules, presented a report on Requisitions Nos. 334, 336, 338 and 339, referred to that committee with power to act, at the meeting held May 24, 1893, (page 1237 of the Proceedings); and the report was read.

Mr. Russell, seconded by Mr. Cooley, moved that the report be adopted, ordered printed and placed on file, and the action of the committee with reference to the said Requisitions approved.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the action of the Committee, with reference to the said Requisitions, approved.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Rules, to whom were referred Requisitions Nos. 334, 336, 338 and 339, for the Engineering Department with power to

act, at the meeting held May 24, 1893, (page 1237 of the Proceedings) respectfully report that they have allowed the same, and request the approval of their action.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
Committee on Rules.

"CONGLOMERATE ROCK" IN M'ARTHUR SECTIONS.

The Clerk presented a communication from McArthur Bros., contractors on Sections 2, 3 and 4, with reference to "Conglomerate Rock" found on their Sections, in the line of the Main Channel, and asking a re-classification of the said material; and the communication was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Finance.

Mr. Cooley, seconded by Mr. Gilmore, moved to amend by substituting the word "Judiciary" in place of "Finance."

On roll-call on the amendment, the vote stood: Yeas—Messrs. Boldenweck, Cooley, Gilmore, Russell and Wenter—five (5) Nays—Messrs. Altpeter, Eckhart and Kelly—three (3).

Upon which result the President declared the motion carried and the amendment adopted.

On roll-call on the original motion as amended, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Russell and Wenter—six (6). Nays—Messrs. Eckhart and Kelly—two (2).

Upon which result the President declared the motion carried, and the communication ordered printed and referred to the Joint Committee on Engineering and Judiciary.

The following is

THE COMMUNICATION:

"CHICAGO, May 31, 1893.

To the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In opening our work on Sections 2, 3 and 4 of the Main Drainage Channel, we have encountered and excavated a cemented conglomerate rock, lying in its original bed, requiring blasting for its removal. This conglomerate rock directly overlies the lime rock, and is here the "bed rock."

This material has been returned in the estimates as "Glacial Drift" This work, in our judgment, has not been properly estimated, but should be estimated and paid for as "Solid Rock."

We cannot excavate and remove this rock as "Glacial Drift," for it is not "Glacial Drift," as contracted for, and costs more than three times the price of "Glacial Drift."

Therefore, we respectfully ask that your Board take early action, directing your engineer to re-estimate and classify this, and any other material requiring blasting for its economical removal, as "Solid Rock," where it properly belongs.

Very respectfully yours,

(Signed) MCARTHUR BROS."

ADDITIONAL CLERK FOR LAW DEPARTMENT.

By unanimous consent, Mr. Kelly presented a report from the Law Department, making requisition for authority to employ one clerk, as provided in the report; and the report was read

Mr. Kelly, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, and the requisition allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Russell—seven (7). Nays—Mr. Wenter—one (1)

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the requisition allowed.

The following is

THE REPORT:

"CHICAGO, May 31, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Mr. S. M. Dickson has been in the employ of the District as Clerk of the Law Department since last August. He is receiving pay at the rate of $3 00 per day, while similar work in the other departments of the District is being paid from $100.00 to $125.00 per month. Mr. Dickson thinks he ought to receive the same pay as the others who are doing the same class of work, and I

think there is justice in his claim. I therefore make requisition for authority to employ one clerk for this department at a salary not to exceed $125.00 per month. This position to be in place of the one occupied by Mr. Dickson.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

STATEMENT CONCERNING EXTENSION OF CHICAGO RIVER.

Mr. Cooley, seconded by Mr. Russell, moved that Mr. Boldenweck be allowed to have inserted in the record a statement in answer to the assertion of Mr. Prendergast, "that the City of Chicago is now pushing the Chicago River to Corwith," used in the explanation of his vote at the meeting held May 24, 1893, (page 1241 of the Proceedings).

On roll-call the vote stood: Yeas—Messrs. Cooley, Eckhart, Kelly, Russell and Wenter—five (5). Nays—Messrs. Altpeter, Boldenweck and Gilmore—three (3).

Upon which result the President declared the motion carried, and Mr. Boldenweck allowed to have inserted in the record a statement in answer to the assertion of Mr. Prendergast, "that the City of Chicago is now pushing the Chicago River to Corwith," used in the explanation of his vote at the meeting held May 24, 1893, (page 1241 of the Proceedings).

RULE ON RECORDING EXPLANATION OF VOTES.

Mr. Eckhart presented an amendment to Rule 9 of Rules of Order, providing that no explanation of the vote of any Trustee be recorded in the minutes, notice of which amendment was given at the meeting held May 24, 1893, (page 1246 of the Proceedings).

The amendment was read and is as follows:

Amend Rule 9, of "Rules of Order" by adding the following:

"By unanimous consent any Trustee may explain his vote when his name is called, but no explanation of the vote of any Trustee will be recorded in the minutes."

Mr. Eckhart, seconded by Mr. Gilmore, moved the adoption of the amendment.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the amendment adopted.

The following is

RULE 9 OF "RULES OF ORDER," AS AMENDED.

"RULE 9. Every member who shall be present when a question is stated from the Chair shall vote thereon unless excused by the Board, and no member shall be recorded as voting unless present when the roll is called. By unanimous consent, any Trustee may explain his vote when his name is called; but no explanation of the vote of any Trustee will be recorded in the minutes."

ADJOURNMENT.

On motion of Mr. Cooley, seconded by Mr. Russell, the Board then adjourned.

THOMAS F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JUNE 7, 1893.

OFFICIAL RECORD.

Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-third regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, June 7, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7), and subsequently Mr. Gilmore, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held May 31, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending June 3, 1893.....	1,313 20	
Eng. Dept., Div. No. 2, week ending June 3, 1893.....	60 00	
Eng. Dept., Div. No. 3, week ending June 3, 1893.....	428 10	
Eng. Dept., Div. No. 4, week ending June 3, 1893.....	49 20	
		$ 1,850 50
Clerical Dept., office roll, week ending June 3, 1893.....		39 00
Law Dept., office roll,		

week ending June 3, 1893		39 00
Total		$ 1,928 50

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 3, June 1, '93)	$ 614 25	
McArthur Bros. (Sec. 4, June 1, '93)	803 25	
Agnew & Co. (Sec. 5, June 1, '93)	1,748 25	
Agnew & Co. (Sec. 6, June 1, '93)	1,441 12	
Agnew & Co. (Sec. 7, May 31, '93)	1,363 42	
Agnew & Co. (Sec. 8, May 31, '93)	4,751 34	
Agnew & Co. (Sec. 9, May 31, '93)	3,339 39	
E. D. Smith & Co. (Sec. 10, May 31, '93)	4,096 75	
Mason, Hoge & Co. (Sec. 11, May 31, '93)	4,985 81	
Mason, Hoge & Co. (Sec. 12, May 31, '93)	6,780 13	
Mason, Hoge & Co. (Sec. 13, May 31, '93)	13,539 10	
McCormick Const. Co. (Sec. 14, June 1, '93)	3,213 00	
L. D. Conner & Co. (Sec. B., May 31, '93)	526 60	
Western Dredging and Impt. Co. (Sec. C., May 31, '93)	670 54	
Streeter & Kenefick (Sec. E, May 31, '93)	3,000 36	
Ricker, Lee & Co. (Sec. F., May 15, '93)	746 04	
Ricker, Lee & Co. (Sec. F., May 31, '93)	1,351 41	
		$52,970 76

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 4 66	
E. Dietzgen Co., (drafting material)	59 94	
F. Mayer & Co. (blue prints)	121 66	
The Polygraph Print Co (blue prints)	19 67	
Geo. H. Benedict & Co. (hektograph prints)	10 80	
Humphrey & Hinckley (typewriter exchanged)	15 00	
Henry Gebhardt, (tables and chest)	42 50	
Hibbard, Spencer, Bartlett & Co. (hardware)	3 30	
Hibbard, Spencer, Bartlett & Co. (hardware)	5 35	
A. J. O'Leary, (repairing boring machine)	55 88	
Thos. Clark & Sons, (alterations to rooms)	340 00	
Thos. Clark & Sons, (alterations and platform)	426 05	
Chicago Edison Co. (changing electric wires)	45 10	
E. Baggot, (changes in plumbing)	6 55	
Orne Electric Const. Co. (call bell system)	17 25	
D. C. Dunlap, (horse and buggy)	45 00	
A. M. Munson, (rent, Mt. Forest)	20 00	
H. S. Norton, (rent, Lemont)	18 00	
O. W. Moon, (rent, Lockport)	20 00	
Geo. Brainard, (gauge reading)	10 00	
Wm. Kirkham, (gauge reading)	10 00	
Patrick McGinnis, (gauge reading)	10 00	
Mary Rusk, (gauge reading)	10 00	
Chicago Toilet Supply Co. (toweling)	5 40	
Seelig & Kandler, (repairing machine)	2 50	
Thos. Bagley, (repairing row-boat)	3 50	
Alex. E. Kastl, (expense)	26 26	
J. B. Rohrer, (expense, Sag Bldg)	42 90	
D. C. Dunlap, (traveling)	84 77	
A. C. Schrader, (traveling)	23 95	
G. W. Wood, (expense)	15 28	
J. B. Rohrer, (traveling)	6 34	
Hiram A. Miller, (traveling)	2 15	
E. J. Murphy, (emergency)	29 00	
Alex. E. Kastl, (emergency)	44 13	
Alex. E. Kastl, (emergency)	41 30	
A. C. Schrader, (emergency)	61 50	
A. C. Schrader, (emergency)	64 36	
A. C. Schrader, (emergency)	30 75	
T. Ryan, (coal, Summit office)	11 25	
		$1,810 95

CLERICAL DEPARTMENT.

Trevor Spring Water Co. (ice)	$ 3 00	
Warner's Towel Supply (toweling)	1 50	
Hibbard, Spencer, Bartlett & Co. (step ladders)	1 54	
S. D. Childs & Co. (stationery)	75	
Cameron, Amberg & Co. (stationery)	9 50	
		$ 16 29

LAW DEPARTMENT.

S. A. Moffett Co. (livery)	12 00	

M. C. Covell & Sons, (livery)	30 00	
Henry Gebhardt, (vault fittings)	26 50	
		$ 68 50

LAW DEPARTMENT.

Land Account—

Orrin N. Carter, (taxes Cook Co. acquired land)	$ 605 06

GENERAL ACCOUNT.

Chicago Daily News Co. (advertising bldgs. and machinery)	$ 12 60
Grand total	$57,412 66

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 1046, Clerical Department, (Numbering Machine and Vault Fitting).....$46 00

Mr. Boldenweck, seconded by Mr. Eckhart, moved that Requisition No. 1046, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 1046, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending June 3, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending June 3, 1893, as the same have been reported to me:

Engineering Department	108
Clerical Department	3
Treasury Department	1
Law Department	7
Total employes	119

Respectfully submitted,

(Signed) THOMAS F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of May, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of May, was $1,278.13, divided as follows:

Salaries	$1,183.18
Stationery	27.95
General expenses	67.00
Total	$1,278.13

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $250.

The total amount expended and charged to the General Account during the month of May was $5,708.64, divided as follows:

Salaries	$5,066.67
Fittings Board Room	163.66
Printing and Stationery	246.97
Janitor Service	80.00
General expenses	151.34
Total	$5,708.64

There are outstanding liabilities against the General Account to the amount of about $1,000, and the expenses for the present month will not exceed $1,500.

The above figures include for both Clerical and General accounts, the payrolls for both April and May, which accounts for the apparent increase.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the Engineering Department for the month of May, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of May, including a table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of May were as follows:

Contractors estimates	$61,896.29
Pay rolls	10,094.05
Material, etc	1,163.90
Total	$73,154.24

I estimate that the expenses of the Department for the month of June, including contractors estimates, will be $85,000.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

(Enclosing classified statement.)

"CHICAGO, June 6, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR — I submit the following report for the month of May:

Pay rolls	$ 6,141.20
Contractor's estimates	61,896.29
Total	$68,037.49

Amount of work done to June 1, 1893.

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
B, River Diversion	2,229	.....
C, River Diversion	3,261	.....
E, Main Channel	17,297	.....
F, River Levee	10,093	.....
1, Main Channel	1,000	.....
2, Main Channel	27,600	.....
2, River Diversion	29,500	.....
3, Main Channel	65,500	.....
4, Main Channel	39,700	.....
5, Main Channel	42,100	.....
6, Main Channel	44,200	.....
7, Main Channel	19,700	3,020
7, River Diversion	11,800	7,640
8, Main Channel	7,500	3,350
8, River Diversion	48,100	46,430
9, Main Channel	11,000	13,800
9, River Diversion	37,700	4,690
10, Main Channel	19,100	15,180
10, River Diversion	27,400	38,240
11, Main Channel	32,600	56,990
11, River Diversion	2,600	4,810
12, Main Channel	18,900	91,800
13, Main Channel	32,822	114,400
14, Main Channel	21,000	33,200
Totals	572,702	483,550

Total amount of material moved to June 1, 1893:

	Cubic Yards.
Main Channel, Glacial Drift	400,019
Main Channel, Solid Rock	331,740
River Diversion, Glacial Drift	172,683
River Diversion, Solid Rock	101,810

Total amount of estimates paid previous to June 1, '93. $573,021.24

CONDITION OF WORK JUNE 1, 1893.

Section.	Contractor.	Total amount done June 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done June 1, 1893.	Amount short as per contract June 1, 1893.
1	Alfred Harlev	$ 270	$ 20.867	$ 57.384	$ 57,114
2	McArthur Bros	15,988	15,611	62,445	46,457
3	McArthur Bros	17.685	18,983	113 898	96,213
4	McArthur Bros	10,719	15,780	78,902	68,183
5	Agnew & Co	11,367	12,476	56,142	44,775
6	Agnew & Co	11.934	14,233	64.050	52,116
7	Agnew & Co	16,025	17.816	80,173	64,148
8	Agnew & Co	51.667	22,760	136,561	84,894
9	Agnew & Co	26,881	19.348	116.088	89.207
10	E. D. Smith & Co	54,361	23,291	139.748	85,387
11	Mason, Hoge & Co	59.625	19.395	116.372	56.747
12	Mason, Hoge & Co	8,469	18,781	112 688	34,219
13	Mason, Hoge & Co	94,048	18,461	110,768	16,720
14	McCormick Constr'n Co.	28,436	19,846	119,078	90,642
	Totals	$ 477,475		$1,364,297	$ 886.822

Total amount required to be done June 1st, 1893.....$1,364,297
Total amount done June 1st, 1893..... 477,475

Amount short as per contract June 1st, 1893.....$ 886 822

FORCE REPORT—DAILY AVERAGE.

Section.	Men.	Teams.	Steam Shovel.	Locomotives.	Steam Pumps.	Steam Scrapers.	Channelers.	Steam Drills.	Steam Hoists.	Cableways.	Cantilever Derrick.	Air Compressor.
Section A	2	.15	....	....	....	....	....	....	....	....	....	....
Section B	21	1	....	....	....	....	....	....	....	....	....	....
Section C	19	1	....	....	....	....	....	....	....	....	....	....
Section D	60	1	....	....	....	....	....	....	....	....	....	....
Section E	32	39	....	....	....	....	....	....	....	....	....	....
Section F	8	10	....	....	....	....	....	....	....	....	....	....
Section 1	29	6	....	....	....	....	....	....	....	....	....	....
Section 2	4	....	....	....	....	....	....	....	....	....	....	....
Section 3	30	1.4	.8	.2	2	....	....	....	.8	....	....	....
Section 4	28	....	....	....	....	....	....	....	....	....	....	....
Section 5	17	9	.5	.5	.8	....	....	....	.5	....	....	....
Section 6	17	.4	....	....	2	2	....	....	....	....	....	....
Section 7	87	3	....	....	3	....	2	4	1	....	....	....
Section 8	126	4	....	....	.4	....	1	2	2	....	....	....
Section 9	96	4	....	....	2	....	2	4	.9	....	....	....
Section 10	218	6	....	....	2	....	3	4	2	....	.9	.3
Section 11	161	14	....	....	4	....	3	7	1	.8	....	1
Section 12	169	11	....	....	1	....	5	7	2	....	....	1.5
Section 13	233	19	....	....	2	....	4	8	2	....	....	....
Section 14	62	9	....	....	1	....	.8	3	.8	....	....	....
Totals	1419	138.95	1.3	.7	20.2	2	20.8	39	13.0	.8	.9	2.8

Besides the usual routine work of the Divisions—such as cross-sectioning, running grades and levels, copying and checking notes, making semi-monthly estimates and superintending work—the Summit Division has been engaged on the location of the new route between Summit and Robey street, and survey of the drainage area running into the Desplaines River north of Sections D, E and F.

Land survey by the Sag Division and continuation of the cross-sectioning for glacial drift and rock on the west route between Lockport and Joliet by the Lockport Division. This division includes the Schrader party and additional temporary help. It will probably take to the middle of June to complete the west route field work.

The plants of the contractors although having been increased during the month are now far from sufficient, on most sections, to carry out the conditions of the contract.

The number of men and teams have been doubled, and a great many buildings erected on Section F. The main force is at work on levee north of the Santa Fe Railway and west of the Desplaines River; the balance is making grade for track from the Alton Road across the section. Several cars of material and one locomotive for this section are on side-track at Summit.

On Section E the work so far is being done by wheel scrapers.

On May 31 one steam shovel began work on Section D, attended by two locomotives. There is also one steam shovel and two locomotives on the work besides, not in operation.

On Section C work is being done on River Diversion by one steam shovel.

On Section B work is being done by wheel-barrows, while the plant consisting of one steam shovel and cable-way is being placed in position.

No work is being done on Section A, as it is mostly under water.

On Section 1 a levee is being built; connection is being made with the Canal for drainage purposes, and plant is arriving.

No work done on Section 2 and but little work has been done on Sections 3 and 4 with the plant at hand.

An improvement has been made on Sections 5 to 9 inclusive in the way of plant and force.

The work on Section 10 has been largely increased during the month.

Mason, Hoge & Co. are reducing the amount short in quantity of work.

Additional machinery is reported on the way in shape of cantilever material.

Section 14 doubled the amount of work in May over the month of April. A cable-way for handling material is being erected.

Very truly yours,

(Signed) D. C. DUNLAP,

Assistant Chief Engineer."

"CHICAGO, June 6, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of May was as follows:

Progress was made on arrangement of papers pertaining to Illinois river floods.

The work of reducing notes and perfecting plats pertaining to the survey of street lines adjacent to Chicago River was continued.

The study and preparation of plans pertaining to regulating works in Main Channel near Lockport was undertaken.

A survey was made of a line extending from the Desplaines River to the North Branch of Chicago River, westward from the junction of the two forks of the North Branch.

The maintenance and records of the water gauges were continued.

The preliminary plat of the survey near head waters of the North Branch was finished.

The work for June will be a continuation of that for May, and the expense will be at about the same rate.

Respectfully,

(Signed) THOS. T. JOHNSTON,

First Principal Assistant Engineer."

"CHICAGO, June 5, 1893.

Benezette Williams, Esq., Chief Engineer:

DEAR SIR—I herewith submit the report of Division 3 for the month of May, 1893.

Maps were prepared for the new right of way between Summit and Chicago, and descriptions of the boundaries of the

ordinance defining the new location were made.

The land survey party, which was transferred from Division 2, began the location of the corners of the tracts of land in the right of way between the range line at Summit and Robey street.

The platting of the street lines on the Chicago River maps was continued, all of the survey notes locating these lines having been received.

Platting on the Sanitary District map, and platting and inking on the watershed map were continued. The main part of the platting on these two maps has been done.

The inking was finished on the sewerage map, and the platting on the topographical maps from Lake Michigan to Joliet was continued.

During the month of June it is proposed to locate the land corners east of Summit, to make the descriptions for the new right of way, and to continue the platting and inking on the several maps which are being drawn.

Very respectfully,

(Signed) EDGAR WILLIAMS,

Second Principal Assistant Engineer."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of May, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report.....		$2,594,195.05
Received from County Treasurer, Tax Account 1892.....	150,000 00	
Received from Engineering Department, Maps sold.....	92 00	
Received from National Bank of Illinois, interest for May.....	1,100 20	
Received from Metropolitan National Bank, interest for May.....	1,068 11	
Received from Ft. Dearborn National Bank, interest for May.....	1,063 99	
Received from Chicago National Bank, interest for May.....	1,115 38	
Received from American Trust and Savings Bank, interest for May.....	$1,349 70	
		$ 155,789 38
Total cash received for month.....		$2,749,984 43
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department....	$ 643 78	
Treasury Department.	166 66	
Engineering Departm't.	11,260 00	
Engineering—Construction—Department....	58,742 25	
Law Department.....	4,203 24	
Law Department—Land Account.....	49,959 75	
General Account.....	4,811 78	
		$129,787 46
Balance this date, in banks as per schedule endorsed hereon		$2,620,196 97

(Signed) MELVILLE E. STONE,

Treasurer.

Chicago, June 3, 1893."

SCHEDULE:

Fort Dearborn National Bank.....	$ 501,122 08
Chicago National Bank.....	525,638 08
Metropolitan National Bank.....	503,859 95
National Bank of Illinois.....	501,962 61
American Trust and Savings Bank.	587,614 25
Total..	$2,620,196 97

MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of May, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—During the month of May the new camps along the drainage channel have been located, extending from the Summit to Willow Springs. The sites selected are on the banks of the old canal where we are able to get sufficient elevation to insure most thorough drainage. Building is progressing rapidly, and the contractors are paying strict attention to the requirements of the law in regard to making ample provision for

sufficient air-space and ventilation in the sleeping apartments. Wells are being sunk of sufficient depth to insure an abundant supply of wholesome water, and various suggestions in regard to the proper sanitation of the camps are being complied with. The health of the employes has been exceptionally good, and although the hospital has been open during the past month for the reception of all cases that require medical or surgical treatment, there has been but a small number that required attention, and those cases not of a serious character. Owing to numerous causes of delay the working force on the several sections has not been up to its full capacity. In consequence of this condition, I have delayed revaccinating the employes, deeming it best to wait until the force employed is much larger than at present when it can be done in a more thorough manner than doing it at this time would insure. I expect to accomplish it during the month of July.

Most respectfully submitted,

(Signed) WM. MARTIN, M. D.
Sanitary Inspector."

RESIGNATION OF CHIEF ENGINEER.

The Clerk presented a communication from Chief Engineer Williams, tendering his resignation as Chief Engineer of of the District; and the same was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the resignation of Mr. Benezette Williams, as Chief Engineer of the District, just read, be accepted, to take effect at once.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the resignation of Mr. Benezette Williams, as Chief Engineer of the District, just read, accepted, to take effect at once.

The following is

THE COMMUNICATION:

"CHICAGO, June 7, 1893.

To the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby tender my resignation as Chief Engineer of the Sanitary District.

Respectfully submitted,

(Signed) BENEZETTE WILLIAMS,
Chief Engineer."

SUSPENSION OF RULES FOR THE APPOINTMENT OF CHIEF ENGINEER.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the rules of the Board be suspended, in order to proceed to the election of a Chief Engineer.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the rules of the Board suspended, in order to proceed to the election of a Chief Engineer.

ELECTION OF CHIEF ENGINEER.

Mr. Kelly, seconded by Mr. Boldenweck, moved that Mr. Isham Randolph be appointed Chief Engineer of the Sanitary District of Chicago, vice Mr. Benezette Williams, resigned, said appointment to take effect at once.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Mr. Isham Randolph duly appointed Chief Engineer of the Sanitary District of Chicago, vice Mr. Benezette Williams resigned, said appointment to take effect at once.

ANNUAL REPORT OF CHIEF ENGINEER FOR 1892.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by the annual report of the Chief Engineer for 1892, presented and referred to that Committee at the meeting held January 25th, 1893, (page 1007 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and, with enclosure, placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report adopted, ordered printed and, with enclosure, placed on file.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the Annual Report of the Chief Engineer, referred to the Joint Committee on Engineering and Finance on January 25, 1893, your Committee reports as follows:

The report for the most part is in the nature of information. Several matters are therein discussed which have since been disposed of by the Board, and several other questions have been specially referred to Committees.

The question of certain surveys for maps was reported by this Committee on February 8, 1893 (page 1048), and the surveys authorized. The route and the treatment thereof between Chicago and Summit has been determined and the matter of the disposition of the water between Lockport and Joliet awaits alternative plans. The question of change of grade of channel has been referred to the Joint Committee on Engineering and Judiciary, and certain matters pertaining to floods to the Engineering Committee.

The question of organization has been taken under advisement by the Joint Committee on Rules and Engineering, and it is recommended that it be continued in the charge of this Committee until conclusions are reached.

As the several matters contained in the annual report are virtually disposed of, or otherwise provided for, this Committee returns the same with the recommendation that it be placed on file.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
B. A. ECKHART,
WM. BOLDENWECK,
JOHN J. ALTPETER.

Joint Committee on Engineering and Finance."

ASSISTANT ENGINEERS NOT CONFIRMED.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to the nomination of Messrs. L. J. Myers and T. F. Richardson as Assistant Engineers, presented to the Board for confirmation and referred to that Committee at the meeting held March 8th, 1893, (page 1090 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to Assistant Engineers L. J. Myers and T. F. Richardson, whom the Chief Engineer nominated to the Board for confirmation on March 8th, 1893, (page 1090 of the Proceedings) said nominations being referred to this Committee, and which the Committee failed to report back on March 15th, 1893, (page 1104 of the Proceedings) the Committee reports back as follows:

In view of the fact that the Chief Engineer withdrew the names, presumably by consent of the Board, by letter of May 10th, 1893, (page 1216) and substituted other names which were referred to another Committee, there seems to be no occassion for any further action in the premises.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

MONTHLY REPORT OF ENGINEERING DEPARTMENT FOR DECEMBER, 1893.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering with reference to and accompanied by the monthly report of the Engineering Department, for the month of December,

1892, presented and referred to that Committee at the meeting held January 25, 1893, (page 1000 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the monthly report of the Engineering Department, referred to this Committee on January 25th, 1893, (page 1000 of the Proceedings) the same is herewith returned without recommendation.

The occasion of its reference has been fully covered in subsequent orders and reports. The report is herewith returned for filing.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

GENERAL FORM FOR CONTRACT, ADVERTISEMENT AND PROPOSAL.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, with reference to and accompanied by a general form of contract, advertisement and proposal, presented and referred to that Committee and the Attorney, at the meeting held March 15, 1893, (page 1101 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with enclosures, placed on file and the recommendations made therein concurred in.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to a "general form for contract, as also general form for advertising for proposals, and blank proposals themselves, to be used in contracting miscellaneous work for the Sanitary District," submitted by the Chief Engineer on March 15 (page 1101 of the Proceedings), and referred to the Committee on Engineering, in conjunction with the Attorney, the Committee reports as follows:

The Attorney has examined the form proposed. It is concluded that the matter will be useful for reference and should be filed, but that there is not, at the present time, such a prospect for a number of small contracts as to require the printing of a general form or such likelihood of their similarity as to make such a form of general applicability.

The proposed form is returned herewith for filing.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK.
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

ASSISTANT ENGINEERS NOT CONFIRMED.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering with reference to the nomination of Messrs. G. W. Wood and J. B. Rohrer as Assistant Engineers, presented to the Board for confirmation and referred to that Committee at the meeting held May 10, 1893, (page 1216 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the confirmation of Sub-Assistant Engineers G. W. Wood and J. B. Rohrer, nominated for the position of Assistant Engineer by the Chief Engineer on May 10th, (page 1216 of the Proceedings) and referred to the Committee on Engineering, the Committee reports back as follows:

The matter of reorganizing the Engineering Department has been pending for some time, and the Committee on Rules and the Joint Committee on Rules and Engineering have made certain recommendations which are now before the Board. Your Committee concludes that any action looking toward the confirmation of Assistant Engineers at this time might be a source of further embarassment, and therefore recommends that the names be referred back to the Engineering Department without prejudice

The Committee is persuaded that the interests of the service will not suffer thereby, and furthermore, that appointments should be governed by the new rules now pending, after the same shall be adopted. It occurs to the Committee that men of the greatest maturity and experience should be assigned to duty as resident engineers on construction and that the work about the office, being under the immediate eye of superiors can be done with men of lower grade.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

FILLING OF CHICAGO RIVER AT JACKSON STREET.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, (accompanied by a letter from City Engineer Artingstall) with reference to and accompanied by a report, with enclosures, from the Chief Engineer and letter, with enclosures, from Captain Marshall, U. S. A., concerning the filling of the Chicago River near Jackson street bridge, presented and referred to that Committee at the meetings held April 29th, May 3rd and May 24th, 1893, (pages 1198, 1206 and 1244 of the proceedings); and the report and the accompanying letter of the City Engineer were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, and, with the accompanying letter of the City Engineer, ordered printed, and, with all enclosures placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with the accompanying letter of the City Engineer, ordered printed and with all enclosures placed on file.

The following is

THE REPORT WITH ACCOMPANYING LETTER:

"CHICAGO, June 7, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In respect to the filling at the Jackson street bridge, to which the attention of the Board was called on April 29th, 1893, (page 1198 of the Proceedings) by the Chief Engineer, and which was referred to this Committee with power to act, and in regard to which the Committee, in conjunction with the Engineer and Attorney, were further instructed on May 3rd, (page 1206), the Committee reports as follows:

The site of the filling has been examined by members of the Committee and the Assistant Engineer, who examined and reported in the premises, has been heard. By request of the Chairman, Capt. Dunham, of the Vessel Agents Association, has examined the situation. The Chairman has also received a letter from Samuel G. Artingstall, City Engineer, which is transmitted herewith.

From all the information, it appears that the pier, or draw rest, and the ground enclosed thereby, were removed during the time the tunnel was under construction between Jackson and Van Buren streets, and that the present work is designed to restore the condition existing prior to the construction of said tunnel.

It is understood that the use of the draw spaces at Jackson and Van Buren streets is the subject of an agreement

between the city and the Pennsylvania Railway Company, which grew out of the construction of the bridges at these two streets.

The President has called the attention of Capt. W. L. Marshall, U. S. Engineer Corps, to the matter, and his reply was received on May 24th, (see page 1245) and referred to this Committee. It appears that the removal of the pier, and the subsequent restoration, now going on, is without his official cognizance and sanction.

It is doubtful if the Sanitary District has any proper occasion for action at this time, or that the present legal status of the matter is materially different from what it was before the pier was removed, or from what it will be when fully restored. The U. S. Engineer Office has taken the matter under advisement, in the interests of navigation, and can be relied on to do whatever may be expedient at this time. The Committee concludes therefore to report the matter back without action.

As the letter of the City Engineer, the report of the Assistant Engineer and the enclosures with Capt. Marshall's letter contain matter of public interest, they are appended hereto.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
W. H. RUSSELL.
THOMAS KELLY,
JOHN J. ALTPETER,
Committee on Engineering."

"CHICAGO, June 5, 1893.

L. E. Cooley, Esq., Sanitary District of Chicago:

DEAR SIR—In reply to yours relating to the filling now being done, under protection, south of Jackson street bridge, the filling does not cover any new territory. When the Tunnel Company opened a temporary channel on the west side of the river in the fall of 1891, the City of Chicago required them to replace this filling and the protection exactly as it existed before work was commenced, and exacted a bond, (which is in existence) for the faithful performance of this work.

Yours truly,

(Signed) SAMUEL G. ARTINGSTALL,
City Engineer."

COST OF SERVICE BOAT.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, accompanied by enclosure from the Chief Engineer, in response to an order adopted at the meeting held May 3, 1893, (page 1206 of the Proceedings), directing that Committee and the Chief Engineer to ascertain and report the cost of a "Service Boat" for the use of the District; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Russell and Wenter—six (6). Nays—Messrs. Eckhart and Kelly—two (2).

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT WITH ENCLOSUERE:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to a suitable service boat, referred to this Committee in conjunction with the Chief Engineer with instructions to ascertain and report the cost of same at the meeting held May 3, 1893 (page 1206 of the Proceedings), the Committee reports as follows:

The Engineering Department has investigated the matter, and the information to date is contained in the letter transmitted herewith. It appears that a boat adapted to the uses required of it can be had inside of five thousand ($5,000) dollars, and that it can be delivered in four or five weeks after an order is given.

The Committee recommends that specific plans and estimates be received with a view to the purchase of a suitable boat, and that the same be reported to the Board as soon as practicable, and that meantime the Committee, in conjunction with the Chief Engineer, continue the same under advisement.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
W. H. RUSSELL,
WM. BOLDENWECK,
JOHN J. ALTPETER,
Committee on Engineering."

(ENCLOSURE.)

"CHICAGO, June 6, 1893.

Mr. Benezette Williams, Chief Engineer:

DEAR SIR—I herewith submit a report of the information I have gathered concerning a service boat for the District. I have communicated with all the boat builders in this vicinity and find that they generally agree that the dimensions should be 50 feet in length by 10 foot beam. with a draft of about 32 to 34 inches. A boat of this character would be secure enough for Lake Michigan, and yet light enough to make investigations on the rivers and streams connected with the work of the Sanitary District.

I have had in mind the fact that such investigations might take place in bad weather, and therefore some protection from rain and storms should be provided for passengers. The boat should therefore have a cabin entirely enclosed, and as a matter of economy the machinery should also be protected from the weather. In all particulars the element of service and durability have been considered of first importance, and speed rather than freight capacity has been sought for. A boat of this character can be obtained for $3,500 to $5,000. The higher price being for boats of regular shipbuilding construction, strong and thoroughly made, the lower price covering the regular style of stock pattern, made for a short term of service, and by carpenters rather than shipbuilders; otherwise the two classes of boats would appear to be much the same. The speed would average about 10 to 12 miles an hour, and promises are made by different makers that they would finish complete and ready to deliver in four or five weeks from the time the order was given.

Thinking that it might be well also to look for any second-hand boats that might be for sale, I found that very few of this character were to be seen, and none of them were known to be for sale. Even the boats now in use on the World's Fair Lagoon did not fill the requirements, even if they could be bought in time to suit the needs of the Board.

Within the next few days I will have such specifications ready as will cover nearly all important details and be able to submit exact figures and specifications, if desired.

Respectfully submitted,

(Signed) ROBERT H. COWDREY.

Received from Mr. Cowdrey, by direction of the Chief Engineer.

(Signed) L. E. COOLEY,
Chairman."

By unanimous consent Mr. Boldenweck was excused from the meeting.

REVISION OF RULES.

Mr. Russell, for the Committee on Rules, submitted a report recommending amendments to the rules governing the Chief Engineer and the Superintendent of Construction, as presented in the report of said Committee at the meeting held May 31, 1893, (page 1250 to 1252 of the Proceedings) and ordered printed and laid over; and the report was read.

Mr. Russell, seconded by Mr. Eckhart, moved that the amending report be adopted, ordered printed and placed on file, the recommendations made therein concurred in and the amendments proposed adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the amending report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the amendments proposed adopted.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Your Committee on Rules, having further considered the rules with reference to the Chief Engineer and the Superintendent of Construction, presented, ordered printed and laid over at the last meeting, held May 31, 1893, (pages 1250 to 1252 of the Proceedings), recommend the following amendments thereto:

RULE 37. Amend by inserting in the 12th line of said rule, "$6,000" in place of "$7,200."

By inserting in the 14th line of said rule, "$20,000."

RULE. 39. Amend by inserting in the 7th line of said rule, "$5,000" in place of "$5,400."

By inserting in the 9th line of said rule, $10,000."

By inserting after the 9th line of said rule, the following:

"One Assistant Superintendent of Construction, at a salary not exceeding the

rate of thirty-six hundred ($3,600) dollars per annum."

By inserting in the 12th line of said rule, $3,000" in place of "$3,600."

By inserting after the 40th line of said rule, the following:

"The Assistant Superintendent of Construction shall assist the Superintendent of Construction in the administrative charge of all work of construction, and perform such other duties as may be assigned to him. He shall be acting Superintendent of Construction in the absence of the Superintendent, or when authorized by the Chief Engineer or the Board."

By inserting in the 44th line of said rule, the words "may be" after the word "as."

RULE 40. Amend by inserting in the 5th line of said rule, "$2,100" in place of "$2,400."

By striking out in the 17th line of said rule, the word "they," and inserting the words "to them" after the word "assigned."

RULE 41. Amend by inserting in the 1st line of said rule, the words "as authorized by the Board" after the word "appoint."

By inserting in the 19th line of said rule, the word "appointments" after the word "all," and by striking out in the same line of said rule the word "promotion."

RULE 41c. Amend by inserting in the 4th line of said rule, the word "for" after the word "provided."

By inserting in the 5th line of said rule the word "upon" after the word "determined."

RULE 41e. Substitute for Rule 41e, the following:

"All current estimates of the work done under any contract and the certificates therefor, shall be made by the respective Resident Engineers and the same shall be certified by the Superintendent of Construction or the Assistant Superintendent of Construction and approved by the Chief Engineer."

All designation of lines by number in the foregoing report refers to the printed copy of the rules as submitted by the Committee on Rules and the Joint Committee on Rules and Engineering at the meeting held May 31, 1893, (page 1250 to 1252 of the Proceedings).

The adoption of these rules as amended is respectfully recommended by the Committee.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
Committee on Rules."

REVISED RULES ADOPTED.

Mr. Kelly, seconded by Mr. Eckhart, then moved that the rules governing the Chief Engineer and the Superintendent of Construction, as presented and as amended by the reports of the Committee on Rules, be adopted as a whole.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the rules governing the Chief Engineer and the Superintendent of Construction, as presented and as amended by the reports of the Committee on Rules, adopted as a whole.

The following are

RULES 37 TO 41*f* AS AMENDED AND ADOPTED:

"CHIEF ENGINEER.

37. The Chief Engineer shall have charge of all engineering work and shall devote his time to the Sanitary District. He shall do all surveying and civil engineering necessary or ordered by the Board, and shall perform such other duties as may be imposed upon him from time to time by ordinances, orders or resolutions of the Board, and shall attend the meetings of the Board when required. His salary shall not exceed the sum of six thousand ($6,000) dollars per annum, and his bond shall be in the sum of twenty thousand ($20,000) dollars.

38. The Chief Engineer shall have entire charge of the work of the Engineering Department, and shall organize and administer the same so as to secure a full record of the nature and cost of all operations, and full responsibility of all employes.

39. The Chief Engineer by the advice and consent of the Board, shall select the following assistants, as needed by him, subject to confirmation by the Board:

One Superintendent of Construction, at a salary not exceeding the rate of five thousand ($5,000) dollars per annum, who shall give a bond in the sum of ten thousand ($10,000) dollars.

One Assistant Superintendent of Construction, at a salary not exceeding the rate of thirty-six hundred ($3,600) dollars per annum.

One First Assistant Chief Engineer at a salary not exceeding the rate of three thousand ($3,000) dollars per annum.

One Second Assistant Chief Engineer at a salary not exceeding the rate of twenty-seven hundred ($2,700) dollars per annum.

One Record Clerk at a salary not exceeding the rate of fifteen hundred ($1,500) dollars per annum.

The Superintendent of Construction shall have administrative charge of all the work of construction, and all employes engaged therein shall report to him and be subject to his orders. He shall perform such other duties as may be assigned to him by the Chief Engineer. He shall see that all contracts entered into by the District with various parties are efficiently carried out, and he shall make a report to the Chief Engineer at least once every two weeks, giving in detail the condition of the work in process of construction by the District, the progress made therein, and the manner in which same is being executed. A copy of the report shall be transmitted to the Board by the Chief Engineer, with such recommendations as the Chief Engineer considers proper to make relative thereto.

The Assistant Superintendent of Construction shall assist the Superintendent of Construction in the administrative charge of all work of construction and perform such other duties as may be assigned to him. He shall be Acting Superintendent of Construction in the absence of the Superintendent, or when authorized by the Chief Engineer or the Board.

The First Assistant Chief Engineer shall have direct charge of the Division of Surveys, shall conduct all general and special surveys, and perform such duties as may be assigned to him by the Chief Engineer. He shall be Acting Chief Engineer in the absence of the Chief Engineer and by his authority, or when authorized by the Board.

The Second Assistant Chief Engineer shall have direct charge of the Division of Drafting and Records, and shall make and record all maps and plats, and file all note books and be custodian of the same, and shall conduct all land surveys as required by the Attorney, and generally shall be in charge of all platting and engineering except that which may pertain to and be necessarily confined to the other two Divisions, all under the general direction of the Chief Engineer.

The work of the Record Clerk shall be in direct charge of the Chief Engineer. In this Division shall be kept all administrative and financial records, and all reports from the several divisions.

40. The Chief Engineer shall nominate for the confirmation of the Board seven Assistant Engineers, at a salary of eighteen hundred ($1,800) dollars to twenty-one hundred ($2,100) dollars per annum, who shall be assigned to the several divisions, with the concurrence of the Chiefs thereof, and at such rates of pay as may be fixed by order of the Board, as follows:

Five Assistant Engineers on Division of Construction, who shall act as resident Engineers, whose nomination must be concurred in by the Superintendent of Construction.

Two Assistant Engineers for such duties as may be assigned to them.

41. The Chief Engineer shall appoint, as authorized by the Board, such employes as the needs of the service may require.

	Rate per month.
Sub-Assistant Engineers	$125 to $150
Instrument men	100 to 125
Sub-instrument men	75 to 100
Draftsmen	75 to 150
Rodmen, not to exceed	75
Flagmen, Chainmen and Axemen, not to exceed	66
Laborers, not to exceed	54

Sub-Assistant Engineers, Instrument men, Sub-Instrument men and Draftsmen shall be men of technical competence and training for the duties assigned them.

All appointments, changes of grade and fixing of pay is to be done with the concurrence of the President and Committee on Engineering.

41*a*. The Chief Engineer may employ an Assistant Record Clerk at the rate of not over one hundred ($100) dollars per month, a typewriter at the rate of not over seventy-five ($75) dollars per month, and an office boy at not over forty ($40) dollars per month.

41*b*. For any special service of limited duration and for which the regular force is not available, employes are to be had by requisition on the Board, and any such requisitions shall state the number, grade, rate of compensation and duration of service required. All such employment shall be designated "Special" on vouchers and returns.

41*c*. All changes of plans, whatsoever, by which any work is to be carried out in any manner different from that provided for in any contracts, shall be determined upon and authorized by the Board, and proper specifications and plats therefor shall be filed for record with the Clerk, and the President shall issue notice, attested by the Clerk, to the parties in interest.

41*d*. Before authorizing or allowing any extra work or fixing any price therefor or directing or passing upon any work not specifically described and provided for in any contracts, the Chief Engineer shall submit all matters in relation thereto to the Board or its duly authorized committees, sitting in an administrative capacity.

41*e*. All current estimates of the work done under any contract and the certificates therefor shall be made by the respective Resident Engineers, and the same shall be certified by the Superintendent of Construction or the Assistant Superintendent of Construction, and approved by the Chief Engineer.

41*f*. The employes confirmed by the Board shall at all times be subject to call before the Board and its authorized committees, and it is made part of their duty to fully advise the Board through the President, or said committees, of any matters of administration, or engineering, which may be for the good of the District, when requested so to do."

DISEASE MAPS FOR HEALTH DEPARTMENT.

The Clerk presented a communication from Dr. Arthur R. Reynolds, Commissioner of Health, directed to President Wenter, requesting a copy of the Zymotic Disease Maps made by the District; and the communication was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the communication be ordered printed and placed on file, the request made therein granted, and the Chief Engineer directed to furnish the maps required.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the communication ordered printed and placed on file, the request made therein granted, and the Chief Engineer directed to furnish the maps required.

The following is the

COMMUNICATION:

"CHICAGO, May 31, 1893.

Mr. Frank Wenter, President Drainage Board, Rialto Building, City:

MY DEAR SIR—Some time ago your Board made some spot maps showing the location of Zymotic Diseases in the City of Chicago from data received from this Department. If I could get from you a copy of those maps to hang in my office it would be a great service to me, and I would be under many obligations to yourself and your Honorable Board.

Yours very truly,

(Signed) ARTHUR R. REYNOLDS, M. D.

Commissioner of Health."

PROTECTION OF MEN ON MAIN CHANNEL.

The Clerk presented a communication from the McCormick Construction Company, Contractors on Section 14 of the Main Channel with reference to protection from outside interference of men on the work of construction of the Main Channel; and the communication was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the communication be referred to the Committee on Judiciary with instructions to report back to the Board.

The motion prevailed unanimously, and it was so ordered.

The following is

THE COMMUNICATION:

"LOCKPORT, Ill., June 5, 1893.

To the Honorable Board of Trustees, Sanitary District of Chicago, Rialto Building, Chicago, Ill.:

GENTLEMEN—Since Friday last our work has been stopped by force and violence.

We have, twice by letter and twice by telegram, applied to Thos. Hennebry, Sheriff of Will County, Illinois, to protect our men against violence, which men are ready and willing to resume work.

The above named Sheriff of Will County has not replied to any of our letters or telegrams, nor has he rendered us any assistance to resume work, under the laws of this State.

We respectfully request that your Honorable Board will take such action as may be necessary to conform with the laws of the State of Illinois to protect men employed on this work from violence and allow us to resume operations.

Mailed by registered letter.

Respectfully,

McCORMICK CONSTRUCTION CO.

(Signed) Per R. P. McCORMICK, Pres."

APPROPRIATION ORDINANCE.

Mr. Eckhart, Chairman, presented for the Committee on Finance, an ordinance appropriating funds of the District for the general corporate purpose of the District; and the ordinance was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the passage of the ordinance.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the ordinance passed.

The following is

THE ORDINANCE:

"*Be it ordained by the Board of Trustees of the Sanitary District of Chicago:*

SECTION 1. That there is hereby appropriated out of the funds of this District the sum of three million, one hundred and ninety-two thousand seven hundred and eighty-six dollars and fifty cents for the general corporate purposes of this District.

SEC. 2. This ordinance shall be in force from and after its passage."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned.

THOMAS F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JUNE 14, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, June 14, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6), and subsequently Mr. Gilmore, making a total of seven (7) members, were present.

MINUTES.

The minutes of the regular meeting, held June 7, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Eckhart.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, week ending June 10, 1893.....	$1,094 40	
Eng. Dept., Div. No. 2, week ending June 10, 1893.....	60 00	
Eng. Dept., Div. No. 3, week ending June 10, 1893.....	428 10	
Eng. Dept., Div. No. 4, week ending June 10, 1893.....	49 20	
		$ 1,631 70
Clerical Dept., office roll, week ending June 10, 1893.....		39 00
Law Dept., office roll,		

week ending June 10, 1893.....		30 00
Total.....		$1,700 70

CLERICAL DEPARTMENT.

Bates Mfg. Co. (numbering machine).....		$16 00

LAW DEPARTMENT.

S. W. Norton, (expert services).....	$2,000 00	
U. W. Weston, (expense).....	48 05	
O. N. Carter, (expense)	57 62	
		$2,105 67

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings).....	$115 34	
Thos. F. Judge, (pay-roll and sundry expense).....	14 12	
		$129 46
Grand total.....		$3,951 83

Mr. Kelly, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 344, Engineering Department, (office furniture).....	$ 10 26
No. 345, Engineering Department, (drafting material).....	22 92
No. 346, Engineering Department, (printing).....	29 80
No. 347, Engineering Department, (stationery).....	1 50
No. 348, Engineering Department, (printing).....	85 50
Total:.....	$149 98

Mr. Kelly, seconded by Mr. Eckhart, moved that Requisitions Nos. 344 to 348 inclusive, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering with power to act, and instructions to report back at the next meeting.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 344 to 348 inclusive, for the Engineering Department, as read and shown above, referred to the Committee on Engineering with power to act and directions to report back at the next meeting.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending June 10, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending June 10, 1893, as the same have been reported to me:

Engineering Department.....	108
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	119

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

RETURN OF EMERGENCY FUND.

The Clerk presented a report, accompanied by check returning the Emergency Fund of $1,000 placed in the hands of Mr. Benezette Williams as Chief Engineer, by order of the Board of February 3, 1892, (page 347 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, and the enclosed check ($1,000) be ordered deposited with the Treasurer to the credit of the District.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the enclosed check ($1,000) ordered deposited with the Treasurer to the credit of the District.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I enclose herewith check drawn by Mr. Benezette Williams, to my order as Clerk, in the sum of one thousand ($1,000) dollars, the same having been tendered to me as a return of the emergency fund of one thousand ($1,000) dollars, which your Honorable Board on February 3rd, 1892, (page 347 of the Proceedings) ordered deposited with Mr. Benezette Williams as Chief Engineer of this District.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

(Enclosing check, $1,000).

EMERGENCY FUND FOR ENGINEERING DEPARTMENT.

The Clerk presented a report from the Chief Engineer, making requisition for the appropriation of a fund of one thousand ($1,000) dollars, for Emergency purposes for the use of the Engineering Department, in place of the amount just returned and re-deposited; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the requisition made therein allowed, and the Clerk authorized and directed to draw a warrant on the Treasurer for one thousand ($1,000) dollars in favor of the Chief Engineer, for the purposes stipulated in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the requisition made therein allowed, and the Clerk authorized and directed to draw a warrant on the Treasurer for one thousand ($1,000) dollars in favor of the Chief Engineer, for the purposes stipulated in the report.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The emergency fund of $1,000 which has been at the disposal of the Chief Engineer, has been turned into the Treasurer by my predecessor; I respectfully ask that this fund of $1,000 be placed to my credit to be used as heretofore in the work of the department.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

NOMINATION OF ASSISTANTS TO CHIEF ENGINEER.

The Clerk presented a report from the Chief Engineer nominating Messrs. U. W. Weston, D. C. Dunlap, Thos. T. Johnston and Edgar Williams as Superintendent and Assistant Superintendent of Construction and First and Second Chief Engineers, respectively; and the report was read.

Mr. Kelly, seconded by Mr. Russell, moved that the report of the Chief Engineer be adopted, ordered printed and placed on file, and the nominations made therein confirmed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the nominations made therein confirmed.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Under the rules governing the Engineering Department, as accepted June 7th by your Honorable Board, I desire to make the following

nominations for positions in the Engineering Department:

Superintendent of Construction, U. W. Weston.

Assistant Superintendent of Construction, D. C. Dunlap.

First Assistant Chief Engineer, T. T. Johnston.

Second Assistant Chief Engineer, Edgar Williams.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

SALARIES OF ASSISTANTS TO CHIEF ENGINEER FIXED.

Mr. Cooley, seconded by Mr. Russell, moved that the salaries of the Superintendent and Assistant Superintendent of Construction and of the First and Second Assistant Chief Engineers, just confirmed by the Board, be fixed at the limits provided by the Rules.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the salaries of the Superintendent and Assistant Superintendent of Construction and of the First and Second Assistant Chief Engineers, just confirmed by the Board, fixed at the limits provided by the Rules.

REPORT ON UNFILLED ORDERS.

The Clerk presented a report from the Chief Engineer, with reference to the condition and state of progress on various unfilled orders of the Board; and the report was read.

Mr. Kelly, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed, and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—Reporting on the various orders of the Board I find that in Order 821 the map is nearly finished and survey completed; that in order of September 21 (page 758 of the Proceedings) the map is finished and ready to be turned into the Board.

The order of November 16th, (page 884 of the Proceedings) map showing the distribution of population is just about completed; the water-shed map is under way and will take considerable time to finish. No. 3, the topographical map, is in the same condition. No. 4, showing the location of sewers in Chicago and suburbs, is finished except coloring. No. 5 is finished complete and ready to be turned in when the others are ready. No. 6 is also finished. No. 7, the topographical map of uniform scale, to show the location of all the work that has been determined upon, is under way, the triangulation lines having been marked in, but to finish it will take several months. No. 8 is finished and ready to be turned in with the others when completed. No. 9 will take some little time yet.

Your order of November 8th (page 890 of the Proceedings) relates to Order 884 to such an extent that the report upon that will suffice as a report upon this.

Your order of November 23rd, (page 917 of the Proceedings) has been complied with, with the exception of question one, which is still under consideration.

Your order of February 1st, (page 1031 of the Proceedings) concerning the foot bridge across the Illinois and Michigan Canal at Mt. Forest has been referred to the Canal Commissioners with plans and specifications and they have not replied up to this time.

Your order of May 23rd, (page 1206 of the Proceedings) in relation to a general service boat is under consideration and the specifications for the same have been drawn and placed in the hands of the Committee.

Your order of May 3rd, (page 1207 of the Proceedings), in relation to the filling of the Chicago River at Jackson street has been reported on to the Committee and left in their hands.

Your order of May 24th, (page 1246 of the Proceedings) in relation to the joining of the line of the channel in Sections E and F with the new line north of the canal has been complied with.

This completes the unfinished orders up to this date, and is

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

PROJECT FOR TEST PITS.

The Clerk presented a report from the Chief Engineer, made in response to an order passed at the meeting held May 24, 1893, (page 1246 of the Proceedings), with reference to a project for test pits on the right of way between Robey Street and Summit, and stating that a proposition for the work of making same would be presented in a few days; and the report was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report be adopted, ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Referring to your instructions of May 24th to the Chief Engineer to submit a scheme for test pits between Summit and Robey street, I desire to state that I find among the records of the Engineering Department reports on a series of soundings very nearly on the line of the proposed channel between the points named, made by the Government Engineers; and also soundings made by direction of the Sanitary District. These borings should be supplemented by test pits or wells, and I have asked for a proposition from Mr. Thomas Osborne on this work. He says it will be impossible for him to submit a proposition in time for this meeting of the Board, but that he will present one to-morrow, when it will be submitted for your consideration.

Very respectfully,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

SECOND SUPPLEMENTAL BOND OF TREASURER.

The Clerk presented a report from Treasurer Stone, accompanied by his second supplemental bond in the sum of one million ($1,000,000) dollars (making in all three million ($3,000,000) dollars), with Messrs. Oscar D. Wetherell, Edson Keith, Robert L. Henry, Elbridge G. Keith, Gilbert B. Shaw, Franklin H. Head, John A. King, John H. Witbeck, John R. Walsh, Adolph Loeb, George Schneider and Walter L. Peck as sureties; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that this second supplemental bond be accepted, the report adopted, ordered printed, and, with accompanying bond, placed on file.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, this second supplemental bond approved and accepted, the report adopted, ordered printed, and, with accompanying bond, placed on file.

The following is

THE REPORT:

"CHICAGO, June 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The funds in the hands of your Treasurer at this time exceed $2,000,000.00, the amount of bond filed with you, and I take pleasure therefore in sending herewith a second supplemental bond for the sum of $1,000,000.00, making $3,000,000 00 in all.

Trusting this will be satisfactory, I am

Sincerely yours,

(Signed) MELVILLE E. STONE,
Treasurer."

(Accompanied by Bond.)

SUPPLEMENTAL EMERGENCY FUND FOR LAW DEPARTMENT.

The Clerk presented a report from the Attorney, making requisition for a supplemental emergency fund of $2,000, for use of the Law Department; and the report was read.

In connection with the report, Mr. Kelly presented an order, authorizing and directing the Clerk to draw a warrant for two thousand ($2,000) dollars on the Treasurer in favor of the Attorney, for the purposes stipulated in the report.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and placed on file, the requisition made therein allowed, the order passed, and the Clerk directed in accordance with the same.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gil-

more, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the requisition made therein allowed, the order passed, and the Clerk directed in accordance with the same.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I frequently find it necessary in making contracts for the purchase of lands for the District to pay a certain amount of money on the contract from the emergency fund placed at my disposal. The amount of a thousand dollars now in that fund is not large enough for this purpose, as several contracts are often pending at the same time. I think it would be to the advantage of the District to have the amount increased.

I therefore request that two thousand dollars additional to the amount now in my hands be placed at my disposal in the emergency fund, making the total three thousand dollars.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

The following is

THE ORDER:

"*Ordered,* That the Clerk be and he is hereby directed to draw a warrant for two thousand ($2,000) dollars on the Treasurer in favor of the Attorney, the same to be advanced to the Law Department for emergency purposes.

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of May, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit the monthly report of the Law Department, for May, 1893. The total amount paid out during the month is as follows:

Salaries.

Attorneys	$1,425 00	
Right of way force	461 67	
Office force	195 00	
		$2,081 67

Expenditures.

Right of way	$1 228 00	
Court costs	152 25	
Legal services	833 33	
Stationery	15 41	
Furniture	28 50	
Sundries	28 83	
		$2,286 32

Land Account.

Right of way (land)	$18 211 25	
Taxes	206 00	
		$18,417 25
Total		$52 785 24

Negotiations for right of way this side of Summit are in progress and it is probable that the expenses for June will include some expenditures on account of right of way.

Three suits have been begun for the condemnation of parcels of land found necessary for the uses of the District, and the Department has given considerable time to the proper transfer on the Assessor's books of the lands of the District from the names of the previous owners to the corporate name of the District, and in connection therewith to the payment of taxes for 1892, for which the District was liable.

One of my assistants has been in attendance for about a week before the Master in Chancery at the taking of the testimony in the suit of Guilford against Agnew & Company and the District, soon to be heard in the United States Court. During the present month the Department will be engaged in negotiations for land to be acquired under the recent ordinance, and in the preparation of condemnation proceedings therefor.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

PURCHASE OF "OTIS GRAVES LEASE."

Mr. Eckhart, Chairman, presented a re-

port from the Joint Committee on Finance and Engineering, with reference to the purchase from Otis Graves of leasehold on right of way lands in Cook County, and authorizing and directing the Clerk to pay for said leasehold, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Otis Graves, on the voucher of the Attorney, for said leasehold, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Otis Graves, on the voucher of the Attorney, for said leasehold, as provided in the report.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with Otis Graves for the cancellation and surrender by him of his lease of certain land hereinafter described for the sum of one hundred and seventy-six and 50-100 dollars.

Your Committee recommend that the Clerk of this District be directed to pay on the voucher of the Attorney to the said Otis Graves the sum of one hundred and seventy-six and 50-100 dollars in full payment for all his interest in and to the use and occupation of any part of that portion of the southeast quarter of Section 12, Township 38 North, Range 12 East of the Third Principal Meridian, lying north of the northwesterly reserve line of the Illinois and Michigan Canal, situated in the County of Cook, in the State of Illinois, acquired by him under a lease to him by Moses J. Wentworth, trustee, dated December 1, 1888, and expiring March 1, 1894, and in full payment for all his interest of whatsoever nature in and to said land or any part thereof.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

"CONGLOMERATE" ROCK ON McARTHUR SECTIONS.

The Clerk presented a communication from McArthur Bros., contractors on Sections 2, 3 and 4, with reference to "Conglomerate Rock" found on their sections in the line of the Main Channel, and again asking a re-classification of the said material, as requested in a previous communication, presented at the meeting held May 31, 1893, (page 1253 of the Proceedings); and the communication was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Judiciary.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"CHICAGO, June 12, 1893.

To the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On May 31 we delivered to you a communication in reference to the estimating by your engineers of certain "conglomerate rock" encountered on Sections 2, 3 and 4 of the Drainage Channel, claiming that the same ought to be estimated and paid for as "solid rock" and not as "glacial drift."

Since then we have received other estimates from the District, and find the material in question is still estimated as "glacial drift." We respectfully renew our objection to these returns and estimates, as improper and inequitable under our contract, and protest against their correctness.

Considering the large amount involved, we again ask for such action on the part of your Honorable Body as will correct

the wrong and injury done us, and settle the question for the future. In view of these estimates as still returned we have felt compelled to suspend work pending a consideration and adjustment of the matter. We would be pleased to meet the Board or a committee at any time in consultation.

Trusting that early action will be taken, we remain

Very respectfully,

(Signed) McARTHUR BROS."

TRUSTEES' ILLINOIS VALLEY TRIP.

The Clerk presented communications, addressed to President Wenter, from Jason T. Richardson, Jr., City Clerk of Ottawa, Illinois, and John E. Morrissey, Clerk of the Village of Seneca, Illinois, urging that the Trustees of the District make a trip by boat down the Illinois Valley; and the communications were read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the communications be ordered printed and referred to the Committee on Federal Relations.

The motion prevailed unanimously, and the communications were ordered printed and so referred.

The following are the

THE COMMUNICATIONS:

"SENECA, June 6, 1893.

Hon. Frank Wenter, President Trustees Sanitary District, Chicago, Ill.:

DEAR SIR—Enclosed please find copy of resolution passed by President and Board of Trustees of Seneca, Illinois, June 5th.

Yours truly,

(Signed) JOHN E. MORRISSEY,
Clerk."

(Enclosure.)

"SENECA, Ills., June 6, 1893.

Preamble and resolutions adopted by the President and Board of Trustees of the Village of Crotty at their regular meeting, held in the Village Hall, June 5th, 1893.

WHEREAS, Work upon the large canal across the Chicago Divide, which has been undertaken by the Sanitary District of Chicago is now well under way; and

WHEREAS, The ultimate object sought by the State Legislature in enacting the law under which the said Sanitary District is operating was the construction of a great water-way to connect Lake Michigan and the Mississippi River, via the Illinois River; and

WHEREAS, It seems that the next session of Congress will be a most propitious one to bring before the proper national authorities, the urgent necessity of beginning work in and along the Illinois River in line with the joint resolutions passed by our general assembly relating to said water-way; therefore,

Resolved, By the President and Board of Trustees of the Village of Crotty, commonly known as Seneca, that the Trustees of said Sanitary District of Chicago be and that they hereby are urgently requested to make a trip down the Illinois Valley for the purpose of consulting with our people, and personally investigating the condition of the valley so far as it relates to the fulfillment of the water-way project.

Resolved, That the Clerk be and is hereby instructed to forward a copy of these resolutions to the President of the Board of Trustees of said Sanitary District of Chicago.

(Signed) ALEX. VAUGHEY,
President.

(Signed) JOHN E. MORRISSEY,
Clerk.'

WHEREAS, The construction of the canal across the Chicago Divide, upon which the Sanitary District of Chicago is now engaged will by no means connect Lake Michigan and the Mississippi with a navigable waterway, as desired by the people of the State of Illinois; and,

WHEREAS, In order to bring about this much needed inland improvement, a great deal of work must be done in and along the Illinois River; and,

WHEREAS, The benefit to be derived from such a waterway is far reaching and will extend to the entire United States; and,

WHEREAS, the work in the Illinois River can be done at a less expense before water from Lake Michigan is turned into this valley, than afterward; therefore,

Resolved, By the Council of the City of Ottawa that the trustees of said Sanitary District of Chicago be and they hereby are urged to make a trip down the Illinois Valley for the purpose of

personally inspecting the same with a view to ascertaining what steps will be necessary to most efficiently and intelligently set before the next Congress the matter of the urgent necessity of making an early beginning on the work of preparing the Illinois River for the reception of the proposed additional water from Lake Michigan;

Resolved, That the City Clerk be, and he hereby is instructed to forward a copy of these resolutions to the President of the Board of Trustees of said Sanitary District of Chicago.

(Passed the City Council the 6th day of June, A. D. 1893.)

(Signed) JASON T. RICHARDSON, JR.,
City Clerk."

(Corporate Seal.)

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JUNE 21, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, June 21, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Gilmore, Kelly, Russell and Wenter—six (6), and subsequently Messrs. Eckhart and Prendergast—two (2), making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held June 14, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 3, June 15, '93).....	$ 307 12
McArthur Bros. (Sec. 4, June 15, '93).....	1,063 12
Agnew & Co. (Sec. 5, June 15, '93).....	1,393 87
Agnew & Co. (Sec. 6, June 15, '93).....	141 75
Agnew & Co. (Sec. 7, June 16, '93).....	983 98
Agnew & Co. (Sec. 8, June 16, '93).....	1,847 30
Agnew & Co. (Sec. 9, June 16, '93).....	1,722 56

E. D. Smith & Co. (Sec. 10, June 16, '93).....	$2,830 63	
Mason, Hoge & Co. (Sec. 11, June 16, '93).	3,259 15	
Mason, Hoge & Co. (Sec. 12, June 15, '93)	3,536 53	
Mason, Hoge & Co. (Sec. 13, June 15, '93)	5,036 28	
McCormick Const. Co. (Sec. 14, June 15, '93)	1,736 88	
Western Dredging and Impt. Co. (Sec. C., June 15, '93).....	642 17	
E. D. Smith & Co. (Sec. D, June 15, '93).....	1,787 01	
		$26,288 35

ENGINEERING DEPARTMENT.

Tobey Furniture Co. (furniture).....		$ 120 15

LAW DEPARTMENT.

Land Account—		
Orrin N. Carter, (taxes on acquired land)....		$ 528 56

GENERAL ACCOUNT.

Chicago Edison Co. (electric lighting)...	$ 12 88	
The Chicago Deposit Vault Co. (janitor service, May, 1893)	80 00	
The Bureau of Press Clippings, (press clippings).....	44 25	
		$ 137 13
Grand total.....		$27.074 19

Mr. Kelly, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Gilmore, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result, the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 349, Engineering Department, (maps).....	$ 21 00
No. 350, Engineering Department, (profile books).	13 00
Total.....	$ 34 00

Mr. Kelly, seconded by Mr. Russell, moved that Requisitions Nos. 349 and 350, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Gilmore, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 349 and 350 inclusive, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending June 17, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 21, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending June 17, 1893, as the same have been reported to me:

Engineering Department.....	85
Clerical Department.....	3
Law Department.....	6
Treasury Department.....	1
Total employes.....	95

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

REPORT ON M'ARTHUR BROTHERS' CLAIM.

The Clerk presented a report from the Chief Engineer with reference to the condition of the work on McArthur Brothers' Sections, 2, 3, and 4, and their claim for a reclassification of the material on said Sections; and the same was read.

By unanimous consent the report was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I made as full an inves-

tigation of the situation on Section 3, in the matter of the claim of McArthur Brothers, as the existing conditions would admit of. We found that all work on McArthur Brothers' Section had been suspended. The steam shovel had been taken out of the cut between Stations 886 and 890; the tracks torn up, and the pit filling up with water. The stratum complained of was pointed out to me, but there were no adequate facilities at hand for testing its character.

Yours truly,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

CHANGES IN RIVER DIVERSION.

The Clerk presented a report from the Chief Engineer with reference to changes in the River Diversion from the west line of Section 21, in Cook County, to near the center of Section 15, in Du Page County; and the same was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be ordered printed and referred to the Committee on Engineering, in conjunction with the Chief Engineer and Attorney

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, June 16, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—After an examination of the ground coupled with information obtained from my assistants and from the maps of the Sanitary District, I would respectfully urge that the line of River Diversion be made continuous from the west line of Section 21 in Cook county to intersection with existing channel near the center of Section 15 in Du Page county. My reasons for this are these: The proposed extension will make the improvement more symmetrical; the flow of water will be facilitated, as will construction of the Main Channel Should the diversion be followed out on the lines now shown upon the Sanitary District maps, it will become necessary for the contractors to dump waste material on the south side of the channel for a considerable distance. To do this would involve quite a delay in the execution of the work by reason of the necessary shifting of machinery and reorganization of the scheme of the work. The District would consequently have to give an extension in time of completing the work and to compensate the contractors for the cost of shifting and reorganizing their plant. Hoping for your favorable action, I remain

Yours very respectfully,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

MEANS OF TRANSPORTATION ALONG THE CHANNEL.

The Clerk presented a report from the Chief Engineer with reference to vehicles for transportation over a proposed continuous road along the Main Channel; and the same was read.

Mr. Gilmore, seconded by Mr. Cooley, moved that the report be ordered printed and laid over for future action.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of transportation along the lines of our work, I wish to offer a suggestion: The District should own a strong, servicable, light draught team and two vehicles. One of these vehicles should be of the surrey type for four people, the other of the wagonette type with seats for about ten persons. Such an outfit as this would prove very servicable for the use of the Trustees and of the heads of departments. In this connection the question of a continuous road upon the limits of the right of way ought to be considered. By joint action on the part of the District and the contractors such a road could be provided at small cost.

Yours very respectfully,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

SEMI-MONTHLY REPORT ON CONDITION OF WORK.

The Clerk presented a report from the Chief Engineer enclosing the first semi-monthly report from the Superintendent of Construction, with reference to the condition of work: and the report and enclosure were read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, June 20, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith the report of Mr. U. W. Weston, Superintendent of Construction, covering the condition of the work. This report is borne out by my own investigations extending from Summit to Section 10, beyond which point I have been unable to go since assuming charge of the Engineering Department.

Section 1 makes a worse showing than any that I saw on which any attempt had been made to do work. The visible equipment being two boilers upon skids in the midst of a pool of water, and one hoisting machine which is being utilized for pulling stumps.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure.)

"CHICAGO, June 20, 1893.

Isham Randolph, Esq., Chief Engineer Sanitary District:

DEAR SIR—In response to your inquiry in reference to the resumption of work by our contractors, will say that I have just returned from a trip over the line of the canal and found that the adjustment of the differences between the striking quarrymen and their employers has enabled our contractors to resume work, and that no further trouble is anticipated.

On Sections 14, 13, 12, 11 and 10, the conditions are favorable for the effective prosecution of the work up to the full progress requirements when the additional machinery ordered shall have been put in place; this the contractors say they will have in working order in a few weeks. Some of it is now being delivered.

North of this point high water has prevented the completion of the River Diversion, which has doubtless retarded progress somewhat on the Main Channel.

On Sections 9 to 5 inclusive, the contractors are increasing their forces and plant with the expressed intention of bringing same up to the rate of progress required.

No work is being done on Sections 4 to 2 inclusive. Tracks, tools and machinery have been taken from the pits, and the latter permitted to fill with water.

But very little has been accomplished on Section 1, and there is no encouraging indication of much immediate improvement. No estimate has been given on this section since February 15th.

Yours very truly,

(Signed) U. W. WESTON,
Supt. of Construction."

JUDICIAL DECISION ON EIGHT-HOUR DAY.

The Clerk presented a report from the Attorney, enclosing an opinion from Hon. Thomas A. Moran, concerning the steps necessary to obtain a judicial decision with reference to the enforcement of the eight-hour clause of the Sanitary District law, made in response to an order passed at the meeting held February 15, 1893 (page 1053 of the Proceedings); and the report and enclosure were read.

With reference to the same matter, Mr. Altpeter presented a communication from the "United Carpenters' Council of Chicago," directed to the Board of Trustees, and the same was read.

Mr. Altpeter, seconded by Mr. Kelly, moved that the report and enclosure, together with the communication, be ordered printed and referred to the Committee on Judiciary.

After discussion, Mr. Prendergast, seconded by Mr. Altpeter, moved, as an amendment, that the "Trades and Labor Assembly of the City of Chicago" be requested to submit to the Board of Trustees the names of two competent attorneys to represent the Sanitary District of Chicago in the matter of securing a judicial decision on the enforcement of the eight-hour clause of the Sanitary District law.

On roll-call on the amendment the vote stood: Yeas—Messrs. Altpeter and Prendergast—two (2). Nays—Messrs. Cooley,

Eckhart, Gilmore, Kelly, Russell and Wenter—six (6).

Upon which result the President declared the amendment lost.

On roll-call on the original motion of Mr. Altpeter, the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report and enclosure, together with the communication, ordered printed and referred to the Committee on Judiciary.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, June 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On February 15th, 1893, an order was passed by the Board directing me "to take the necessary steps to obtain a judicial decision upon the power of this Board to restrain contractors in doing work for the District from requiring or permitting their employes to work more than eight hours per day."

As Mr. John P. Wilson, General Counsel of the Board, and myself had sometime previously given an opinion in substance that the Board did not have this power, I did not feel as if I ought to take charge of such a case. Mr. Wilson concurred with me in this view. After consultation with the Judiciary Committee and other Trustees, together with Mr. Wilson, it was thought advisable to ask Judge Thomas A. Moran to take charge of the matter. In accordance with this plan a communication, of which the following is a copy, was sent him:

"CHICAGO, March 4, 1893.

Hon. Thomas A. Moran:

DEAR SIR—Enclosed you will find a copy of a clause inserted in the contracts entered into by the Sanitary District for the digging of its channel. The contractors are employing men by the hour who work more than eight hours per day. The Sanitary District is desirous of bringing suit to restrain the contracts from requiring or permitting their employes to work more than eight hours per day and of securing your services to that end.

If agreeable to you to act in the matter, I would be pleased to have you report at your earliest convenience, what proceedings in your opinion would best enable the Sanitary District to obtain a judicial decision as to its rights and powers in the premises.

Yours very truly,

ORRIN N. CARTER,
Attorney.
JOHN P. WILSON,
General Counsel."

"In response to this communication Judge Moran yesterday sent me the enclosed opinion on the questions submitted to him. He informs me that owing to great pressure of business, he was unable to give the opinion at an earlier date.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

(Enclosing opinion.)

(Enclosure.)

"CHICAGO, June 19, 1893.

To the Sanitary District of Chicago:

My opinion has been asked as to the right of the Sanitary District to restrain contractors who are working under contracts with said District in the digging of the channel, from employing men by the hour for more than eight hours per day, and what proceedings would best enable the Sanitary District to obtain a judicial decision as to its rights and powers in the premises.

To the first question—that is, the right of the Sanitary District to restrain contractors from employing men by the hour for more than eight hours per day, I am of opinion that the Sanitary District has no standing under the law to restrain such contractors. A form of the contract entered into between the Sanitary District and its contractors has been furnished to me and said contract contains the following clause:

"The said contractor hereby agrees to "carry on all the work provided for in "this contract in strict conformity to the "requirements of the law under which "the Sanitary District of Chicago "is organized, entitled 'An act to "create sanitary districts or to "remove obstructions from the "Desplaines and Illinois Rivers, ap- "proved May 29th, 1889, in force July 1, "1889,' which provides in Section 11, "among other things, that no person "shall be employed on said work unless "he be a citizen of the United States or

"has in good faith declared his intention to become such citizen; in all "cases where an alien after making his "declaration of intention to become a "citizen of the United States, shall for "the space of three months after he "could lawfully do so, fail to take out "his final papers and complete his citizenship such failure shall be prima "facie evidence that his declaration of "intention was not made in good faith; "and that eight hours shall constitute a "days work."

This clause of the contract requires the contractor to carry on the work in conformity with the requirements of the law. The contract is as strong and broad as the law is and conformity with the law in respect to its provisions is conformity with the contract. If the contractor, in employing persons by the hour for more than eight hours a day is not violating the law, then he is not violating the contract and it must necessarily follow that the other party to the contract, to-wit: The Sanitary District, has no basis for complaint against the contractor. There is nothing in this law which forbids a contractor to employ laborers by the hour to work for as many hours out of the twenty-four as he and they can agree upon. The total effect of the law, in my opinion, is to fix the number of hours that shall upon work done in pursuance of the organization of the Sanitary District, constitute a legal day's work; that is to say, where a laborer bargains with a contractor to work for him by the *day* then it must be held that both parties intended the legal day provided by this law,--that is, a day of eight hours. The act does not prevent the laborer from contracting by the hour for more or less than eight hours out of the twenty-four nor prescribe any amount of compensation for eight hours or for any other number of hours of labor. If the Sanitary District was itself to employ labor by the day, then eight hours would measure the day under this law, but the law does not even forbid the Sanitary District from employing labor by the hour and for a number of hours more or less than eight hours on the same day. That such is the effect of such a provision in a law is expressly determined by the Supreme Court of the United States, in United States vs. Martin, 94 U. S., 400. Thereby the Act of Congress of June 25, 1868, it was declared "that eight hours shall constitute a day's work for all laborers, workmen and mechanics who may be employed by or on behalf of the Government of the United States." The Supreme Court said that such a provision of the law amounts only to a direction to the officers of the United States that eight hours would constitute a day's work for a laborer, but that the statute did not provide that the employer and the laborer might not agree with each other as to what time should constitute a day's work.

I have been unable to find any case which announces a different doctrine and on reason and principle I am unable to see how any different construction of this provision of the law that eight hours shall constitute a day's work can be arrived at.

On the assumption that the Sanitary District is not content to rest upon the view which I have expressed with reference to the construction of the law and its right to restrain contractors from employing men by the hour for more than eight hour's per day, and desires to institute proceedings to obtain a judicial decision as to the rights of the Sanitary District in that regard, I have to say that the only proceeding that seems to me to be at all tenable is a proceeding in equity to enjoin the contractor from employing men in any other way than by the day and for the day of eight hours, treating the provision in the contract which I have quoted as an agreement on the part of the contractors that they will not employ the men except by the day and for an eight hour day; that is, treating said clause in the agreement as a negative covenant or promise on the part of the contractor. A bill to restrain a violation of such negative, promise or covenant is a proceeding that has frequently received the approval of the Chancery Courts. A judicial determination of the question could therefore be obtained by filing a bill setting out the contract and praying for an injunction against the contractors as above indicated. All the questions could be raised on demurrer to the bill. In such cases if the contract is clear and the violation of it is apparent, the fact that no injury is done to the complainant by its violation will make no difference in a court of equity. Proof of actual damage to the complainant in such cases is not required.

Dickinson v. Grand Junc. Canal Co., 15 Beav. 270.

Also on this general doctrine.

Lumley v. Wagner, 1 de Gex. N. & G., 604.

Stewart v. Winters, 4 Sanf. Chy. Rep., 287.

Metropolitan Exhibition Co. v. Ewing, 42 Fed. Rep. 198

Cort v. Lasar, 18 Ore., 221.

Hahn v. Concordia Society, 42 Mo., 465.

See 2 Beach on Mod. Eq. Jur., Secs. 604, 605, 606 and cases there cited.

Also 2 High on Inj., Sec. 1134 et seq.

I feel bound to say that while I have examined a very large number of authorities in which the right to enforce observance of a negative covenant in a court of equity has been considered, I have found no case whatever that would justify me in saying that a favorable decision on such a bill as I have herein indicated might be filed, could be hoped for.

Respectfully,

(Signed) T. A. MORAN.

The following is

THE COMMUNICATION:

"CHICAGO, June 14, 1893.

Board of Sanitary Trustees:

GENTLEMEN — We, the undersigned Committee have been deputized by Carpenter's Union No. 1 U. B. of Chicago, to await upon your Honorable Body for the purpose of making inquiries regarding the enforcement of certain sections of the Drainage Act. More particularly are we instructed to inquire,

First—Whether the said act provides for an eight-hour work day.

Second—Whether the contracts made between the contractors for the drainage channel and the Board of Trustees specify that eight hours shall constitute a legal day's work.

Third—(If the foregoing are answered affirmatively); Why is this section (the only one contained in the Drainage Act that directly affects the working classes) totally disregarded by the contractors of the drainage channel and also by the Honorable Board of Drainage Trustees.

In connection herewith we take the liberty of stating that we largely ascribe the disastrous troubles that have of late taken place along the drainage channel to the fact that the employes are compelled to work a long number of hours per day for the smallest possible recompense

We therefore address you not alone in name of the organized carpenters of this city, but also in behalf of all who are humane, to alleviate if in your power, the condition of the unhappy laborers employed in the construction of the drainage channel.

Respectfully submitted,

(Signed) JAS. MORAHAN,
W. J. WHITEHURST,
JOS. STEWART,
P. F. FARISH,
CHAS. WITT,
A. L. DINTAMAN,
W. J. LOGSDON,
J. C. BOOTH,
WM. COULTER,
J. KABITZKI,
HY. W. SKINNER,
ADOLPH STAMM."

PURCHASE OF "DONNERSBERGER LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from Joseph Donnersberger of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Joseph Donnersberger, on the voucher of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Joseph Donnersberger, on the voucher of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, June 21, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago

GENTLEMEN—The Joint Committee on

Finance and Engineering have reached an agreement with Joseph Donnersberger for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of sixty-eight thousand six hundred and four ($68,604) dollars.

Your Committee recommend that the Clerk of this District be directed to pay on the voucher of the Attorney to said Joseph Donnersberger the sum of sixty-eight thousand six hundred and four ($68,604) dollars, in full payment for the following described land, to-wit:

That part of the southwest quarter (¼) of the northwest quarter (¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13) East of the Third Principal Meridian, lying northerly of the northerly boundary line of the right of way of the Atchison, Topeka and Santa Fe Railroad Company, excepting that part thereof conveyed by said Donnersberger to the Chicago, Madison and Northern Railroad Company by deed dated August 27, 1889, and described therein as the north one hundred (100) feet except the west thirty-three (33) feet of the southwest quarter (¼) of the northwest quarter (¼) of said Section thirty-six (36), said land lying and being situate in the County of Cook, in the State of Illinois.

The deed is to be made subject to all taxes and assessments subsequent to the year 1893, and subject also to whatsoever easement now exists in the public over and upon the west thirty-three (33) feet of the premises conveyed.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
L. E. COOLEY,

Joint Committee on Finance and Engineering."

REPORT ON REQUISITIONS NOS. 344 TO 348 INCLUSIVE.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, with reference to Requisitions Nos. 344 to 348 inclusive, for the Engineering Department, presented and referred to that Committee with power to act, at the meeting held June 14, 1893 (page 1275 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 21, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—With reference to Requisitions Nos. 344 to 348, inclusive, for the Engineering Department, presented and referred to this Committee with power to act at the meeting held June 14, 1893, (page 1275 of the Proceedings) respectfully report that it has considered and allowed the same.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

CHANGES IN PLANS BETWEEN WILLOW SPRINGS AND LOCKPORT.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, accompanied by four orders, with reference to certain changes from plans and contracts for the work between Willow Springs and Lockport; and the report and accompanying orders were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the accompanying orders passed.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the accompanying orders passed.

The following is

THE REPORT WITH ACCOMPANYING ORDERS:

"CHICAGO, June 21, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — In view of certain

changes by which the plans and descriptions submitted and filed by the Chief Engineer on April 19, 1893, (Page 1172 of the Proceedings) differ from the plans and contracts as authorized by the Board, for the work between Willow Springs and Lockport, and in further view of the fact that the work is in process of execution and that said changes seem to be of a character to be approved, the Committee, after consultation with the Engineer and Attorney, submits herewith several orders which cover all changes made to date, for the approval of the Board, viz:

First—An order covering all changes in alignment and division of sections, of the Main Channel.

Second—An order in relation to changes in the grade of the River Diversion on Sections 1 and 2.

Third—An order for a River Diversion in Sections 4 and 5.

Fourth—An order in relation to changes in location and grade of River Diversion between the line of DuPage County and Lemont Township and Goose Lake.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOS. KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Committee on Engineering."

(Enclosures.)

"WHEREAS, The location of the Main Channel between the Willow Springs highway and the middle of Section 14, of Lockport township, and the several sections thereof, as defined in the specifications and in the order of June 29, 1892, (page 607) has been changed in certain particulars, as follows:

1. A change in location in Section 1, between the highway and the first bend in the line of the said channel for the purpose of a better alignment with the work above said highway and to better accommodate the River Diversion.

2. A change in the location of the curve in Sections 10 and 11, by which the line is thrown farther away from the canal and railway and occupies lower ground.

3. Certain changes by which Section 1 is made to begin at the lower side of the Willow Springs highway and the divisions of the several sections are shifted, and the lower end of Section 14 is shifted northward to a point some 1,200 feet above the middle of Section 14, of Lockport township, and as more particularly set forth in the report of the Committee on Engineering on November 2, 1892 (page 850); therefore, be it

Ordered, That the several changes in location as herein set forth are hereby authorized, and that the location of the Main Channel as now staked out on the ground and as described under head of "Location," (page 1173 of the Proceedings) is hereby adopted as the final location of said channel and the several sections thereof."

"WHEREAS, A change in the grade of the River Diversion in Sections 1 and 2 has been found desirable; and,

WHEREAS, It has been stipulated in an agreement with the Columbia Park Company (see page 806 of the Proceedings), that said river diversion opposite the park of said company shall be one foot deeper than the depth specified for River Diversion in general; therefore be it

Ordered, That the grade of the River Diversion beginning at Station 790, opposite the lower end of Columbia Park, be established at an elevation of six feet above Chicago datum; and be it

Ordered, Further, that the grade of said diversion above said Station 790 to the pool at or near Station 770, be made one foot lower."

"WHEREAS, A diversion of the river in Sections 4 and 5 is necessary between Stations 920 and 960 or thereabouts, therefore be it

Ordered, That said River Diversion be located with its southeasterly boundary not less than eight hundred feet from the northwesterly edge of the Main Channel and parallel thereto, and that the bottom grade thereof shall be at the elevation of five feet or thereabouts above Chicago datum."

"WHEREAS, A change in location of the River Diversion in Sections 10 and 11 has been found expedient on account of right of way, and

WHEREAS, It has been found desirable to change the grade of the River Diver-

sion between Sag and Goose Lake, therefore be it

Ordered, That the change in location of said River Diversion, beginning at Station 1236+50 in Section 10, and curving southerly to Goose Lake in such manner as to bring the guard bank 575 feet or thereabouts from the west line of the Main Channel as now located, and as particularly described on Page 1175 of the Proceedings, be authorized, and be it further

Ordered, That the grade of said River Diversion shall be established at 5.04 feet above Chicago datum at Station 1070 in Section 7, and that said grade descend thence at the rate of 0.12 feet in 1000 feet to Goose Lake, and terminate at Station 1290 at an elevation of 2.40 feet above Chicago datum."

WESTERN STONE COMPANY AND STEPHENS STREET BRIDGES, ETC., REFERRED BACK.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to the Western Stone Company and Stephens street bridges, and special orders on various subjects, recommending that same be referred back to the Chief Engineer for further consideration; and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be adopted, ordered printed, and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, June 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the bridge for the Western Stone Company's railway across the River Diversion near the line of Cook and Will Counties, the specifications for which were referred to this Committee on March 22nd, (page 1112) and which was referred to in report of April 5th, (page 1140); and in regard to specification for bridge over River Diversion at Stephens street, referred to this Committee on May 10th (page 1215), the Committee reports as follows:

It appears desirable to reconsider the whole question of River Diversion and improvement between the high ground above the Santa Fe Railway at Summit and the Lockport road, in respect to bridges, spillway, culverts, height of levees, and any other matters which require early determination. It is the further opinion of the Committee that the Chief Engineer should report to what extent it may be practicable to restrain flood waters down the valley of the Desplaines, and what additional works will be required and the cost thereof.

It is therefore recommended that the specifications for the Western Stone Company's bridge and the highway bridge at Stephens street, Lemont, be referred back to the Chief Engineer. This will also dispose of the instructions in regard to the Santa Fe crossing at Lemont, as contained in report of April 5th, (page 1140.)

Special orders in regard to spillway at or near Summit and in regard to river improvement at and near Romeo are covered in the above general recommendations, (see Proceedings, September 21, 1892, page 758; August 10, 1892, page 677, and September 21, 1892, page 753.)

Very respectfully submitted,

(Signed) L. E. COOLEY, *Chairman.*
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER.
B. A. ECKHART,

Joint Committee on Engineering and Finance."

CHANGE OF GRADE IN MAIN CHANNEL.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Judiciary, with reference to the change of grade in the rock cut on the Main Channel, as proposed in the report of the Chief Engineer, presented and referred to that Committee at the meeting held March 1, 1893 (page 1066 of the Proceedings; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, June 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the report of the Chief Engineer of March 1, 1893, (page 1066) recommending that the grade of the Main Channel be changed in the rock, and referred to this Committee, the Committee reports as follows:

The proposed change of grade will raise the bottom of the channel at the lower end some two feet, and reduce the slope in the rock from six to four feet. The effect of this is to diminish the capacity about twenty per cent. The saving in cost is about one and a half per cent. of the total estimate of the Main Channel between Bridgeport and Joliet.

It is argued that the channel will carry the minimum volume required by law with the lessened grade, but as doubts have been expressed, it is thought wise to be entirely safe, especially as any extra capacity that may be provided costs so little in proportion to the entire cost of the work.

If a change of grade be desirable at the lower end with a view to the better construction of regulating works, it should be obtained in some other way than by diminishing the capacity of the channel now provided for and under contract.

Your Committee therefore recommends that the proposition to change the grade be referred back to the Engineering Department with instructions to report what, if any, changes of grade should be made, the channel to be fully equivalent in capacity to that now specified.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Joint Committee on Engineering and Judiciary."

REPORT ON M'ARTHUR CLAIM.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Judiciary, accompanied by an order, with reference to the communications from McArthur Bros., concerning "Conglomerate Rock" found on Sections 2, 3 and 4 of the Main Channel, and asking a reclassification of the same, presented and referred to that Committee at the meetings held May 31, 1893, and June 14, 1893 (pages 1253 and 1280 of the Proceedings); and the report and accompanying order were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the accompanying order passed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the accompanying order passed.

The following is

THE REPORT, WITH ACCOMPANYING ORDER:

"CHICAGO, June 21, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Judiciary, to whom was referred the communications of McArthur Bros. to the Board of Trustees of the Sanitary District of Chicago under date of May 31st, 1893, and June 12th, 1893, having considered the same, beg leave to report as follows:

The Committee is unable to agree with the position of McArthur Bros. on the question raised by said letters, and recommend that the Board of Trustees call on the Chief Engineer of the Sanitary District of Chicago to decide the question raised by said communications from McArthur Bros., as provided in the contracts between the Sanitary District and said McArthur Bros.

(Signed) L. E. COOLEY,
Chairman.
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
Joint Committee on Engineering and Judiciary."

(Enclosing order and communications.

The following is

THE ORDER:

"*Ordered*, That the question raised by the letters of McArthur Bros. to the Board of Trustees of the Sanitary District of Chicago, dated May 31st, 1893, and June 12th, 1893, be and the same is hereby referred to the Chief Engineer of the District for his decision under the provisions of the contracts between McArthur Bros. and the Sanitary District, the Board of Trustees being unable to agree with McArthur Bros. in regard to the question so raised by them, and that the Clerk be directed to furnish said Chief Engineer with a copy of said letters and of this order, and also to furnish McArthur Bros. with a copy of this order."

TRUSTEES' ILLINOIS VALLEY TRIP

The Clerk presented a communication from Geo. McHuse, Mayor, and Bernhard Wolters, City Clerk, of the City of Havana, urging that the Trustees of the District make a trip by boat down the Illinois Valley; and the communication was read.

Mr. Cooley, seconded by Mr. Russell, moved that the communication be ordered printed and referred to the Committee on Federal Relations.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"At a regular meeting of the City Council of the City of Havana, in the State of Illinois, on June 3, 1893, among other things, the following resolutions were unanimously adopted:

Be it resolved by the City Council of the City of Havana, That heretofore, for the improvement of the navigation of the Illinois River, the government of the United States and that of the State of Illinois constructed and placed in that river a system of dams and locks, but that the benefits therefrom to the navigation is not perceptible and the stagnation caused thereby has produced sickness and disease, and hence that system is worse than a mere failure; that really for the said improvement and to avoid the perpetual source of sickness, disease and death that will surely be caused by the lodging and accumulating against and above the said dams of the immense sewerage soon to flow from Chicago into the said river, the said dams ought to be removed, and in their stead a system of wing dams and dredging adopted, which would also allow a quick and unobstructed passage of the said sewage; that the improvement of the Illinois and Desplaines Rivers and the construction of a canal, so as to make a navigable waterway from the Mississippi to Lake Michigan has already been much discussed, agitated and favored by all the people, and to which Congress has given attention and caused surveys and reports thereof to be made; that for relieving the City of Chicago of its immense disease breeding sewage, the Sanitary District of that city is now constructing a large canal from the said lake to the Desplaines river through which from said lake 300,000 cubic feet of water per minute will flow, carrying the said sewage into the Desplaines and thence into the Illinois, thereby removing the cause of sickness and disease from Chicago and distributing it along the valleys of said rivers, but mainly at and above the said dams. It cannot, however, be believed the people of Chicago or the Trustees of said district intentionally desire to thus send disease and death to the people of those valleys —that the law under which said Sanitary District was organized contemplates the construction of the said waterway in connection with said Sanitary Canal and the removal of said dams, and that said work would be a great aid to the purpose of the said district and a great benefit to all the people, and that the influence of said Trustees, properly directed and exercised, connected as they are with their great Sanitary scheme, is persuasive and well calculated to secure and hasten the said waterway, and the removal of said dams: Therefore be it

Resolved, That to enable them to more intelligently carry out their great Sanitary project in connection with said rivers and more effectually use their influence in securing and hastening the said waterway and the removal of said dams, the said Trustees are hereby requested and urged to proceed down the Illinois River by boat on the subsidence of the present high water therein, and by actual inspection to become better acquainted with the said river and the condition of the valley thereof, and the pernicious effects of said dams.

(Signed) GEORGE E. MCHUSE,
Mayor.

Attest:
BERNHARD WOLTERS,
City Clerk."

(Corporate Seal.)

USE OF STONE BY TOWN OF LEMONT.

The Clerk presented a communication, directed to the Board of Trustees, by the Highway Commissioners of the Town of Lemont, asking permission to obtain stone excavated from the Main Channel of the District for grading a road; and the communication was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the communication be ordered printed and referred to the Joint Committee on Finance and Judiciary, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the communication ordered printed and so referred.

The following is the

THE COMMUNICATION:

"LEMONT, June 21, 1893.

To the Board of Sanitary Trustees, Sanitary District of Chicago:

GENTLEMEN—The undersigned, the Board of Highway Commissioners of the Town of Lemont, desire to arrange with you, whereby it may be permitted to obtain stone from the pile near the highway north of the Desplaines River, in Lemont.

The Board intends to grade a small piece of road, and can obtain stone more readily and conveniently from the large pile along the highway than from any other point here.

Any arrangement which you may see fit to make with our Attorney, J. W. McCarthy, will be satisfactory to us. We would like to know as soon as possible.

Yours, etc.,

(Signed) D. B. MURPHY,
NEIL HARKINS,
LAWRENCE KIRK,
Highway Commissioners.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JUNE 28, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, June 28, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6), and subsequently Messrs. Gilmore and Prendergast—two (2), making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held June 21, 1893, were approved as printed, on motion of Mr. Russell seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Streeter & Kenefick, (Sec. E., June 15, '93)	$6,791 15	
Ricker, Lee & Co. (Sec. F., June 15, '93)	2,270 77	
		$9,061 92

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 23 25
John Morris Co. (stationery)	126 23
S. D. Childs & Co. (stationery)	21 88

Rand, McNally & Co. (maps)	$21 00	
E. Dietzgen Co., (drafting material)	3 00	
John T. Allison, (rent, Summit)	20 00	
Estate of Richard Peters, (vault fittings and changes)	86 88	
E. R. Shnable, (traveling)	8 62	
Robert H. Cowdrey, (emergency)	27 67	
		$ 338 53

LAW DEPARTMENT.

Thomas Burke, (livery)	$ 15 00	
Haley & O'Donnell, (expense)	8 00	
O. N. Carter, (expense)	23 18	
		$ 46 18

LAW DEPARTMENT.

Land Account—	
Orrin N. Carter, (taxes on acquired land)	$ 371 65
Grand total	$9.818 28

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 456, Law Department, (stationery, etc.) $9 35

Mr. Boldenweck, seconded by Mr. Altpeter, moved that Requisition No. 456 for the Law Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 456 for the Law Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending June 24, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending June 24, 1893, as the same have been reported to me:

Engineering Department	85
Clerical Department	3
Treasury Department	1
Law Department	6
Total employes	95

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

DECISION ON MCARTHUR CLAIM.

The Clerk presented a report from the Chief Engineer, being a decision on the claim of McArthur Brothers, as set forth in their communications of May 31st and June 12, 1893, concerning "Conglomerate Rock" found on Sections 2, 3, and 4 of the Main Channel, and asking a reclassification of the same, the said report of the Chief Engineer being presented in response to a report of the Joint Committee on Engineering and Judiciary, and accompanying order, presented and adopted at the meeting held June 21, 1893, (page 1294 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Judiciary, with instructions to report back as soon as possible.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, June 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Acting under your reso-

lution of the 21st inst., calling upon me to exercise the power delegated, by the contract, to the Chief Engineer to decide questions arising between the contractor and the Board, in the case of the claim made by McArthur Brothers for solid rock classification on certain material encountered upon their work, I have to report as follows: In response to my request that the firm would submit the arguments upon which they base their claim, for my information, Mr. Archibald McArthur met me on Saturday last and stated verbally the substance of their claim as contained in their communication of May 31st.

After carefully considering this question, I am unable to admit their claim for the following reasons:

The terms of the contract defining Glacial Drift are not geologically correct, but the definition therein set forth is arbitrary and was adopted by the Sanitary District and accepted by the contractor as a basis of estimating the material overlying the solid rock for the purposes of settlement. That the material encountered is very tough and difficult to handle cannot be denied, but that the last clause of the arbitrary definition of Glacial Drift, namely, "any other material that overlies the bed rock" covers and includes it fully, is to my mind perfectly evident.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

PROJECT FOR TEST PITS.

The Clerk presented a report from the Chief Engineer, enclosing bids, made in response to an order passed at the meeting held May 24, 1893, (page 1246 of the proceedings) with reference to a project for test pits on the right of way between Robey street and Summit; and the report was read.

Mr. Cooley presented an order with reference to the same, accepting the proposition of J. R. Davis & Son; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with enclosed bids placed on file, the recommendations made therein concurred in, and the order adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and with enclosed bids placed on file, the recommendations made therein concurred in, and the order adopted.

The following is

THE REPORT:

"CHICAGO, June 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I am in receipt of propositions from Wm. Harley & Son, J. R. Davis & Son and S. B. Geiger, for digging the test pits which are needed between Summit and Robey street.

From H. B. Herr & Co. I had a verbal proposition to do the work under our supervision, we paying them cost plus 15 per cent.

The proposition of Wm. Harley & Son is $363 for each test pit, they to keep them pumped dry during the time of the work.

The Geiger proposition figures $403.84 per pit.

J. R. Davis & Son submits two propositions, one to bore with a pod auger 6 inches in diameter, bringing up specimens of each strata of material passed through, the full depth of such strata, for the sum of $1.25 per foot depth. Their alternative proposition is a well three feet square, curved throughout, with spaces left to show character of material, for $2.50 per foot, including ladder. Taking the average depth of wells as 35 feet, the first Davis proposition figures out $43.75, the second, for larger wells, $87.50. The proposition does not contemplate keeping the wells pumped out any longer than is necessary to determine the character of the material. I think the Davis proposition meets all the requirements fully.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosing five (5) communications.)

The following is

THE ORDER:

"WHEREAS, The Chief Engineer has this day submitted certain propositions for test pits on the line of the Main Channel between Robey street and the

range line at Summit, in accordance with order of May 24, (pages 1246 and 1250 of the Proceedings) therefore be it

Ordered, That the sinking of said test pits be authorized in such number as the Chief Engineer may deem sufficient to properly disclose the nature of the material to be excavated, and that the proposition of J. R. Davis & Son be accepted, the work to be done under the direction of the Chief Engineer."

SPECIFICATIONS FOR SERVICE BOAT.

The Clerk presented a report from the Chief Engineer, accompanied by specifications, concerning a general service boat, and recommending the sale of the scow owned by the District; and the same was read.

Mr. Cooley presented an order directing the Committee on Finance, in conjunction with the Clerk, to dispose of the scow mentioned in the report of the Chief Engineer; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with enclosed specifications, placed on file, the recommendations made therein concurred in, and the order adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with enclosed specifications, placed on file, the recommendations made therein concurred in, and the order adopted.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith the revised specifications for General Service Boat, which seem to meet our requirements.

In this connection, I beg to call attention to the scow that is owned by the District which is seemingly a source of expense, without any prospect of its ever becoming useful. I am advised that it costs $5 per month to store it, and that it is constantly giving trouble, requiring to be pumped out, etc. I would suggest that it might be well to dispose of it if a reasonable figure can be obtained for it.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosing specifications.)

The following is

THE ORDER:

"*Ordered*, That the Committee on Finance, in conjunction with the Clerk, be and they are hereby instructed to dispose of the scow which is reported as without any prospect for usefulness in report of the Chief Engineer of this date."

PAYMENT FOR "KEIG ET AL. LANDS."

Mr. Boldenweck presented an order, authorizing and directing the Clerk to pay on the voucher of the Attorney, to the County Treasurer of Will County, Illinois, a certain sum, as a deposit for payment for right of way lands in Will County, Illinois, owned by John J. Keig et al., as provided in said order; and the order was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the order be adopted, and the Clerk authorized and directed to pay the County Treasurer of Will County, Illinois, on the voucher of the Attorney, for said lands as provided in the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the Clerk authorized and directed to pay the County Treasurer of Will County, Illinois, on the voucher of the Attorney, for said lands as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to the County Treasurer of Will county, Illinois, the sum of nine hundred ($900) dollar for the use and benefit of the owners of or persons interested in that part of the northwest quarter of Section two (2), in Township thirty-six (36) North, and of Range ten (10), East of the Third Principal Meridian, in Will county, Illinois, thus bounded and described:

Beginning at a point on the north line

of said northwest quarter (¼) four hundred and twenty-nine (429) feet west of the westerly reserve line of the Illinois and Michigan Canal; thence west along the said north line of said northwest quarter one hundred and five and six-tenths (105 6-10) feet; thence southerly along a line parallel to the said westerly reserve line of the canal four hundred and forty-five and five-tenths (445 5-10) feet; thence east along a line parallel to the said north line of the said northwest quarter one hundred and five and six-tenths (105 6-10) feet; thence northerly along a line parallel to the said westerly reserve line of the canal to the point of beginning; containing one and seven one-hundredths (1.07) acres more or less.

Said amount being the aggregate of the sums awarded to the owners of or persons interested in the said above described land by the verdict of the jury and the final order and decree entered in the Circuit Court of Will county, Illinois, in the case of the Sanitary District of Chicago vs. John J. Keig, et al., general number 14,103, on the 23rd day of June A. D., 1893."

PURCHASE OF "GEO. H. MERRICK LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, recommending the purchase from George H. Merrick of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay, on the voucher of the Attorney, for said right of way lands, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Geo. H. Merrick on the voucher of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said George H. Merrick, on the voucher of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with George H. Merrick for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of ten thousand ($10,000) dollars.

Your Committee recommend that the Clerk of this District be directed to pay on the voucher of the Attorney to the said George H. Merrick the sum of ten thousand ($10,000) dollars in full payment for the following described land, to-wit:

The north half (½) of the north half (½) of the southwest quarter (¼) of the northeast quarter (¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian; said land lying and being situate in the County of Cook, in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
JOHN J. ALTPETER,
WM. BOLDENWECK,
W. H. RUSSELL,
L. E. COOLEY.

Joint Committee on Finance and Engineering."

USE OF STONE BY TOWN OF LEMONT.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the communication from the Highway Commissioners of the Town of Lemont, asking permission to use stone excavated from the Main Channel of the District for grading a road, presented and referred to that Committee at the meeting held June 21, 1893, (page 1296 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Prendergast, Russell and Wen

ter—seven (7). Excused and not voting —Mr. Gilmore—one (1). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance and Judiciary, to whom was referred the request of the Board of Highway Commissioners of the Town of Lemont for permission to take stone from the spoil bank near the highway north of the Desplaines River in Lemont, for the purpose of grading a road, having considered the matter, recommend that said Board of Highway Commissioners be granted permission to take stone as requested, not to exceed two hundred (200) wagon loads; *provided*, however, that they take only such stone as is non-merchantable, and that said stone be taken under the direction of the Chief Engineer, his agents and assistants, as to kind taken and the place from which same shall be removed.

(Signed) B A. ECKHART,
Chairman.
JOHN J. ALTPETER,
WM. BOLDENWECK,
W. H. RUSSELL,
Joint Committee on Finance and Engineering."

SERVICE BOAT TO BE ADVERTISED.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering with reference to a service boat, and directing the Chief Engineer to receive propositions for the construction of the same in accordance with the specifications this day submitted; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Eckhart—one (1).

Upon which result, the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Chief Engineer instructed in accordance with the same.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to a service boat, reported upon by the Committee on June 7, 1893, (page 1267 of the Proceedings) and which the Committee, in conjunction with the Chief Engineer, has continued under advisement, the Committee recommends that the Chief Engineer be instructed to receive propositions for the construction of a suitable boat, as specified in the specifications this day submitted by the Chief Engineer, said propositions to state cost and time of delivery after the order is given.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
Committee on Engineering."

REPORT ON CONDITION OF WORK.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by the report of the Chief Engineer enclosing the first semi-monthly report of the Superintendent of Construction, with reference to the condition of work, presented and referred to that Committee at the meeting held June 21, 1893 (page 1286 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with accompanying report, placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report adopted, ordered printed and, with accompanying report, placed on file.

The following is

THE REPORT:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the report of the Chief Engineer and the Superintendent of Construction, referred to this Committee on June 21st, your Committee reports as follows:

The Committee called in Alfred and William Harley, and they gave assurances of progress and of preparation and disposition to push the work. Your Committee is not prepared to advise any harsher measures until further opportunity is furnished to test their ability to prosecute the work vigorously. There seems to be no occasion for any action in regard to the contracts in general further except on Sections two (2) three (3) and four (4) than is now being taken by the Superintendent of Construction and the Chief Engineer.

Very respectfully,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK.
JOHN J. ALTPETER,
B. A. ECKHART,
W. H. RUSSELL,

Joint Committee on Engineering and Finance."

(Two (2) enclosures.)

OFFICES TO BE CLOSED JULY 4.

Mr. Russell presented an order, directing that the offices of the District be closed on Tuesday, July 4, 1893; and the order was read.

Mr. Russell, seconded by Mr. Altpeter, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the offices of the District ordered closed Tuesday, July 4, 1893.

The following is

THE ORDER:

"*Ordered*, That the offices of the Sanitary District of Chicago be and they are hereby ordered closed on Tuesday, July 4, 1893, the same being a legal holiday."

ADJOURNMENT TO SPECIAL TIME.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that when the Board adjourn, it do adjourn to meet Saturday, July 1, 1893, at 11 o'clock A. M.

The motion prevailed unanimously, upon which the President declared that when the Board adjourn, it do adjourn to meet Saturday July 1, 1893, at 11 o'clock A. M.

By unanimous consent, the Board then took a ten-minute recess.

OGDEN DITCH INFLOW.

On reassembling at the close of the recess, the Clerk presented a report from the Chief Engineer, accompanied by two enclosures with two (2) tables, concerning the condition of the Chicago River, and the inflow from the Ogden Ditch; and the report and enclosures were read.

Mr Cooley, seconded by Mr. Boldenweck, moved that the report and enclosures with two (2) tables be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, June 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Herewith I submit report bearing upon the relation of the work of the Sanitary District to the present offensive condition of the Chicago River, going to show very conclusively that up to this time no work done on the line of the Drainage Channel has contributed either directly or indirectly to the deplorable condition of said river. Report No. 1 is from Mr. E. R. Shnable and relates to the physical conditions now existing in the region lying south of the village of Lyons, bounded on the south by the I. & M. Canal, on the West by the Lyons Road, and on the east by the range line, Township 38 North, Range 12, East, which conditions have not been changed by anything which we have caused to be done.

Report No. 2 is submitted by Mr. T. T Johnston, First Assistant Chief Enginee and is, with the tabulations which h has made, a valuable contribution to th

fund of information bearing upon the causes which unite to produce the unwholesome condition of the river.

Table No. 1 shows that for given flood heights at Riverside the flood heights at Willow Springs in 1893 have ranged slightly below the heights of 1892.

Table No. 2 giving the flow into the Chicago River from five of the sources indicated shows that the inflow is greatly in excess of the working capacity of the Bridgeport pumps, without considering the 6th source or the inflow from the Ogden Ditch This inflow for the current month was greatest on the 12th inst. but on that day the Fullerton avenue conduit was idle and the Bridgeport pumps discharged 39,600 cubic feet, so that the outflow to the lake was reduced from 147,089 cubic feet on the 11th to 112,200 cubic feet. But as the tables submitted tell the story of the situation in concise form, further comment is unnecessary.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"SUMMIT, Ills., June 27, 1893.

Mr. Isham Randolph, Chief Engineer, Sanitary District of Chicago, Chicago, Ill.:

MY DEAR SIR—In reply to your favor of even date, will say that our contractors have not cut or broken the levee which follows the east and south side of the Desplaines River from the high ground south of the Village of Lyons towards the Village of Summit. This levee has an opening about 1,400 feet north of the Santa Fe Railway bridge over the Desplaines, which opening has been there long before our contractors arrived on the ground. It was there last January.

The only levee disturbed by contractors is the one enclosing what was until recently Swifts ice pond. In its place they have built a railroad embankment 2 feet higher and 10 feet wider. However, this levee takes no part in preventing the Desplaines Valley flood water from reaching the Chicago River.

The flood waters of the Desplaines overflow its banks between the Ogden dam and the Summit-Riverside road filling up the low ground between the river on the north, the Illinois and Michigan Canal spoil bank on the south, the Summit road on the west, and are then drained into a large ditch along the range line Township 38 North, Range 12 East. This ditch passes the Ogden dam to the east and thus the flood waters reach the Chicago River.

The contractors are now at work building a levee 6 to 7 feet high and 12 feet wide on top which will prevent this overflow.

Yours respectfully,

(Signed) E. R. SHNABLE,
Assistant Engineer."

(Enclosures.)

"CHICAGO, June 28, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The following statement, somewhat hastily compiled, though believed to be essentially correct, pertains to the conditions of flow in the Chicago River during June, 1893.

The sources of flow into the river are:

First—Water supply, which is the sewage.

Second—North Branch above Fullerton avenue.

Third—Through Fullerton avenue conduit.

Fourth—Storm water from city area.

Fifth—From the lake through main river.

Sixth—From the Ogden Ditch.

The outflow is:

First—By way of the Illinois and Michigan Canal in dry weather.

Second—By way of canal and main river in wet weather.

The most salient question at present is as to the inflow by way of Ogden Ditch, especially as influenced by any works of the Sanitary District. A letter addressed to you by Assistant Engineer Shnable, which you showed me this day, states that the Sanitary District has done no work in the vicinity of Summit which would permit a more free flow of water toward Chicago. Therefore, the question would turn on the merits of any works which would restrict flow down the Desplaines toward Joliet. That some works supposed to have such a tendency have been constructed at some distance below Summit is true, and the data are at hand to determine whether they have had any effect of the kind supposed. The accom-

panying table No. 1 shows the effect of floods from the upper Desplaines at Riverside on the height of river surface at Willow Springs both for 1893 and 1892, that is, both before and after the works in question were constructed. It appears that within a limit of less than two and one-half inches the same effects were produced at Willow Springs, in both years, by floods of magnitude equal to those of June, 1893. Owing to the more flooded state of the river in 1892 the Willow Springs water surface was slightly higher in 1892 than in 1893, but not more than two and one-half inches. The deduction is direct and conclusive that the Sanitary District works have not had the supposed effect. In fact, the conditions are essentially unchanged.

The existing state of the Chicago River which is unusually offensive in the central part of the city may be readily explained. The accompanying table No. 2 shows an approximation to the conditions of flow in the rivers in May and June, 1893.

The water supply is taken approximately at 15,000 cubic feet per minute, which is considered to be the volume of the sewage. This is believed to be a low estimate. There has not been time to fully verify this amount, but it is not in excess of the sewage for 1891.

The tabulated flow from the North Branch is a close estimate, rather small if anything.

The flow through Fullerton avenue is from the city records. No estimate is made of city storm water, though the data shows that nearly all of it must have gone into the lake.

The flow in the main river from the lake is deduced from the other data, but in such manner that it is certainly underestimated. The flow into the lake, except for a few days at its maximum, is not overestimated. Minus quantities indicate flow into the lake and plus quantities the flow from the lake.

The flow from the Ogden Ditch has been exagerated intentionally, and is probably 20 per cent. too great. This has been done in order that the conclusions drawn may certainly be in error on the safe side.

The flow toward Joliet is assumed to be 45,000 cubic feet per minute, which is the smallest volume it could possibly have been. It is small to just the extent that the Ogden Ditch flow is large.

The pumpage into the Illinois and Michigan Canal is deduced from the Sanitary District discharge curve and gauge readings at the canal lock. It is believed to be a very close approximation, and is an overestimate when in error. An examination of the tables shows that there has been a small pumpage at Bridgeport, and quite a continuous flow from the Upper North Branch. That the overflow from the Desplaines to the Ogden Ditch has been small and of short duration, compared with many previous floods.

It is to be remembered that no account is taken of the storm water from the city area, the effect of which has been to increase the tendency of flow toward the lake.

The conclusion to be drawn with reference to the present state of the river is that (1st) the small pumpage at Bridgeport has permitted an accumulation of filth by sedimentation, and (2nd) that owing to the moderate nature of recent floods there has been nothing to cleanse the rivers.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

(Accompanied by two tables.)

TABLE NO. 1.

RELATIVE EFFECTS OF DESPLAINES RIVER FLOODS AT WILLOW SPRINGS 1892-93.

1892.			1893.		
Date at Willow Springs.	Riverside Gauge.	Willow Springs Gauge.	Date at Willow Springs.	Riverside Gauge.	Willow Springs Gauge.
June 4.....	15.1	11.94	March 25.....	15.7	12.06
June 9.....	16.7	12.42	April 23.....	16 6	12.26
June 15.....	16.8	12.51	May 2.....	15.9	12.12
July 3.....	15.4	12.16	June 13.....	15.9	12.02
			June 23.....	15.6	12.07

Compiled from Sanitary District gauge readings and checked.

(Signed) THOS. T. JOHNSTON, *First Assistant Chief Engineer.*

TABLE NO. 2.

APPROXIMATE FLOWS PERTAINING TO THE CHICAGO RIVER.—1893.

Quantities expressed in cubic feet per minute.

DATE. 1893.	Upper N. Branch above Bomanville.	Fullerton avenue.	Total N. Branch except water supply.	Water supply at Bridgeport.	Total N. Branch and water supply.	I. and M. Canal (pumped.)	Main river toward Bridgeport.	South Branch at Bridgeport toward Bridgep't.	Ogden Ditch.	Riverside.	Desplaines at Summit.
May 1...	37,200	.....	37,200	15,000	52,200	45,900	— 113,400	159,300	107,100	152,100	45,000
May 2...	31,800	.....	31,800	15,000	46 800	43,200	— 115,600	158,800	112.000	157,000	.....
May 3...	18,600	.....	18,600	15,000	33,600	39,600	— 69,600	109,200	75.600	120,600	.....
May 4...	14,400	.....	14.400	15,000	29,400	37,800	— 34,200	72,000	42,600	87,600	.....
May 5...	14,700	.....	14,700	15,000	29,700	33,300	— 21,000	54,300	24.600	69,600	.....
May 6...	15,600	.....	15,600	15,000	30,600	35.100	— 22.500	57,600	27,000	72,000	.....
May 7...	10,800	.....	10,800	15,000	25,800	36,900	— 9,300	46,200	20,400	65,400	.....
May 8...	7.800	.....	7,800	15.000	22,800	33,300	+ 2,700	30,600	7,800	52,800	.....
May 9...	6,300	.....	6,300	15,000	21,300	36.000	" 14,700	21,300	.....	39,000	.....
May 10...	5,100	.....	5,100	15,000	20,100	38.700	" 18,600	20,100	.....	31.800	
May 11...	4,500	.....	4,500	15,000	19,500	32,400	" 12.900	19.500	.....	25,300	
May 12...	5,100	11,917	17,017	15.000	32.017	35,100	" 3,083	32,017	.....	27,000	
May 13...	4,500	.....	4,500	15.000	19,500	32.400	" 12,900	19,500		34,500	
May 14...	4,500	.....	4.500	15,000	19.500	30.600	" 11,100	19,500		30,600	
May 15...	3,600	.....	3,600	15,000	18.600	30.600	" 12,000	18.600		30,600	
May 16...	3,000	.....	3 000	15.000	18,000	36,000	" 18,000	18,000		33.600	
May 17...	2,700	.....	2,700	15,000	17,700	40,500	" 22.800	17.700		37,500	
May 18...	2,100	.....	2,100	15 000	17,100	36 900	" 19,800	17,100		35,200	
May 19...	1.800	.....	1,800	15.000	16 800	39,600	" 22.800	16,800		31.800	
May 20...	1,500	.....	1,500	15,000	16.500	39 600	" 23,100	16.500		25,900	
May 21...	1.200	.....	1,200	15,000	16.200	38.700	" 22,500	16,200		21.700	
May 22...	1,200	13,129	14,329	15.000	29.329	40,500	" 11,171	29,329		16,300	
May 23. .	1.500	12,972	14,472	15.000	29,472	41,400	" 11,928	29,472		14.700	
May 24. ..	4,500	.....	4,500	15,000	19.500	35,100	" 15,600	19,500		14.700	
May 25...	3.300	.....	3,300	15.000	18 300	39,600	" 21,300	18,300		14.700	
May 26...	2.400	.....	2,400	15,000	17,400	39.600	" 22.200	17,400		13,800	
May 27...	2,400	.....	2.400	15 000	17,400	39 600	" 22 200	17,400		12,000	
May 28...	1.800	.....	1,800	15,000	16.800	36,000	" 19.200	16.800		11,400	
May 29...	1,800	12 972	14,772	15,000	29,772	40 500	" 10,728	29,772		10,200	
May 30 ..	1.200	13,284	14,484	15 000	29.484	36,900	" 7.416	29,484		8,400	
May 31...	1,200	13,639	14,839	15.000	29,839	38,700	" 8,861	29,839		7,200	
June 1..	1,800	7,609	9,409	15,000	24,409	38,700	" 14 291	24.409		7.200	
June 2..	3,300	13,129	16.429	15,000	31,429	41,400	" 9,971	31,429		7,800	
June 3..	6,000	13 284	19.284	15,000	34,284	39,600	" 5.316	34,284		19 800	
June 4..	7,200	13.058	20,258	15.000	35,258	42.300	" 7,042	35,258		25.800	
June 5..	7,200	13.284	21,084	15 000	36,084	42.300	" 1,116	41,184	5,100	50,100	
June 6..	6.000	13 438	19,438	15.000	34.438	43 200	" 8.762	34 438		30,100	
June 7..	4,200	13,438	17 638	15.000	32,638	43,200	" 10.562	32,638		24.900	
June 8..	3,600	13,438	17,038	15 000	32,038	40 500	" 8,462	32 038		18.000	
June 9..	3,000	13,284	16,284	15,000	31,284	38,700	" 7,416	31 284		15,100	
June 10..	20.700	13,438	34,138	15 000	49.138	42,300	— 6,838	49.138		19.500	
June 11..	58.800	13 589	72,389	15,000	87,389	37.800	— 147,089	184,889	97,500	142,500	
June 12..	32.400	.....	32,400	15,000	47 400	39.600	— 112,200	151,800	104,400	149,400	
June 13..	19,800	.....	19,80 0	15.000	34,800	40.500	— 54 600	95,100	57,300	102,300	
June 14..	13,200	.....	13.200	15,000	28,200	37.800	— 13,200	51.000	22,800	67,800	
June 15..	8.700	13,129	21,829	15,000	36 829	39,600	— 1,429	41,029	4,200	49,200	
June 16..	6 600	13,284	19,884	15,000	34,884	37,800	+ 2,916	34,884	.....	38,200	
June 17..	5,700	13,438	19,138	15,000	34,138	39 600	" 5,462	34.138	.....	31,800	.....
June 18..	5,100	13,284	18,384	15 000	33 384	39.600	" 6.215	33.384	.....	25,100	.....
June 19..	5,100	13 438	18,538	15.000	33,538	37,800	" 4,262	33.538	.....	19.500	.....
June 20..	4 500	13,284	17,784	15,000	32,784	35.100	" 2,316	32,784	.....	19 500	.....
June 21..	16,800	13,284	30.084	15,000	45,084	37,800	— 44,484	82.284	37.200	82.200	.....
June 22..	12,000	13,129	25.129	15,000	40,129	38.700	— 84 829	123,529	43,400	128.400	.....
June 23	7,800	.....	7.800	15 000	22,800	38.700	— 30 000	68,700	45.900	90,900	....
June 24	6.300	.....	6.300	15.000	21.300	37.800	— 8.700	29.100	7.800	52 800	.....

Over estimated, probably 20 per cent

Under estimated the same amount that the Ogden Ditch is over-estimated.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned to Saturday, July 1, 1893, at 11 o'clock A. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

ADJOURNED MEETING.

The adjourned session of the one hundred and seventy-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Saturday, July 1, 1893, at 11 o'clock A. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6) members, were present.

VOUCHERS

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, June, 1893	$ 2,199 18	
Eng. Dept., Div. No. 1, (20 days ending June 30, 1893)	2,755 79	
Eng. Dept., Div. No. 2, (20 days ending June 30, 1893)	166 67	
Eng. Dept., Div. No. 3, (20 days ending June 30, 1893)	1,627 60	
Eng. Dept., Div. No. 4, (20 days ending June 30, 1893)	143 34	
Eng. Dept., discharged men's roll, June, 1893	452 00	
		$ 7,344 58
Clerical Dept., Clerk's roll, June, 1893	$ 566 66	
Clerical Dept., office, (20 days ending June 30, 1893)	110 00	
		$ 676 66
Treasury Dept., Treasurer's roll, June, 1893		166 67
Law Dept., Attorney's roll, June, 1893	$1,608 33	
Law Dept., Joliet roll, June, 1893	333 33	
Law Dept., office roll, (20 days ending June 30, 1893)	99 66	
		$ 2,041 32
General Account, Sanitary Inspector's roll, June 6, 1893	$ 200 00	
General Account, Trustee's roll, June, 1893	2,333 33	
		$ 2,533 33
Grand total		$12,762 56

Mr. Eckhart seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

OGDEN DITCH INFLOW.

The Clerk presented a further report from the Chief Engineer, accompanied by one enclosure, with reference to the condition of the Chicago River and the Ogden Ditch inflow; and the report and enclosure were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report and enclosure be ordered printed and placed on file.

The following is

THE REPORT WITH ENCLOSURE:

"CHICAGO, July 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Owing to the very brief period within which the materials for my report on the causes affecting the condition of the Chicago River submitted on the 28th ult. had to be collected and prepared, some salient points were passed over without remark. I therefore requested Mr. Johnson to follow out the lines indicated in his communication already submitted and develope the influence which the North Branch has upon the condition of the main river and the South Branch under fluctuations of flow induced by flood waters and Fullerton avenue pumpage. His letter to me is so clear upon these points that I feel sure you will be glad to have it go into the record along with the balance of the facts and I therefore submit it herewith.

Yours very respectfully,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure.)

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—There is an object lesson in the existing state of the Chicago River in the central part of the city, involving the polluting power of the North Branch, the nature of which seems to be worthy of study.

A discussion submitted to you on the 28th inst., closed with the conclusion: "That (1st) the small pumpage at Bridgeport has permitted an accumulation of filth by sedimentation, and (2nd) that owing to the moderate nature of recent floods there has been nothing to cleanse the river."

This conclusion, while correct, is general. A more detailed examination reveals at least one interesting fact, in that the main source of the filth in the central part of the city is found in the flow from the North Branch. The flow of the North Branch is always southward, and when it reaches the head of the main river it goes either into the South Branch or the main river, or partly into both. In dry weather, with the Bridgeport pumps in even partial operation, it goes into the South Branch mingled with more or less clear lake water from Lake Michigan by way of the main river, with the result that the main river is much less offensive than at present. In times of moderate rains, its flow goes partly into the South Branch and partly into the main river toward the lake, with the result that the main river becomes very offensive, as at present, and the South Branch more offensive than in dry weather. In times of greater floods the flow in the South Branch turns toward the lake, joining with that of the North Branch at its junction with the main river, with the result that all of the flow goes into the lake. At such times, while offensive enough, the condition in the river is not as bad as at present, there being a large proportion of storm water mingled with the sewage. Furthermore, the river receives a cleaning, though at the unfortunate expense of polluting the lake.

This order of events being understood, it must be clear that it is the sewage of the North Branch that is at present mainly responsible for the offensive state of the river in the central part of the city, especially the condition of the main river. There have been but very few days that the Bridgeport pumps have not taken care of the flow from the Ogden ditch and the South Fork combined. Consequently the flow in the South Branch, though moderate at all times, has been mainly to the south, except perhaps at its north end. It must be noted that sewers empty into the South Branch from both sides frequently. If, in connection with other flows, the Bridgeport pumps can take care of only a part of the flow into the South Branch, then the flow in the south end of the South Branch will be toward Bridgeport, and the flow in the north end toward the main river. Furthermore, the flow will be with an inappreciable velocity, and sedimentation will exist under favorable circumstances. There is a greater or less approximation to this state of affairs as the pumpage at Bridgeport is diminished and the weather rainy. The situation is more forcibly described when it is stated that, with no sewage coming from the North Branch, that is, with only the water from the upper North Branch and Fullerton avenue, then under existing circumstances the main river would be in comparatively good condition and the South Branch certainly better.

The population draining into the North Branch was, in 1886, 222,500, and in 1892 417,500

It has been a usual thing, especially in in storm times, when the rivers looked bad, to attribute the trouble to the condition of the South Fork, into which the Stock Yards and neighboring packing houses drain. It is true the South Fork is more highly polluted than any other portion of the river. But the Bridgeport pumping station is so located that if the pumps are in operation at all they intercept the flow from the Fork. It is therefore, only in times of extreme floods that any South Fork filth gets to the central part of the city, for the reason that it is only in times of extreme floods that the pumps cannot be operated.

The important significance of the existing state of the river is, that the North Branch forms an important factor in the city's sanitary affairs, and attention is directed toward a closer study, not only of the sewage entering it, but also of the floods originating at its head waters.

The present state of affairs suggests a utility that may be accomplished by augmenting the pumping capacity at Bridgeport, in a manner quite distinct and forcible. If 80,000 cubic feet per minute had been pumped at Bridgeport recently the effect would have been to draw in through the main river 40,000 cubic feet per minute more than did come in, which varied from less than nothing to not more than 10,000 cubic feet per

minute. The result would doubtless have been a condition not more than ordinarily offensive in the down town districts, particularly in the main river, and possibly better. There would have been at least four times as much clear water mingled with the sewage. Speaking generally and having the dry weather periods in view, the effluent from the North Branch would have been mingled with nearly twice its volume of clear water, whereas it was not mingled with, at most, more than one-third (⅓) its volume.

From another point of view, the river would have been in a very much better state, though still offensive, in those parts where thousands of people are daily congregated and where, at its very best, the air would be bad enough anyhow.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Cooley, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JULY 5, 1893.

OFFICIAL RECORD.

Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, July 5, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8), and subsequently Mr. Boldenweck, making a total of nine (9) members, were present.

MINUTES.

The minutes of the regular meeting, held June 28, 1893, and of the adjourned session of the same meeting, held July 1, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Cooley.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (Sec. 1, June 28, '93)	$ 2,284 77
Agnew & Co. (Sec. 6, July 1, '93)	1,323 00
Agnew & Co. (Sec. 7, July 1, '93)	1,324 84
Agnew & Co. (Sec. 8, July 1, '93)	3,214 01
Agnew & Co. (Sec. 9, July 1, '93)	1,265 00
E. D. Smith & Co. (Sec. 10, July 1, '93)	6,608 00

Mason, Hoge & Co. (Sec. 11, July 1, '93)..	$ 7,031 46	
Mason. Hoge & Co. (Sec. 12, July 1, '93).	7,697 15	
Mason, Hoge & Co. (Sec. 13, July 1, '93) .	15,435 87	
McCormick Const. Co. (Sec. 14, July 1, '93)	3,696 00	
Western Dredging and Impt. Co. (Sec. C., June 30, '93).....	529 89	
Streeter & Kenefick, (Sec. E., June 30, '93)	12,709 81	
Ricker, Lee & Co. (Sec. F., June 30, '93)	2,369 06	
		$65,488 86

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery).....	$ 4 42	
Trevor Spring Water Co. (ice).....	3 00	
Waukesha Hygeia Mineral Springs Co. (water).....	5 00	
Warner's Towel Supply (toweling).....	1 50	
Henry Gebhardt, (vault fittings).....	34 00	
		$47 92

LAW DEPARTMENT.

John P. Wilson, (legal services).....	$833 34	
T. A. Moran, (legal services).....	500 00	
		$1,333 34

GENERAL ACCOUNT.

Henry Gebhardt, (hat-rack, etc).....	$ 5 73	
Wm. Martin, (expense, traveling).....	30 00	
The Chicago Deposit Vault Co. (rent, April to June, 1893).....	2.035 00	
The Chicago Deposit Vault Co. (janitor service, June, 1893).....	80 00	
		$2,150 73
Grand total.....		$69,020 85

Mr. Russell, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Excused and not voting—Mr. Boldenweck—one (1). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 458, Law Department, (book case, etc.)..... $18 90

Mr. Eckhart, seconded by Mr. Russell, moved that Requisition No. 458, for the Law Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 458, for the Law Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending July 1, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending July 1, 1893, as the same have been reported to me:

Engineering Department.....	85
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	8
Total employes.....	97

Respectfully submitted.

(Signed) THOS. F. JUDGE,
Clerk."

NOMINATION OF ASSISTANT ENGINEER.

The Clerk presented a report from the Chief Engineer, transmitting the name of A. C. Schrader, nominated as Assistant Engineer, the said nomination being concurred in by the Superintendent of Construction; and the report was read.

Mr. Kelly, seconded by Mr. Cooley,

moved that the report be adopted, ordered printed, and placed on file, and the recommendation made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore. Kelly, Prendergast and Wenter—eight (8). Excused and not voting—Mr. Russell—one (1). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendation made therein concurred in.

The following is

THE REPORT:

"CHICAGO, June 30, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby recommend to your Honorable Body the promotion of Mr. A. C. Schrader from the grade of Sub-Assistant Engineer to the vacancy now existing in the grade of Assistant Engineer.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

I concur in the above recommendation.

(Signed) U. W. WESTON,
Supt. of Construction."

BOND OF CHIEF ENGINEER.

The Clerk presented the bond of Isham Randolph, as Chief Engineer, in the sum of twenty thousand ($20,000.00) dollars, with Eugene S. Pike and Andrew Crawford as sureties.

Mr. Eckhart, seconded by Mr. Cooley, moved that the bond of Isham Randolph, as Chief Engineer, be accepted, approved and ordered placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the bond of Isham Randolph, as Chief Engineer, accepted, approved and ordered placed on file.

BOND OF SUPERINTENDENT OF CONSTRUCTION.

The Clerk presented the bond of Uri W. Weston, as Superintendent of Construction, in the sum of ten thousand ($10,000.00) dollars, with J. S. Meckling, Harry Hargis and Frederick M. Kantzler as sureties.

Mr. Russell, seconded by Mr. Kelly, moved that the bond of Uri W. Weston, as Superintendent of Construction, be accepted, approved and ordered placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the bond of Uri W. Weston, as Superintendent of Construction, accepted, approved and ordered placed on file.

MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of June, 1893; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be ordered printed and referred to the Committee on Health and Public Order.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, July 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—During the month of June, nothwithstanding the latter portion of it was quite warm, there has been no marked change taken place in the unusually healthy condition that has prevailed in the various camps up to the present time. There has been a number of mild cases in the hospital, but only one of a fatal character, attributable to the hot weather. This was a case of sunstroke occurring in the Harlev Camp, which was brought to the hospital in a dying condition, and survived but a short time.

This case has brought up the question of making some provision for the burial of the laborers who sicken and die while engaged at work on the Drainage Channel. The majority of workmen are wanderers that, in case of death, would have no friends to claim the remains.

The town authorities are not required to do anything in such cases, as the men are not paupers and a charge on the town. Consequently there is in my opinion but one thing to do, and that is for the Board of Trustees of the Sanitary District to make application to the Town Board of Willow Springs to set apart a small space in their cemetery for these particular cases. A proper record of all such deaths will be kept at the hospital. The graves marked, so that if any question of identification should ever arise in the future, there would be no difficulty whatever in establishing the fact, should friends or relatives of the parties wish to do so. The expense for the amount of space required would not be very much, and I have no doubt that this Board would willingly assume this obligation.

Most respectfully submitted,

(Signed) WM. MARTIN, M. D.

Sanitary Inspector."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of June, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report. ...		$2,620,196.97
Received from Law Department, Land Account, (Nagle land deposit returned) ..	$310 00	
Received from Law Department, Land Account, (ice plant engine and boiler sold)	300 00	
Received from County Treasurer, Tax Account.....	150,000 00	
Received from Engineering Department, Emergency Fund.....	1,000 00	
Received from McArthur Bros., rent.....	150 00	
Received from National Bank of Illinois, interest for June.....	1,031 43	
Received from Metropolitan National Bank, interest for June.....	1,033 50	
Received from Ft. Dearborn National Bank, interest for June.....	1,029 65	
Received from Chicago National Bank, interest for June.....	$ 1,080 01	
Received from American Trust and Savings Bank, interest for June	1,322 79	
		$ 157,257 38
Total cash received for month...		$2,777,454 35
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 724 89	
Treasury Department	166 67	
Engineering Departm't.	10,894 82	
Engineering—Construction—Department	76,522 87	
Law Department ...	6,506 36	
Law Department—Land Account ...	81,943 12	
General Account .	2,766 80	
		$179,525 53
Balance this date, in banks as per schedule endorsed hereon ...		$2,597,928 82

(Signed) MELVILLE E. STONE,

Treasurer.

Chicago, July 3, 1893."

SCHEDULE:

Fort Dearborn National Bank.....	$ 501,122 08
Chicago National Bank.....	525,638 08
Metropolitan National Bank.....	503,859 95
National Bank of Illinois.....	501,962 61
American Trust and Savings Bank.	565,346 10
Total..	$2,597,928 82

REPORT ON JUDICIAL DECISION ON EIGHT-HOUR DAY.

Mr. Kelly, Chairman, presented a majority report from the Committee on Judiciary, with reference to and accompanied by the report from the Attorney, enclosing an opinion from Hon. Thomas A. Moran, concerning the steps necessary to obtain a judicial decision with reference to the enforcement of the eight-hour clause of the Sanitary District Law, which report was presented and referred to that Committee at the meeting held June 21, 1893, (page 1287 of the Proceedings); and the report was read.

Mr. Altpeter presented a minority report, directing that the Committee on Judiciary employ two Attorneys, to be recommended by the Trades and Labor Assembly and the Central Labor Union, of Chicago, to test and enforce the provisions of the eight-hour clause as provided in the report; and the report was read.

Mr. Kelly, seconded by Mr. Bolden-

weck, moved that the majority report be adopted, ordered printed and with accompanying report placed on file, and the recommendations made therein concurred in.

Mr. Altpeter, seconded by Mr. Prendergast, moved as a substitute that the minority report be adopted, ordered printed and placed on file. and the recommendations made therein concurred in.

On roll-call, on motion of Mr. Altpeter on the minority report, the vote stood: Yeas—Messrs. Altpeter and Prendergast—two (2). Nays—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7).

Upon which result the President declared the motion lost.

On roll-call on the original motion of Mr. Kelly, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—Mr. Prendergast—one (1).

Upon which result the President declared the motion carried, the majority report adopted, ordered printed, and with accompanying report placed on file, and the recommendations made therein concurred in.

The following is

THE MAJORITY REPORT:

"CHICAGO, July 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Your Committee on Judiciary have considered the report of the Attorney enclosing opinion of Judge Thomas A. Moran on the enforcement of the eight-hour clause of the Sanitary District law and the securing of a judicial decision on the same.

After conferring with Judge Moran, together with the Attorney of the Board, they are of the opinion that the Board of Trustees have fully complied with the provisions of the law in letting contracts, and that it would be useless for the Board to commence legal proceedings.

They therefore recommend that the opinions of Judge Moran and the Attorney and General Counsel of the District be concurred in, and that the Attorney be instructed to take no further steps to obtain a judicial decision on this question.

Respectfully submitted,

(Signed) THOMAS KELLY,
Chairman.
WM. BOLDENWECK.
Committee on Judiciary."

The following is

THE MINORITY REPORT:

"CHICAGO, July 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit the following order as a minority report, and recommend its adoption:

Ordered, That the Committee on Judiciary employ two (2) attorneys to be recommended by the Trades and Labor Assembly and the Central Labor Union of Chicago to institute and carry to the Supreme Court a case to test and enforce the provisions of the eight-hour clause of the Sanitary District Law, at an expense not to exceed five hundred ($500) dollars.

(Signed) JOHN J. ALTPETER,
Of Committee on Judiciary."

REPORT ON COMMUNICATION FROM "CARPENTERS' COUNCIL OF CHICAGO."

Mr. Kelly, Chairman, presented a report from the Committee on Judiciary, with reference to and accompanied by the communication from the "United Carpenter's Council of Chicago," concerning a judicial decision with reference to the enforcement of the eight-hour clause of the Sanitary District Law, which communication was presented and referred to that Committee at the meeting held June 21, 1893, (page 1287 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be not received.

On roll-call the vote stood: Yeas—Messrs. Altpeter and Cooley—two (2). Nays—Messrs. Boldenweck, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—seven (7).

Upon which result the President declared the lost.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, and

the recommendations made therein concurred in.

After a general discussion, Mr. Eckhart, seconded by Mr. Boldenweck, moved the previous question.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—Mr. Prendergast—one (1).

Upon which result, the President declared the motion carried, and the previous question ordered.

On roll-call, on the motion of Mr. Kelly, the vote stood: Yeas—Messrs. Boldenweck, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Messrs. Altpeter and Cooley—two (2).

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with accompanying communication, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, July 5, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Judiciary have met representatives of the United Carpenters' Council of Chicago, in conference with Judge Moran and the Attorney of the District, on the subject of the enforcement of the eight-hour clause of the Sanitary District Law, and after a full discussion it was understood that the recognized representatives of labor organizations should prepare and submit a clause such as in their opinion should be inserted in future contracts of the District (covering the distance between Summit and Bridgeport) providing for an eight-hour day and the enforcement thereof.

While your Committee believe that the Board has fully complied with the law in the letting of its contracts, they recommend that your Honorable Body agree to receive and consider such a clause when so submitted.

Respectfully submitted,

(Signed) THOS. KELLY,
Chairman.
WM. BOLDENWECK,
Committee on Judiciary."

CHANGES IN RIVER DIVERSION.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering, accompanied by a form of agreement, with reference to the changes in the river diversion from the west line of Section 21, in Cook County, to near the center of Section 15, in DuPage County, as recommended in the report of the Chief Engineer, presented and referred to that Committee at the meeting held June 21, 1893, (page 1286 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with enclosure, placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with enclosure, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, July 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the diversion of the river, as recommended by the Chief Engineer in a communication to this Board on June 21, (page 1286 of the Proceedings) and referred to this Committee, your Committee reports as follows:

The proposed river diversion is in Sections 6 and 7 of the contracts, from a point opposite Sag to the line of Du Page County and Lemont Township, and was left for later determination in the order of June 29, 1892, (page 607) said order being made part of the contracts. The execution of this work seems desirable as an improvement on the present project and as facilitating the spoiling of material from the Main Channel and as avoiding the delay on account of the agreement in regard to the quarry of the Western Stone Company in Section 7.

In consideration of this work, Agnew & Co. agrees to release any claim for damages and unearned profits on account of said agreement with the West-

ern Stone Co., and also to construct the levee adjacent to the river on the east to the standard height of eleven feet above the established grade of the river diversion through the rock, or said grade prolonged, throughout all of their Sections from 5 to 9 inclusive, said levee to conform to the general alignment and treatment already prescribed for the rock sections.

The agreement with Agnew & Co. is transmitted herewith for the approval of the Board, and it is recommended that the President and the Clerk be directed to execute the same on the part of the Sanitary District.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
THOMAS KELLY,
JOHN J. ALTPETER,
W. H. RUSSELL,
WM. BOLDENWECK,
Committee on Engineering."

(Enclosing agreement.)

APPOINTMENT OF MARSHAL OF THE DISTRICT.

Mr. Gilmore, Chairman, presented a majority report from the Committee on Health and Public Order, recommending that Edward Williams be elected as Marshal of the Sanitary District at a salary of three thousand ($3,000.00) dollars per annum; and the report was read.

Mr. Gilmore, seconded by Mr. Kelly, moved that the majority report be adopted, ordered printed and placed on file, and the recommendation made therein concurred in.

Mr. Boldenweck, of the Committee on Health and Public Order, moved, as a minority report, to amend the report presented, by substituting the name of "Frederick Ebersold" in place of "Edward Williams," and "twenty-five hundred ($2,500.00) dollars," in place of "three thousand ($3,000.00) dollars."

Mr. Boldenweck, seconded by Mr. Eckhart, moved the adoption of the minority report.

On roll-call the vote stood: Yeas—Messrs. Boldenweck and Eckhart—two (2). Nays—Messrs. Altpeter, Cooley, Gilmore, Kelly, Prendergast, Russell and Wenter—seven (7).

Upon which result the President declared the motion lost.

On roll-call on the original motion of Mr. Gilmore, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendation made therein concurred in, and Edward Williams duly elected as Marshal of the Sanitary District at a salary of three thousand ($3,000.00) dollars per annum.

The following is

THE REPORT:

"CHICAGO, July 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Your Committee on Health and Public Order respectfully submit the following recommendation:

That Mr. Edward Williams be elected as Marshal of the Sanitary District, at a salary of three thousand ($3,000) dollars per annum.

Respectfully submitted,

(Signed) A. P. GILMORE,
Chairman.
JOHN J. ALTPETER.
Committee on Health and Public Order."

PROJECT FOR ROAD ALONG THE MAIN CHANNEL.

Mr. Cooley, presented an order, directing the Chief Engineer to submit a project for a road along the Main Channel, as proposed in his report, presented at the meeting held June 21, 1893, (page 1286 of the Proceedings); and the order was read.

Mr. Cooley, seconded by Mr. Russell, moved the adoption of the order.

The motion prevailed unanimously, the order was adopted, and the Chief Engineer was instructed in accordance with the same.

The following is

THE ORDER:

"*Ordered,* That the Chief Engineer submit a project for a road along the works of the District, as suggested in his communication of June 21, 1893, (page 1286 of the Proceedings) said road to make use of the tow-path of the canal so

far as available, or such other route shall be followed as may in the judgment of the Engineer be most expedient."

RULES FOR DEPARTMENT OF POLICE.

Mr. Eckhart, seconded by Mr. Kelly, moved that the matter of preparing and submitting the rules for the government of the Department of Police be referred to the Joint Committee on Rules and Health and Public Order, together with the Attorney and the Marshal.

The motion prevailed unanimously, and the matter of preparing and submitting the rules for the government of the Department of Police was so referred.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JULY 12, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-eighth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, July 12, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7), and subsequently Mr. Cooley, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held July 5, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—		
E. D. Smith & Co. (Sec. D, June 30, '93).....		2,040 55

LAW DEPARTMENT.

Chicago Telephone Co. (telephone to Oct. 1, '93).....	31 25	
U. S. Desk and Office Fitting Co. (book case).....	18 00	
O. N. Carter, (expense)	233 26	
		$ 282 51

GENERAL ACCOUNT.

Chicago Telephone Co.

(telephone to Oct. 1, '93)	$ 31,25	
John F. Higgins, (printing proceedings, June, 1893)	136 31	
		$167 56
Grand total		$2,490 62

Mr. Boldenweck, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 351, Engineering Department, (sundries) $6 70

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisition No. 351, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—None

Upon which result the President declared the motion carried, and Requisition No. 351, for the Engineering Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending July 8, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending July 8, 1893, as the same have been reported to me:

Engineering Department	84
Clerical Department	3
Treasury Department	1
Law Department	7
Total employes	95

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of June, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of June, 1893, was $110.29, divided as follows:

Salaries	$ 78.00
Stationery	10.25
General expenses	22.04
Total	$110.29

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $850.

The total amount expended and charged to the General Account during the month of June, 1893, was $279.19, divided as follows:

Advertising	$ 12.60
Printing and Stationery	115.34
Janitor Service	80.00
General expenses	71.25
Total	$ 279.19

There are no outstanding liabilities against the General Account, and the expenses for the present month will be about $5,000.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the Engineering Department for the month of June, 1893.

The report was read and, by unanimous consent, was ordered printed, and, with the accompanying classified statement, placed on file.

The following is

THE REPORT:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of June, including a table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of June were as follows:

Contractors estimates	$87,574.99
Pay rolls	9,867.53
Material, etc	2,094.92
Total	$99,537.44

I estimate the expense for July will be $130,000.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, July 12, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR — I herewith submit the following report for the month of June:

Pay rolls	$ 5,734.47
Contractor's estimates	87,574.99
Total	$93,309.46

Yours respectfully,

(Signed) D. C. DUNLAP,
Assistant Superintendent of Construction.

Amount of work done to July 1, 1893:

SECTIONS.	CUBIC YARDS. Glacial Drift.	Solid Rock.
B, River Diversion	2,229	.....
C, River Diversion	8,961	.....
D, Main Channel	16,546	.....
E, Main Channel	98,340	.....
F, River Levee	32,420	.....
1, Main Channel	6,718	.....
1, River Diversion	3,953	.....
2, Main Channel	27,600	.....
2, River Diversion	29,500	.....
3, Main Channel	66,800	.....
4, Main Channel	44,200	.....
5, Main Channel	48,000	.....
6, Main Channel	50,400	.....
7, Main Channel	19,700	5,260
7, River Diversion	11,800	8,990
8, Main Channel	7,500	6,120
8, River Diversion	48,900	51,120
9, Main Channel	11,000	18,240
9, River Diversion	37,700	4,690
10, Main Channel	20,200	28,320
10, River Diversion	27,400	38,240
11, Main Channel	32,600	71,880
11, River Diversion	2,600	4,810
12, Main Channel	18,900	108,000
13, Main Channel	32,822	145,700
14, Main Channel	25,400	40,500
Totals	732,189	531,820

Total amount of material moved to July 1, 1893:

	Cubic Yards.
Main Channel, Glacial Drift	526,726
Main Channel, Solid Rock	423,970
River Diversion, Glacial Drift	205,463
River Diversion, Solid Rock	107,850
Total amount of estimates paid previous to July 1, '93	$460,596.23

CONDITION OF WORK JULY 1, 1893.

Section.	Contractor.	Total amount done July 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done July 1, 1893.	Amount short as per contract July 1, 1893.
1	Alfred Harlev	$ 2,881	$ 20,867	$ 78,251	$ 75,370
2	McArthur Bros	15,988	15,611	78,056	62,068
3	McArthur Bros	18,036	18,983	132,881	114,845
4	McArthur Bros	11,934	15,780	94,682	82,748
5	Agnew & Co	12,960	12,476	68,618	55,658
6	Agnew & Co	13,608	14,233	78,283	64,675
7	Agnew & Co	18,644	17,816	97,989	79,325
8	Agnew & Co	57,451	22,760	159,321	101,870
9	Agnew & Co	30,295	19,348	135,436	105,141
10	E. D. Smith & Co	67,148	23,291	163,039	97,891
11	Mason, Hoge & Co	71,385	19,395	135,767	64,382
12	Mason, Hoge & Co	91,307	18,781	131,469	40,162
13	Mason, Hoge & Co	117,444	18,461	129,229	11,785
14	McCormick Constr'n Co.	34,645	19,846	138,924	104,279
	Totals	$ 561,726		$1,621,945	$1,060,199

Total amount required to be done July 1st, 1893.....$1,621,945
Total amount done July 1st, 1893..... 561,726

Amount short as per contract July 1st, 1893.....$1,060 219

FORCE REPORT—DAILY AVERAGE JUNE, 1893.

Section.	Men.	Teams.	Steam Shovels.	Locomotives.	Steam and Air Pumps.	Steam Scrapers.	Channelers.	Steam and Air Drills.	Steam and Air Hoists.	Cableways.	Cantilever Derricks.	Air Compressors.
Section A	4											
Section B	25	6										
Section C	34	.8	1		1							
Section D	99	.6	1									
Section E	47	88			1							
Section F	38	28										
Section 1	80	9										
Section 2	No	force										
Section 3	9	.2	.1	.1	.3				.1			
Section 4	9											
Section 5	12	3.0	.05	.05	.3				.05			
Section 6	13	.1			.1	2						
Section 7	63	1			1.9		1.5	2.5	1			
Section 8	98	2.0			.6		.9	2.8	1.8			
Section 9	49	2			1.9		.8	1.9	.5			
Section 10	168	2			3.2		3.4	3.3	2.		.7	.8
Section 11	158	14			6.5		2.9	6.9	.7	.7		.9
Section 12	153	3			3		4.3	5.8	2.2			1.
Section 13	208	7			5		3.7	7.2	2.2			1.
Section 14	64	10			2		1.3	2.7	.8			
Totals	1331	176.7	2.15	.15	26.8	2	18.8	33.1	11.35	.7	.7	3.7

"CHICAGO, July 12, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of June was:

Plans pertaining to regulating works in vicinity of Lockport.

Reducing notes and making plat of survey extending from Desplaines River to forks of the North Branch.

The preparation of a set of "zymotic disease maps" for the Commissioner of Health of the City of Chicago.

Reduction of notes pertaining to Illinois river floods was again taken up and continued.

Maintenance and records of water gauges, including the establishment of a water gauge at Morris, Ills.

Copies of water gauge readings at Willow Springs and Summit were made for the Law Department.

Miscellaneous calculations were made for channels of various dimensions.

Some work was done with reference to the proposed change of grade of Main Channel.

An investigation was made with reference to present unusual pollution of the Chicago river, and the results made a subject of report.

Comparative high water profiles of Desplaines river for 1892 and 1893 were made.

Specifications for service boat were made.

The work pertaining to street line surveys adjacent to Chicago river was done.

Tabulations of water gauge readings were made for use of the Division of Construction.

The work for July will be a continuance of that of June, with the addition of such general and special surveys as may be ordered.

The expense for July will approximate two thousand ($2,000) dollars.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

"CHICAGO, July 12, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I herewith submit the report of Division 3 for the month of June, 1893:

One land survey party was engaged on the surveys of the right of way between Summit and Bridgeport up to the 10th of June, after which date an additional party from Division 1 was assigned to the work. As soon as the notes of the right of way surveys were received in the office, the preparation of plats to a large scale for the use of the land department was commenced.

Nearly all of the land corners between the range line near Summit and Western avenue have been located.

Good progress was made on the platting of the Sanitary District and Watershed maps, the work having been carried on through the month without any interruption.

The lettering of the street names on the Chicago River Survey maps was continued.

The force which was engaged on the topographical maps from Lake Michigan to Joliet the first part of the month, was transferred to work on the right of way plats the latter part of the month.

Work was also done in making the land descriptions and platting the location of the line of the Main Channel below Section 14, in tracing the profiles of the Main Channel and river diversions from Summit to Lockport, and in drawing miscellaneous maps for the law and engineering departments.

During the next month it is proposed to finish the land surveys and the right of way maps between Summit and Robey street, and to continue the platting of the several topographical maps.

Yours respectfully,

EDGAR WILLIAMS,

Second Assistant Chief Engineer."

(Enclosing classified statement.)

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of June, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 12, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit the

monthly report of the Law Department, for June, 1893. The total amount paid out is as follows:

Salaries.

Attorneys	$1,425 00	
Right of way force	416 66	
Office force	168 66	
		$2,010 32

Expenditures.

Right of way	$2,390 12	
Court costs	36 35	
Stationery	2 40	
Sundries	41 48	
		$2,470 35

Land Account.

Right of way (land)	$79,680 50	
Taxes	1,505 27	
		$81,185 77
Total		$85,666 44

Since the last report several pieces of land have been purchased on the right of way between Summit and Bridgeport, and negotiations are pending for other pieces. The surveys have been finished for a large part of the right of way east of Summit, and opinions as to title are being obtained as rapidly as possible.

It is hoped that the trial of the suit to obtain a crossing under the Santa Fe Railroad for the river diversion at Lemont will be begun this month; all arrangements are being made to that end. During the present month this department will give much of its time to looking after this suit, and to preparing for condemnation proceedings on the right of way east of Summit.

Respectfully submitted,

(Signed) ORRIN N. CARTER,

Attorney."

PURCHASE OF "WILSHIRE, GATES, DONNERSBERGER AND UNION SAFE DEPOSIT COMPANY LANDS."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from the estate of George Wilshire, deceased; William B. Gates, Joseph Donnersberger and the Union Safe Deposit Company, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of George Wilshire, deceased; William B. Gates, Joseph Donnersberger and the Union Safe Deposit Company, on the vouchers of the Attorney, for said right of way lands as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of George Wilshire, deceased; William B. Gates, Joseph Donnersberger and the Union Safe Deposit Company, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, July 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with George P. Wilshire and Alexander McDonald, executors of and trustees under the last will and testament of George Wilshire, deceased, for the purchase from them for the corporate purposes of this District, of the land hereinafter described for the sum of Forty-one thousand and one hundred dollars ($41,100.00).

From William B. Gates, for the purchase from him, for the corporate purposes of this District, of the land hereinafter described for the sum of thirty-two thousand dollars ($32,000).

From Joseph Donnersberger, for the purchase from him, for the corporate purposes of this District, of the land hereinafter described, for the sum of twenty-one thousand four hundred and forty-three and twenty one-hundredths dollars ($21,443.20).

From the Union Safe Deposit Company, for the purchase from it, for the corporate purposes of this District, of the land hereinafter described, for the sum of twenty-one thousand three hundred

and twenty-four and eighty one-hundredths dollars ($21,324.80).

Your Committee recommend that the Clerk of this District be directed to pay on the vouchers of the Attorney to said George P. Wilshire and Alexander McDonald, executors of and trustees under the last will and testament of George Wilshire, deceased, the sum of forty-one thousand and one hundred dollars ($41,100.00), in full payment for the following described land, to-wit:

That part of the east six hundred and thirteen (613) feet of the Northwest quarter (¼) of the Northwest quarter (¼) of Section thirty-six (36), Township thirty-nine (39) North, Range 13 East of the Third Principal Meridian, lying north of a line parallel with and sixty (60) feet northwesterly at right angles from the center line of the original right of way of the Atchison, Topeka and Santa Fe Railroad Company in Chicago, (said center line being a line parallel with and two hundred and sixty (260) feet northwesterly at right angles from the northwesterly reserve line of the Illinois and Michigan Canal).

To William B. Gates, the sum of thirty-two thousand dollars ($32,000), in full payment for the following described land, to-wit:

That part of the West half (½) of the Southwest quarter (¼) of Section thirty-five (35), Township thirty-nine (39) North of Range 13 East of the Third Principal Meridian, lying north of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company and south of a line drawn from a point in the west line of said section, one thousand and twenty-five and sixty one-hundredths (1,025.60) feet south of the West quarter (¼) corner of said section to a point in the east line of said West half (½) of said Southwest quarter (¼) four hundred and ninety-five and eighty-three one-hundredths (495.83) feet south of the east and west center line of said section, excepting that portion thereof known as Lot two (2) of the Superior Court Partition of said West half (½) of said Southwest quarter (¼).

To Joseph Donnersberger, the sum of twenty-one thousand four hundred and forty-three and twenty one-hundredths dollars ($21,443.20), in full payment for the following described land, to-wit:

That part of the West half (½) of the East half (½) of the Southwest quarter (¼) of Section thirty-five (35) Township thirty-nine (39) North of Range thirteen (13), East of the Third Principal Meridian, lying north of the northerly boundary line of the right of way of the Atchison, Topeka & Santa Fe Railroad Company in Chicago, and south of a line drawn from a point in the west line of said section, one thousand and twenty-five and sixty one-hundredths (1,025.60) feet south of the West quarter (¼) corner of said section to a point in the east line of the Northwest quarter (¼) of said section, thirty-three and ninety-four one-hundredths (33.94) feet north of the center of said section.

To the Union Safe Deposit Company, the sum of twenty-one thousand three hundred and twenty-four and eighty one-hundredths dollars ($21,324.80), in full payment for the following described land, to-wit:

All that part of the East half (½) of the East half (½) of the Southwest quarter (¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13) East of the Third Principal Meridian, lying west and north of the lands of the Atchison, Topeka & Santa Fe Railroad Company in Chicago, containing thirteen and three hundred and twenty-eight one-thousandths (13 328-1000) acres, more or less.

All of said land lying and being situate in the County of Cook, State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
JOHN J. ALTPETER,
L. E. COOLEY.
WM. BOLDENWECK,
W. H. RUSSELL,

Joint Committee on Finance and Engineering."

ACTION ON MCARTHUR CLAIM.

Mr. Kelly, for the Joint Committee on Engineering and Judiciary, presented a report and order, with reference to and accompanied by the report of the Chief Engineer, presented and referred to that Committee at the meeting held June 28, 1893, (page 1299 of the Proceedings), deciding the claim of McArthur Brothers for a re-classification of material excavated on Sections 2, 3 and 4 of the Main Channel of the District, as set forth in their communications of May 31 and June 12, 1893, (pages 1253 and 1280 of the

Proceedings); and the report and order were read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with enclosure, placed on file, the recommendations made therein concurred in, and the order passed.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6). Excused and not voting—Mr. Altpeter—one (1). Nays—Mr. Cooley—one (1).

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with enclosure, placed on file, the recommendations made therein concurred in, and the order passed.

The following is

THE REPORT, WITH ACCOMPANYING ORDER:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Judiciary, to whom was referred, on June 28, 1893, the communication of Isham Randolph, Chief Engineer, with reference to the claim of McArthur Brothers to have certain material excavated by them classified as "solid rock," beg leave to report:

That they have considered the subject matter and McArthur Brothers' claim at great length and at various times since the first communication of McArthur Brothers to the Board on this subject May 31 last.

Your Committee are of the opinion that the decision of the Chief Engineer on this subject should be accepted as final by this Board, and that the Chief Engineer should not be instructed or directed to change the classification of said material.

Your Committee recommend the adoption of the order hereto attached.

Respectfully submitted,

(Signed) W. H. RUSSELL,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Engineering and Judiciary."

"*Ordered*, That the Board of Trustees accept as final the decision of Isham Randolph, Chief Engineer of the District, upon the claim of McArthur Brothers to have certain material excavated by them classified as "solid rock" under their contracts with the District, and that the Board declines to instruct or direct said Engineer to change the classification of said material; and,

Ordered further, That the Clerk of the District be and he is hereby directed to serve a notice upon said McArthur Brothers that unless they resume work under each of their contracts within ten days they will be considered as having abandoned the work under their said contracts, and that the District will proceed to have said work completed as provided in said contracts and to charge the cost thereof to said McArthur Brothers in accordance with the provisions of their said contracts."

(Enclosure.)

ORDINANCE CREATING DEPARTMENT OF POLICE.

Mr. Russell, for the Joint Committee on Rules and Health and Public Order, presented a report, transmitting an ordinance, creating a Department of Police of the Sanitary District; and the report and ordinance were read.

Mr. Russell, seconded by Mr. Kelly, moved that the report and ordinance be adopted, ordered printed, and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report and ordinance adopted, ordered printed and placed on file.

The following is

THE REPORT WITH ACCOMPANYING ORDINANCE:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Rules and Health and Public Order, in conjunction with the Marshal and Attorney of the District, to whom was referred the question of the organization of a Police Force along the line of the Main Channel of the Sanitary District, have had the matter under consideration, and beg leave to submit herewith to the

Board an Ordinance creating such a Police Force, and recommend its passage by your Honorable Body.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Rules and Health and Public Order."

The following is the

ORDINANCE:

'Be it ordained by the Board of Trustees of the Sanitary District of Chicago:

SECTION 1. That there be and is hereby established a police force for the Sanitary District of Chicago, which shall consist of a marshal, and such number of sergeants and patrolmen as may from time to time be authorized by the Board of Trustees of said District.

SEC. 2. Said Marshal shall be appointed by the Board of Trustees, and shall hold his office at the pleasure of said Board.

He shall, before entering upon the duties of his office, enter into a bond to the Sanitary District of Chicago, in the sum of ten thousand ($10,000) dollars, with such sureties as the Board shall approve, conditioned for the faithful performance of the duties of his office.

He shall appoint all sergeants from members serving as patrolmen. He shall submit to the Board for its approval rules prescribing the physical and mental qualifications required of applicants for positions on the police force.

SEC. 3. Said Marshal is hereby authorized, in cases of emergency, to appoint special policemen, and such policemen shall have the same power and authority as the regular police force; provided, that such appointments shall in no case continue for more than one week unless same shall be confirmed by the Board.

He shall also have power, on the application of any citizen showing the necessity thereof, to appoint any additional number of special patrolmen of the police force to do duty at any fixed place within the limits within which police powers are conferred upon the District by statute, at the charge and expense of the citizen by whom the application is made, and shall keep a correct list of all persons so appointed and report same to the Board.

Such special patrolmen shall conform to and be subject to all rules and regulations governing the police force of the District and to such special rules and regulations as the Marshal may make concerning such special patrolmen. They shall possess all the powers, privileges and duties of the regular patrolmen of the District, at the places for which they were respectively appointed, and may be removed or discharged from service at any time by the Marshal without assigning any cause therefor.

SEC. 4. Said Marshal shall make and promulgate such orders, rules and regulations as he may deem necessary for the regulation, government and discipline of said force, and shall make suitable regulations under which the officers and men shall be required to wear any appropriate uniform and badge, by which at all time, the authority and relations of such officers and men on said force may be known as the exigency of their duties may require.

SEC. 5. Said Marshal shall have the power, in case of violation of any police rule, regulation or order, or other breach of discipline, to punish the offending party by reprimand, suspension without pay for a specified time, or by dismissal from the force.

SEC. 6. Said Marshal shall make monthly reports to the Board of Trustees, in writing, of the state of the police force with such suggestions from time to time as he may deem advisable for the improvement of the force, its discipline and government.

SEC. 7. The salary of the Marshal shall not exceed three thousand ($3,000) dollars per annum. The Marshal may appoint a First Sergeant who shall rereceive a salary not to exceed twelve hundred ($1,200) dollars per annum. whose duties shall be prescribed by the Marshal, and who shall be Acting Marshal when authorized by the Marshal and in his absence. The salaries of the sergeants shall not exceed the rate of one thousand ($1,000) dollars per annum. The salaries of the patrolmen shall not exceed seventy-five ($75.00) per month.

SEC. 8. The President and Clerk, together with the Marshal, shall constitute a Board to which all applications for positions on the police force shall be

referred, and under whose direction such examination shall be made as shall be prescribed under the rules adopted by the Board of Trustees. Applicants having passed a satisfactory examination shall be placed on a list of eligibles from which, only, appointments to the force shall be made."

FURTHER DECISION ON MC'ARTHUR CLAIM.

By unanimous consent the Clerk presented a report from the Chief Egineer, accompanied by a communication from McArthur Brothers, being a supplemental decision (in answer to the communication on their claim) with reference to a rock classification for material excavated on Sections 2, 3 and 4 of the Main Channel; and the report and enclosure were read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report with enclosure be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit a communication received from McArthur Brothers objecting to my decision on the classification of certain hard material encountered by them in the prosecution of their work of excavating for the Main Channel under their contract with this District.

I am unable to admit the validity of the arguments advanced by McArthur Brothers, and must adhere to my decision of the question at issue as submitted to your Honorable Board under date of June 26 last.

The specifications for solid rock, which form a part of the contract between this District and McArthur Brothers, define solid rock as follows: "Solid rock shall comprise all rock found in its original bed, even though it may be so loosened from the adjacent underlying rock that it can be removed without blasting." If the hard stratum overlying the lime rock, which is now under discussion, were rock at all, it would come within the terms of this agreed, arbitrary definition, but inasmuch as it is not a rock but rather a hard pan or indurated clay formation with imbedded gravel, it does not come within the solid rock classification.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

(Enclosure.)

"CHICAGO, July 10, 1893.

Mr. Isham Randolph, Chief Engineer, Sanitary District of Chicago:

DEAR SIR—Your favor of June 27th accompanied by a report to the Board of Trustees of the Sanitary District of Chicago, is duly received. We cannot concede that your report is correct, if it is to be concluded from the report, that the material in question is not "solid rock" as defined in our contract.

While under the clause in the specifications defining "glacial drift," you may be correct in your conclusion that this substance is "glacial drift," if it is admitted, that the lime rock in place, is the "bed rock," and if the "solid rock" definition is wholly ignored; yet in our opinion, it is improper to assume that the lime rock is the "bed rock."

The Century Dictionary defines "bed rock" as a mining term, and adds: "The term is beginning to be used elsewhere, to designate solid rock, lying under loose, detrital masses, such as sand and gravel." We find this "solid rock" in its original bed, overlying the lime rock, and is here, as we claimed in our letter of May 31st, the "bed rock." We claimed that the material in question should be classed as "solid rock" under the specifications of the contract, where it is defined as "All rock found in its original bed," which is broad enough in its term to include loose rock and shale.

You appear to have drawn an arbitrary line for the "bed rock," between the upper line of the Lime Rock and the material immediately overlying. "Solid Rock" in the contract is not defined as "lime rock," but it shall include *all rock* found in its original bed. We maintain that the material in question is "solid rock," well defined in the sense in which the definition for rock is geologically and commonly accepted; that it lies in its original bed, and is therefore "bed rock."

Overlying the Niagara Group, (of which the Joliet limestone, which you assume to be the "bed rock" is a member) come many formations of well defined

rock, commonly accepted and geologically considered as such, to-wit: Shales, which would be found to be more easily extracted than the material we have encountered, and yet one would not seek to penetrate through them down to the Niagara limestone to find his definition of "bed rock."

If it were true that this material could be classed under either definition in the specifications, then the determination of the one under which it should be placed, should be governed by equitable and commonly understood rules, and all material that requires rock methods for its economical removal, should be classed as "solid rock."

Webster defines "rock" as follows: "First, a large mass of stony material; the solid material of the earth's crust. Second (geologically), any natural deposit of stony material whether consolidated or not; thus including sand, earth or clay when in natural beds."

Your report is silent regarding the "solid rock" definition. In urging these suggestions, we do not admit the power of the Chief Engineer under our contract to arbitrarily classify "solid rock" as "glacial drift," nor to compel an acceptance by us of the price of "glacial drift work" for "solid rock work," but we address you in the hope of arriving at an amicable adjustment of this controversy. We respectfully urge that you give the Board a supplementary report, which shall more fully state your position, and whether or not the material in question is "solid rock," as described in the clause of our contract defining "solid rock."

Very respectfully yours,

(Signed) McARTHUR BROS."

COMMUNICATION FROM MC'ARTHUR BROTHERS.

The Clerk presented a communication from McArthur Brothers, asking an opportunity to address the full Board, with reference to their claim for a reclassification of material excavated on Sections 2, 3 and 4 of the Main Channel; and the communication was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, July 12, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We have been informed through the public press that the Joint Committee on Engineering and Judiciary were about to report to you unfavorably upon our request of May 31 for a rock classification of certain material encountered upon our work, and for a correction of certain estimates rendered upon said material, and referred to in our letter of June 10 to your Honorable Body, and to all the propositions made for the purpose of settlement under date of July 1, 1893, and we respectfully request an opportunity to state to the full Board our views upon the matter in question, and the reasons why we believe no arbitrary and peremptory action should be taken by this Board looking to an attempt to cancel our contract with the Board. We would be pleased to be now heard in the proper course of business before your Board.

Very respectfully yours,

(Signed) McARTHUR BROS.,

Contractors on Sections 2, 3 and 4 of the Main Drainage Channel."

(NOTE—Following a suggestion made during the meeting, after adjournment Mr. A. McArthur, representing McArthur Bros., addressed the members of the Board present, on the subject indicated in the communication.)

BOND OF MARSHAL OF POLICE FORCE.

The Clerk presented the bond of Edward Williams, as Marshal of the Police Force of the District, in the sum of ten thousand ($10,000) dollars, with George K. Williams and Joseph E. Bidwill as sureties.

Mr. Prendergast, seconded by Mr. Kelly, moved that the bond of Edward Williams as Marshal of the Police Force of the District be accepted, approved and ordered placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the bond of Edward Williams, as Marshal of the Police Force of the District, accepted, approved and ordered placed on file.

IMPROVEMENT OF SOUTH FORK.

Mr. Kelly presented an order directing

the Chief Engineer to recommend action for the immediate improvement of the present condition of the South Fork, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Russell, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer instructed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, The South Fork of the South Branch of the Chicago river is a serious menace to the health of the city and should receive the earliest relief practicable, therefore be it

Ordered, That the Chief Engineer take under advisement at an early day plans for the improvement of the condition of the South Fork, in harmony with the general plans for the works of the District, and that meanwhile he recommend any action which may be properly taken for the immediate improvement of the present condition."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO,

JULY 19 AND 21, 1893.

OFFICIAL RECORD.

Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and seventy-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, July 19, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7), and subsequently Mr. Prendergast, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held July 12, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, (half month, ending July 15, 1893).....	2,089 40	
Eng. Dept., Div. No. 2, (half month, ending July 15, 1893).....	436 70	
Eng. Dept., Div. No. 3, (half month, ending July 15, 1893).....	859 05	
Eng. Dept., Div. No. 4, (half month, ending July 15, 1893).....	107 50	
		$ 3,492 65
Clerical Dept., office roll, (half month, ending July 15, 1893)....		87 50
Law Dept., office roll,		

(half month, ending July 15, 1893).....	$ 97 50	
Total.....		$ 3,677 65

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (Sec. 1, July 15, '93).....	$ 2,315 25	
Agnew & Co. (Sec. 5, July 15, '93).....	779 63	
Agnew & Co. (Sec. 6, July 15, '93).....	874 13	
Agnew & Co. (Sec. 7, July 16, '93).....	2,058 00	
Agnew & Co. (Sec. 8, July 16, '93).....	3,760 86	
Agnew & Co. (Sec. 9, July 16, '93).....	1,937 88	
E. D. Smith & Co. (Sec. 10, July 16, '93).....	7,210 00	
Mason, Hoge & Co. (Sec. 11, July 16, '93).	8,470 00	
Mason, Hoge & Co. (Sec. 12, July 15, '93).	7,974 54	
Mason, Hoge & Co. (Sec. 13, July 15, '93).	11,773 13	
McCormick Const. Co. (Sec. 14, July 15, '93)	2,927 75	
Western Dredging and Impt. Co. (Sec. C., July 15, '93).....	1,361 24	
E. D. Smith & Co. (Sec. D. July 16, '93).....	2,544 37	
Streeter & Kenefick, (Sec. E., July 16, '93)	8 605 23	
Ricker, Lee & Co. (Sec. F., July 16, '93)	2.341 01	
		$64,933 02

ENGINEERING DEPARTMENT.

Keogh & Schroeder, Co. (stationery).....	$ 5 25	
E. Dietzgen Co., (drafting material).....	20 60	
F. Mayer & Co. (blue prints).....	56 67	
The Polygraph Print Co (polygraphs).....	8 78	
W. A. Olmsted, (mounting maps).....	3 00	
Crane Company, (iron pipe).....	29 74	
Tobey Furniture Co. (furniture).....	62 00	
Hibbard, Spencer, Bartlett & Co. (hardware)	9 34	
Henry Gebhardt, (vault fittings.).....	115 00	
J. E. Robinson & Co., (nickel plating).....	1 45	
Ed Maguire, (drills)..	3 00	
Chicago Toilet Supply Co. (toweling).....	5 40	
McArthur Bros., (coal)	75	
George W. Adelman, (livery).....	3 00	
Wagner Bros., (livery)	29 50	
Wm. Kirkham, (gauge reading).....	10 00	
Geo. Brainard, (gauge reading).....	10 00	
Patrick McGinnis, (gauge reading).....	$ 10 00	
Mary Rusk, (gauge reading).....	10 00	
E. Hastings, (gauge reading).....	3 66	
D. C. Dunlap, (horse and buggy).....	45 00	
A. M. Munson, (rent, Mt. Forest).....	20 00	
H. S. Norton, (rent, Lemont).....	18 00	
O. W. Moon, (rent, Lockport).....	20 00	
E. R. Shnable, (traveling).....	18 92	
W. T. Keating, (traveling).....	14 33	
G. W. Wood, (traveling).....	9 50	
J. B. Rohrer, (traveling).....	4 87	
J. B. Rohrer, (traveling, Sag Bldg.).....	11 40	
Hiram A. Miller, (traveling).....	2 30	
Chas. L. Harrison, (traveling).....	5 60	
A. R. Benson, (traveling).....	2 20	
Alex. E. Kastl, (traveling).....	6 00	
		$ 575 26

LAW DEPARTMENT.

Frank Vander Bogart, Clerk Circuit Court, Will County, (court costs).....	$ 42 60	
Frank Vander Bogart, Clerk Circuit Court, Will County, (court costs).....	41 50	
S. A. Moffett Co., (livery).....	24 00	
		$108 10
Grand total.....		$69.294 03

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 352, Engineering Department, (window shades).....	$16 00

No. 353, Engineering Department, (profile paper)	$ 16 00
No. 354, Engineering Department, (axe handles)	3 80
No. 355, Engineering Department, (map rack)	15 00
No. 356, Engineering Department, (postage stamps)	20 00
No. 1047, General Account, (furniture, etc.)	93 00
Total	$163 80

Mr. Cooley, seconded by Mr. Boldenweck, moved that Requisitions Nos. 352, 355 and 356, for the Engineering Department, and No. 1047, for the General Account, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 352, 355 and 356, for the Engineering Department, and No. 1047, for the General Account, as read and shown above, allowed.

Mr. Cooley, seconded by Mr. Boldenweck, moved that Requisitions Nos. 353 and 354, for the Engineering Department, as read and shown above, be referred to the Committee on Engineering.

The motion prevailed unanimously, and Requisitions Nos. 353 and 354, for the Engineering Department, as read and shown above, were referred to the Committee on Engineering.

ACT CONFERRING POLICE POWER.

The Clerk presented a message from the President, transmitting a certified copy of the Act passed by the last Legislature, conferring police power on the District, with the recommendation that the same be spread on the minutes; and the message was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the message and enclosure be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, July 18, 1893.

The Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith a certified copy of the Act, passed by the recent Legislature, conferring Police Powers on the Sanitary District of Chicago, and recommend that the same be spread on the records.

Respectfully submitted,

(Signed) FRANK WENTER,
President."

"*An Act conferring police power upon the Sanitary District of Chicago.*

SECTION 1. Be it enacted by the people of the State of Illinois, represented in the General Assembly, That the Sanitary District of Chicago shall have the right and power to appoint and support a police force, the members of which may have, and exercise police powers over and within its right of way, and for a distance of one and one-half miles on each side of its Main Drainage Channel, such police powers as are conferred upon and exercised by the police of organized cities and villages; but such police force when acting within the limits of such city or village shall act in aid of the regular police force of such city or village and shall then be subject to the direction of its chief of police, city or village marshals, or other head thereof.

CLAYTON E. CRAFTS,
Speaker of the House.

JOSEPH B. GILL,
President of the Senate.

Approved June 16, 1893.

JOHN P. ALTGELD,
Governor.

Filed, June 17, 1893.

W. H. HINRICHSEN,
Secretary of State."

"UNITED STATES OF AMERICA, }
State of Illinois. } ss.
OFFICE OF THE SECRETARY. }

I, WILLIAM H. HINRICHSEN, Secretary of State of the State of Illinois, do hereby certify that the foregoing is a true copy of An Act conferring police power upon the Sanitary District of Chicago, the original of which is now on file in this office.

In witness whereof I hereto set my hand, and affix the Great Seal of State, at the City of Springfield, this 22nd day of June, A. D. 1893.

(Signed) W. H. HINRICHSEN,
Secretary of State."

[Seal]

AGREEMENT ON RIVER DIVERSION CHANGES.

The Clerk presented a message from the President, transmitting the completed agreement with Messrs. Agnew & Company, with reference to changes in the river diversion from the west line of Section 21, in Cook County, to near the center of Section 15, in Du Page County, with the recommendation that the same be spread on the minutes and placed on file; and the message was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the message and enclosure be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT WITH ACCOMPANYING AGREEMENT:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the completed agreement with Messrs. Agnew & Company, which was submitted to your Honorable Body by the Committee on Engineering at the meeting held July 5, 1893, (page 1317 of the Proceedings) with reference to changes in the river diversion from the west line of Section 21, in Cook County, to near the center of Section 15, in DuPage County, and recommend that the agreement be spread on the record and placed on file.

Respectfully submitted,

FRANK WENTER,
President."

(Enclosure.)

The following is

THE AGREEMENT:

"*This agreement*, made this 5th day of July, A. D. 1893, between the Sanitary District of Chicago, a corporation, party of the first part, and Francis Agnew John P. Agnew and John McGillen doing business under the firm name and style of Agnew & Co., party of the second part, witnesseth, that

WHEREAS, Second party have made certain claims for compensation under their contract with first party for excavation upon contract Section 7 of first party, by reason of first party having permitted the Western Stone Company to take out stone from a portion of the line of the Main Channel on said section whereby second party claim that their prospective profits are diminished; and

WHEREAS, First party has planned and laid out a new River Diversion across said contract section extending in a direct line from the river diversion in contract Section eight (8) into and through said contract Section seven (7) and a portion of contract Section six (6) to the east and west center line of Section 15, Township 37 North, Range 11, East of the Third Principal Meridian, and first party wishes said River Diversion to be excavated and a levee built in conformity with the plans of its Chief Engineer and uniform with the River Diversion and levee or railroad embankment in contract Sections eight (8) and nine (9); now

Therefore, in consideration of the premises, and of the reciprocal promises herein contained, the parties hereto do hereby covenant and agree as follows:

First—Second party hereby abandons and relinquishes all claim to compensation by reason of stone having been taken out of any portion of the Main Channel or River Diversion on said contract Section seven (7) by the Western Stone Company, or that shall hereafter be taken therefrom by said Western Stone Company under its agreement with the first party of July 27, 1892, and makes no claim against first party by reason of delay by it in acquiring possession of its right of way on the contract Sections five (5), six (6), seven (7) and nine (9) of second party.

Second—It is agreed that second party shall do all the work required on the new River Diversion in said Sections six (6) and seven (7) in accordance with plans and specifications prepared by the Chief Engineer of first party.

And the second party agrees to excavate said new River Diversion under the direction of said Chief Engineer carrying the same in a direct line from the point where the present River Diversion cuts the boundary line between the Counties of Cook and Du Page, through contract Section seven (7) and a portion of contract Section six (6) to the east and west center line of Section 15, Township 37 North, Range 11, East of the Third Principal Meridian, and agrees to spoil the material from said River Diversion on the easterly side thereof; and also to construct the levee adjacent to the river on the east to a height of not less than eleven feet above the established grade of the River Diversion through the rock.

or said grade prolonged, throughout all of their contract Sections from five (5) to nine (9) inclusive, said levee to conform to the general alignment and treatment already prescribed for the rock sections. All said work to be done under the supervision and direction of and in accordance with the plans and specifications furnished by said Chief Engineer and at the several rates specified in the original contracts for the respective contract sections.

In witness whereof, on the day and year first above written, the said Sanitary District of Chicago has caused this agreement to be signed by its President and attested by its Clerk, and its corporate seal to be hereto affixed, and the said party of the second part have hereunto set their hands and seals.

(Signed)

SANITARY DISTRICT OF CHICAGO,

By FRANK WENTER,

President.

Attest:

THOS. F. JUDGE,

Clerk.

[Corporate Seal.]

[Seal] FRANCIS AGNEW,

[Seal] JOHN P. AGNEW,

[Seal] JOHN MCGILLEN."

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending July 15, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending July 15, 1893, as the same have been reported to me:

Engineering Department.....	88
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	99

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

SALE OF BUILDINGS AND MACHINERY ON RIGHT OF WAY.

The Clerk presented a report, accompanied by two receipts from the Treasurer, with reference to the sale of buildings and machinery on the right of way owned by the District, said sale being made under the direction of the Committee on Finance, in pursuance of an order passed at the meeting held March 22, 1893, (page 1118 of the Proceedings); and the report and enclosed receipts were read.

Mr. Boldenweck, seconded by Mr. Kelly moved that the report be adopted, and, with enclosures, ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and, with enclosures, ordered printed and placed on file.

The following is

THE REPORT, WITH ACCOMPANYING RECEIPTS:

"CHICAGO, July 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In pursuance of an order passed by your Honorable Body at the meeting held March 22, 1893, (page 1118 of the Proceedings), directing that the Clerk advertise and sell, under the direction of the Committee on Finance, buildings and machinery on the right of way and owned by the District, as described in the order, I have to report that under the direction of the Committee on Finance I advertised the said property for sale, and disposed of all of the same to the highest bidders, the Western Dredging and Improvement Company and the Globe Wrecking and Salvage Company, for the sums of Three Hundred ($300) dollars and Six Hundred ($600) dollars respectively.

I herewith transmit receipts from the Treasurer, under dates of June 1 and July 14, 1893, for the said amounts of Three Hundred($300) dollars and Six Hundred ($600) dollars respectively, they being in full of the amounts received from the highest bidders for the said property.

All of which is

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

"CHICAGO, June 1, 1893.

Received of Thomas F. Judge, Clerk of the Sanitary District of Chicago, check on the Globe National Bank for three hundred ($300) dollars, drawn by the Western Dredging & Improvement Company, in favor of Orrin N. Carter, Attorney, and endorsed to the Sanitary District of Chicago, same being money received on account of Brownell engine and boiler on the Piper Ice Plant, sold to said company, to be deposited to the credit of the Sanitary District of Chicago.

(Signed) MELVILLE E. STONE,
Treasurer, Sanitary District of Chicago.
By W. G. STANFORD,
Assistant Treasurer.

"CHICAGO, July 14, 1893.

Received of Thomas F. Judge, Clerk of the Sanitary District of Chicago, for deposit to the credit of the Sanitary District of Chicago, the sum of six hundred ($600) dollars, being the full amount received from the Globe Wrecking & Salvage Company, for all the buildings and machinery offered for sale on the right of way between Summit and Willow Springs, the said buildings and machinery being those advertised and sold by the Clerk, under the direction of the Committee on Finance, as directed by order of the Board of Trustees, passed March 22, 1893, (page 1118 of the Proceedings.)

(Signed) MELVILLE E. STONE,
Treasurer, Sanitary District of Chicago.
By W. G. STANFORD,
Assistant Treasurer."

CONDITION OF WORK ON "AGNEW SECTIONS."

The Clerk presented a report from the Chief Engineer, accompanied by tabulated statement, with reference to the condition of work on Sections 5, 6, 7, 8 and 9, for which Messrs. Agnew & Co. are contractors; and the report and enclosure were read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ACCOMPANYING STATEMENT:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I desire to call your attention to the state of progress made by Agnew & Co. on Sections 5, 6, 7, 8 and 9, up to the 15th of the present month.

The estimated quantities of these sections aggregate 5,859,732 cubic yards—1,999,686 cubic yards of glacial drift and 3,860,046 cubic yards of solid rock. Of this amount only 242,000 cubic yards of glacial drift and 106,250 cubic yards of solid rock, or a total of 348,250 cubic yards has been removed; whereas, under the terms of the contract, Agnew & Co. should have removed about 857,500 cubic yards. They have, therefore, run behind their contracted rate of progress 59 4-10 per cent. See detailed statement herewith.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

Section.	Classification.	Estimated Quantity.	Amount Finished.	Amount Unfinished.
Section 5	Main Channel, solid rock	223,525	.....	223,525
	Main Channel, glacial drift	978,985	51,300	927,685
	River Diversion, glacial drift	10,350	.....	10,350
	Total	1,212,860	51,300	1,161,560
Section 6	Main Channel, solid rock	517,809	.....	517,809
	Main Channel, glacial drift	576,714	54,100	522,614
	River Diversion, glacial drift	31,100	.....	31,100
	Total	1,125,623	54,100	1,071,523
Section 7	Main Channel, solid rock	882,036	7,080	874,956
	Main Channel, glacial drift	143,908	19,700	124,208
	River Diversion, solid rock	41,991	10,370	31,621
	River Diversion, glacial drift	40,414	11,800	28,614
	Total	1,108,349	48,950	1,059,399
Section 8	Main Channel, solid rock	1,114,843	8,790	1,106,053
	Main Channel, glacial drift	38,051	7,500	30,551
	River Diversion, solid rock	92,591	54,200	38,391
	River Diversion, glacial drift	67,627	48,900	18,727
	Total	1,313,112	119,390	1,193,722
Section 9	Main Channel, solid rock	966,362	21,120	945,242
	Main Channel, glacial drift	74,534	11,000	63,534
	River Diversion, solid rock	20,889	4,690	16,199
	River Diversion, glacial drift	38,003	37,700	303
	Total	1,099,788	74,510	1,025,278

RECAPITULATION.

Sections.	GLACIAL DRIFT.		SOLID ROCK.	
	Total to be Excavated.	Amount Removed.	Total to be Excavated.	Amount Removed.
Number 5	989,335	51,300	223,525	.....
Number 6	607,814	54,100	517,809	
Number 7	184,322	31,500	924,027	17,450
Number 8	105,678	56,400	1,207,434	62,990
Number 9	112,537	48,700	987,251	25,810
Totals	1,999,686	242,000	3,860,046	106,250

Total yards to be removed	5,859,732
Total yards removed	348,250
Total balance to be removed	5,511,482

SPECIFICATIONS FOR WESTERN STONE COMPANY'S BRIDGE AND PROJECT FOR DRAINING GOOSE LAKE

The Clerk presented a report from the Chief Engineer, enclosing specifications and plans for the Western Stone Company's bridge on Section 10, and also project, with plat and profile, concerning the draining of Goose Lake; and the report was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report and enclosed project be ordered printed, and, with specifications, plans, plat and profile, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith specifications and plans for the trestle crossing the river diversion, to be used by the Western Stone Company's railroad track.

I also submit plat and profile covering the project for draining Goose Lake. This work is purely sanitary in its aims, as the flood waters will be but little affected by it. Goose Lake now acts as a sort of settling basin in which the sewage from the Desplaines River collects and decays. It is therefore a menace to the health of the surrounding region with its population of laborers and others engaged in carrying out the work of the Sanitary District, and for this reason the project has a valid claim to your consideration.

Very respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

P. S.—The report made to me by Assistant Chief Engineer Johnston is submitted herewith, and it goes so fully into the Goose Lake project that it leaves little else to be said."

(One (1) enclosure with specifications, plat and profile)

(Enclosure.)

"CHICAGO, July 19, 1893.

Mr. Isham Randolph, Chief Engineer.

DEAR SIR—A correction, or "River Diversion" of the Des Plaines River from the head of Goose Lake to the foot of Romeo Island has properties as follows:

The Goose Lake is a flat place something over a mile in length in the course of the river. Its margins, through a width of more than 1,500 feet, are at all times in a marshy state, and when any small increase in the volume of flow takes place the water spreads over the whole surface, forming first a bog and then a lake.

The river water, at the low stages which are generally continuous through the summer and fall, is essentially sewage. This impregnates the extensive marsh area and constitutes it a menace to health, and a nuisance such as should not, perhaps, be maintained in the property of the Sanitary District.

The accompanying map, plat No. 1, shows the region in question. As indicated, two locations have been considered for a channel which will remedy the evils above stated. One follows the sinuosities of the river and is designated as line 2, and the other, while generally following the river, has a smoother alignment and is designated as line 1.

The profiles of these two locations are on plat No. 2 accompanying, as is also a profile of the existing channel west of Romeo Island.

The estimates contemplate:

First—A channel 200 feet wide on line 1, with a slope of .00012.

Second—A channel 75 feet wide on line 1 with a slope of .0002.

Third—A channel 75 feet wide on line 2, with a slope of .0002.

Fourth—A channel 50 feet wide on line 2, with a slope of .0002.

The narrow channel is excavated more than a foot deeper than the wider channel and on that account will have the effect of drawing the ground water lower and draining the marshy land more effectively. Furthermore, the narrow channel has a steeper slope, so that for the same elevation of water surface the 50 foot channel will carry more water than the 200 foot channel, when the latter is flowing one foot deep. Also the 75 foot channel will carry more water than the 200 foot channel when the latter is flowing two feet deep.

An examination of the habits of the Desplaines River shows that when its flow is as much as 12,000 cubic feet per minute it is generally considerably in

excess of that amount, so that a river diversion would have little or no effect in draining this marshy region. Also when the flow is less than 12,000 cubic feet per minute, which is by far the greater part of the time, it is generally considerably less, so that a diversion channel having a capacity of about 12,000 cubic feet per minute at the elevation of present low water level, would have essentially as good an effect as any that could be constructed. This flow would be attained either by the 200 foot wide channel with a slope of .00012, or by the 75 foot channel with slope .0002. The latter would, however, be the more effective, because it would more readily drain to a lower level and maintain at the lower level the ordinary low water flow which is less than 3000 cubic feet per minute.

A channel only 50 feet wide would have a decidedly beneficial effect, and in fact would be fully as effective during more than half of each year, as would the wider channels. Its capacity at the elevation of existing low water would be about 7,500 cubic feet per minute. It would have the effect of concentrating in a higher degree the ordinary low water flow, which would be of some advantage.

The excavations involved are indicated in the following table:

TABLE OF ELEMENTS OF PROPOSED "RIVER DIVERSION" CHANNEL BETWEEN HEAD OF GOOSE LAKE AND FOOT OF ROMEO ISLAND.

Line.	Width in ft.	Slope.	Cap'city at elevation of existing low water in cu. ft. per min.	Total excavation in cu. yds	Approximate proportion of total excavation that is glacial drift in cu. yds.
1	200	0.00012	12,000	62,000	8,000
1	75	0.0002	12.000	60 000	3 000
2	75	0.0002	12.000	60,000	.....
2	50	0.0002	7.500	40 000	.....

NOTE—The data are not sufficiently accurate to state definitely what proportion of the excavation is rock and what proportion is glacial drift, but a tolerably close approximation is stated for Line 1.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

EQUIPMENT OF DEPARTMENT OF POLICE.

The Clerk presented a report from the Marshal, submitting recommendations, concerning the equipment of the Department of Police; and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be ordered printed and referred to the Joint Committee on Health and Public Order and Finance.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—After careful investigation and consideration of the conditions and matters pertaining to the proper policing of the District, I beg to submit the following recommendations:

First—That the building erected and now owned by the District at Sag be taken for police purposes, and that the central or headquarter station be located at that point for the present.

Second—That four additional police stations be built, one to be located at or near Romeo, one at or near Lemont, one at or near Willow Springs, and one at or near Summit, and that in each case the station be located on the District right of way, or as near thereto as practicable.

Third—That the Board appoint, at the earliest practicable time, 35 patrolmen.

Fourth—That a contract be made for the necessary summer uniforms, and that the men when appointed be required to purchase the same at their own expense under said contract.

Fifth—That the Board purchase, at its own expense the necessary stars, belts, and other equipage for the Police Department, the same to always remain the property of the District.

Sixth—That the Board provide an iron cot, a mattress and necessary bedding for each member of the police force.

Seventh—That the Board provide a pair of horses and a suitable covered wagon capable of conveying six persons, such wagon being so constructed as to be readily adapted to any ordinary police use, and keep the same at police headquarters; that a man be employed or detailed, whose duty it shall be to care for the team and any other horses which the District may own or keep at headquarters, and whose further duty shall be to act as driver whenever it shall be necessary for the use of the Police Department, Members of the Board of Trustees or the Paymaster.

Eighth—That a suitable saddle horse with necessary equipage be provided for the use of the Marshal, and kept and cared for at the Central Station.

Ninth—That pending the building of the stations, tents be provided by rental for the lodgment and protection of the men at points where stations are being built.

Tenth—That provision be made for the purchase of an iron lock-up for each police station, and for brooms, brushes, mops, buckets, stoves, stationery, and all necessary station furnishings.

I further recommend that an appropriation be made, and the proper person be instructed to immediately repair and put in proper condition for use, the railroad bridge over the Illinois & Michigan Canal at Sag, to the end that it may be adapted to police and other District purposes.

Most respectfully submitted,

(Signed) EDWARD WILLIAMS,
Marshal.

I herewith submit a rough sketch of proposed police stations, 24 x30', the cost of which should not exceed fifteen hundred ($1,500) dollars each.

Respectfully submitted,

(Signed) EDWARD WILLIAMS,
Marshal."

TRUSTEES ILLINOIS VALLEY TRIP.

Mr. Boldenweck, Chairman, presented a report from the Committee on Federal Relations, with reference to and accompanied by communications received from the Valley Towns, urging that the Trustees make a trip by boat down the Illinois Valley; and the report was read.

Mr. Boldenweck, seconded by Mr. Russell, moved that the report be adopted, ordered printed, and, with enclosures, placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosures, placed on file, and the recommendations therein concurred in.

The following is

THE REPORT:

"CHICAGO, July 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the several resolutions from the valley towns, referred to this Committee, to-wit:

NAME.	DATE.	Page of Proceedings.
Beardstown, Illinois..	May 4, 1893..	.....
Marseilles, Illinois....	May 15, 1893.	1244
Seneca, Illinois.....	June 6, 1893..	1281
Ottawa, Illinois.....	June 6, 1893..	1281
Havana, Illinois.....	June 3, 1893..	1295
Hennepin, Illinois....	July 13, 1893.	.....

Your Committee reports as follows:

The sentiments of these several resolutions are all of a similar character, and express the desire of the people of the Illinois Valley that the Sanitary District shall co-operate in the mutual purpose of the extension of deep navigation from Lake Michigan to the Mississippi River.

Specifically, they call upon the Trustees of the Sanitary District to make a personal examination of the Illinois Valley, and meet citizens thereof, with a view of crystalizing some specific action in regard to the problem between Joliet and the Mississippi.

These resolutions also urge a policy which will secure an early removal of the locks and dams in the Illinois River below the City of La Salle, and the inauguration of a general scheme for the dredging of the stream to greater capacity, in anticipation of an increased flow of water from Lake Michigan, through the channel of the Sanitary District.

It is sufficient to say that the Sanitary District law entails obligations on the District in regard to over-flowed lands between Joliet and the Mississippi River in certain contingencies, and that the District is obligated to remove the locks and dams at Henry and at Copperas Creek before this flow of water is turned into the Illinois River.

The theory of the law, as expressed in the joint resolution passed by the same Legislature, and also by a similar resolution passed by the House of Representatives in the session of 1893, is that the District and the people of the Illinois Valley shall co-operate in bringing about, through the United States Government or other agencies, the completion of a waterway to the Mississippi.

The Committee is of the opinion that the work of improving the Illinois River on the section below the City of La Salle cannot be too soon undertaken, and that every opportunity should be taken to

bring the matter to the attention of the people of the State, and to Congress, and we are strongly of the opinion that it will be wise for the Trustees of the Sanitary District, in the season of low water, to take a trip by boat over the river below the City of La Salle, and spend such time in the valley as may be necessary to fully understand the nature of the problem.

Your Committee therefore recommend that the Trustees of this District shall take such a trip during the fall months, at such time as may be convenient, the date thereof to be determined by the Board at some future time, and that the Clerk of the District be instructed to notify the town officials from whom the resolutions were received of the action of this Board in regard to same.

The resolutions are returned herewith for filing.

Respectfully submitted,

(Signed) WM. BOLDENWECK,
Chairman.
JOHN J. ALTPETER,
W. H. RUSSELL,
L. E. COOLEY,
Committee on Federal Relations."

(Four (4) enclosures.)

SAG BUILDING TURNED OVER TO DEPARTMENT OF POLICE.

Mr. Wenter, Chairman, presented a report from the Joint Committee on Rules and Health and Public Order, accompanied by requirements of applicants for positions on the Police Force of the District, and recommending that the Sag Building be turned over to the Department of Police, and the appropriation of five hundred ($500) dollars additional, for necessary changes, and transmitting an order for the same; and the report and enclosures were read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in and the accompanying requirements and order adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the accompanying requirements and order adopted.

The following is

THE REPORT, WITH ACCOMPANYING ORDER AND REQUIREMENTS:

"CHICAGO, July 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Rules and Health and Public Order report, with reference to the Department of Police of the District, that the Sag Building, now in charge of the Engineering Department, be turned over to the Department of Police, for its use, and that the additional sum of five hundred ($500) dollars be appropriated for such changes as may be necessary to re-arrange same for the purposes of that Department, the said sum to be expended under the direction of the Joint Committee on Rules and Health and Public Order.

An order, making such an appropriation, is attached herewith, with the recommendation that the same be adopted.

The Committee also transmits herewith a set of requirements of applicants for positions on the police force, and recommend that the same be approved.

Respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Rules and Health and Public Order."

"*Ordered*, That there be and there is hereby appropriated and ordered set aside to the credit of the Sag Building the sum of five hundred ($500) dollars, the said sum to be expended under the direction of the Joint Committee on Rules and Health and Public Order."

"*Requirements of Applicants for Positions on the Police Force of the Sanitary District of Chicago:*

1. The applicant shall fill out in his own hand writing an examination blank containing his personal history, and shall answer such questions as are therein propounded.

2. To be eligible to appointment he

must be a citizen of the United States, have been a resident of the State of Illinois for two years next preceding the date of his appointment and never have been convicted of any crime.

3. He must be of good moral character and temperate habits, in good health and of sound physical constitution.

4. He must be able to read, write and converse in the English language understandingly.

5. He must not be over 36 years of age; not less than 5 feet 8 inches in height, and shall not weigh less than 160 pounds.

6. He shall present an application in such form as may from time to time be adopted, which shall be signed by not less than five citizens of good character and habits, and verified by the affidavit of one of them, which application shall be endorsed by the Examining Committee.

7. He shall submit himself to such examination by the Sanitary Inspector of the District as the latter may deem necessary to enable him to reach a conclusion as to the possession by the applicant of the foregoing physical requirements.

8. He shall submit to an examination under oath by the Examining Board as to the foregoing qualifications, and as to any other matters relative to his practical fitness for a position on the police force."

CLAIM OF REPAUNO CHEMICAL COMPANY.

The Clerk presented a communication from the Repauno Chemical Company of New Jersey, with reference to money claimed to be due them from the McCormick Construction Company, contractors for Section 14, for blasting material used on the work on the Main Channel; and the communication was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the Committee on Judiciary.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the communication ordered printed and referred to the Committee on Judiciary.

The following is

THE COMMUNICATION:

"July 19th, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

The undersigned, the Repauno Chemical Company, of New Jersey, respectfully represents that heretofore, to-wit, on the 10th day of October, 1892, it entered into a contract with the McCormick Construction Company, of Lockport, Illinois, whereby the undersigned agreed to furnish said construction company with such high explosives and other materials as said construction company would require in its work in excavating the Drainage Channel under the charge of your Honorable Board, and would call for at the hands of the undersigned.

The undersigned further represents that, upon the day aforesaid, in pursuance of said contract, it furnished said construction company with a supply of blasting materials, and, during the time from said day until and including the 6th day of July, 1893, the undersigned, on divers days and at various times furnished said construction company additional supplies of blasting materials and other materials necessary to said work, which materials so furnished were used by said construction company in the prosecution of its work upon said channel.

The undersigned further represents that the total amount of indebtedness due it from said construction company is $2,945.77, an account of which indebtedness is attached hereto, and verified by affidavit.

The undersigned further represents that it has never received a dollar upon the account of said construction company with it, and that, unless action is taken by this Honorable Board to protect the interests of the undersigned, nothing will ever be received upon said account.

Therefore, the undersigned respectfully petitions this Honorable Board to retain, out of any moneys under its control and due to said construction company, an amount sufficient to pay the said indebtedness due the undersigned, and to apply the amount so retained in satisfaction of said account.

(Signed) REPAUNO CHEMICAL CO.

By CHARLES L. PATTERSON.

Subscribed and sworn to before me

this 19th day of July, A. D. 1893, by Charles L. Patterson.

(Signed) CHAS. S. THORNTON,
Notary Public."

[Seal]

STATE OF ILLINOIS, } ss.
COUNTY OF COOK, }

Charles L. Patterson, being first duly sworn, deposes and says that he is a general sales agent for the Repauno Chemical Company; that he is familiar with the debit and credit account between said company and the McCormick Construction Company, of Lockport, Illinois; and he says that the statement appended hereto is a correct copy of said account between said companies, and that said construction company is indebted to said chemical company the sum of $2,945.77 for merchandise heretofore sold and delivered by the latter to the former, such account allowing all credits and set-offs due said construction company; and further affiant sayeth not.

(Signed) CHARLES L. PATTERSON.

Subscribed and sworn to before me this 19th day of July, A. D. 1893.

(Signed) CHAS. S. THORNTON,
Notary Public.

[Seal.]

(Enclosing itemized statement.)

RECONSIDERATION OF VOTE ON APPROVAL OF VOUCHERS.

Mr. Cooley, seconded by Mr. Kelly, moved a reconsideration of the vote by which the vouchers this day presented including the voucher for the McCormick Construction Company, for $2,927 75, for work done on Section 14 of the Main Channel, were approved.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, and the vote by which the vouchers this day presented, including the voucher for the McCormick Construction Company, for $2,927 75, for work done on Section 14 of the Main Channel, were approved, reconsidered.

M'CORMICK COMPANY VOUCHER REFERRED.

Mr. Cooley, seconded by Mr. Kelly, then moved that the voucher this day presented for the McCormick Construction Company, for $2,927.75, for work done on Section 14 of the Main Channel, be referred to the Committee on Judiciary, in connection with the claim of the Repauno Chemical Company just presented.

The motion prevailed unanimously and it was so ordered.

APPROVAL OF VOUCHERS.

Mr. Eckhart, seconded by Mr. Kelly, then moved that all the vouchers this day presented, with the exception of that for the McCormick Construction Company, for $2,927.75, for work done on Section 14 on the Main Channel, just referred to the Committee on Judiciary, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and all the vouchers this day presented, with the exception of that for the McCormick Construction Company for $2,927.75, for work done on Section 14 of the Main Channel, just referred to the Committee on Judiciary, approved and ordered paid.

COMMUNICATION FROM M'ARTHUR BROS.

The Clerk presented a communication from McArthur Brothers, contractors on Sections 2, 3 and 4 of the Main Channel, with reference to the order passed at the meeting held July 12, 1893, (page 1327 of the Proceedings), directing them to proceed with the work on their Sections; and the communication was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be received without prejudice to to the rights of the District, and placed on file without being printed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried, the communication received without prejudice to the rights of the District, and placed on file without being printed.

By unanimous consent Mr. Russell was excused from the meeting.

SPECIFICATIONS FOR STEPHENS STREET BRIDGE.

By unanimous consent, the Clerk presented a report from the Chief Engineer,

transmitting plans and specifications for a bridge over the river diversion at Stephens street, Lemont; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be ordered printed, and with enclosed plans and specifications be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, July 19, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith plans and specifications for a bridge across the proposed river diversion under Stephens street, Lemont. The cost of such structure is estimated at $8.25 per lineal foot, or $4,125.00. The masonry in abutments and piers figures up 394 cubic yards, estimated at $8.00 per cubic yard, equals $3,152.00. Cost of superstructure and masonry, $7,277.00.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosing plan and specifications.)

DIRECTIONS TO ATTORNEY IN PROCEEDING FOR "SANTA FE" CROSSING NEAR LEMONT.

Mr. Kelly presented an order directing the Attorney to take certain steps, as provided in the order, in the proceedings instituted for acquiring a right of way across the main line of the "Santa Fe," near Lemont; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney directed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That in the proceedings instituted for acquiring the right of way for the new river diversion across the right of way of the main line of the Chicago, Santa Fe and California Railway Company in Section 20, Township 37 North, Range 11 East of the Third Principal Meridian, Cook County, Illinois, entitled Sanitary District of Chicago vs. Farmers' Loan and Trust Company, et al., in the Circuit Court of Cook County, General Number 116,049, the Attorney of the District be and he is hereby directed to so frame the proceedings and take the necessary steps as to acquire for the District only the right to construct and maintain a channel across said right of way in accordance with the plans and specifications prepared by the Chief Engineer of this District, a copy of which is filed with the Clerk of the District, leaving the owners of said right of way the right to use said right of way for railroad purposes at said crossing above the level of the banks of said channel as shown upon said plans, with the right to support the tracks of said railroad from the bed of said channel by piers or other supports which will occupy in the aggregate not more than ten (10) per cent of the cross section of said channel beneath said railroad tracks used for crossing said channel—said channel at the place of said crossing to be of the width of five hundred (500) feet, measured at right angles to the center line of said channel."

ORDINANCE FOR TAX LEVY OF 1893.

Mr. Eckhart, Chairman, presented from the Committee on Finance, an ordinance levying the taxes for the year 1893, for the corporate purposes of the District; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the passage of the ordinance.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the ordinance passed.

The following is the

ORDINANCE:

"*Be it ordained by the Board of Trustees of the Sanitary District of Chicago:*

SECTION 1. That the sum of one million five hundred thousand ($1,500,000) dollars be and the same is hereby levied and assessed on the real and personal property within the Sanitary District of Chicago, subject to taxation according to the valuation of said property, as the same is assessed and equalized for State and County purposes for the year 1893; the taxes levied and assessed under this ordi-

nance being for the corporate purposes of the Sanitary District of Chicago.

SEC. 2. The Clerk of this District is hereby directed to certify on or before the second Tuesday of August, 1893, to the County Clerk of Cook County, the amount required to be raised by tax, pursuant to this ordinance, and to that end to file with the said County Clerk a copy of this ordinance duly certified by the Clerk of said District.

SEC. 3. This ordinance shall take effect and be in force from and after its passage."

ADJOURNMENT TO SPECIAL TIME.

Mr. Kelly, seconded by Mr. Eckhart, moved that when the Board adjourn. it do adjourn to meet Friday, July 21, 1893, at 2 o'clock P. M.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and that when the Board adjourn. it do adjourn to meet Friday, July 21, 1893, at 2 o'clock P. M.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned, to meet Friday, July 21, 1893, at 2 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

ADJOURNED MEETING.

The adjourned session of the one hundred and seventy-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Friday, July 21, 1893, at 2 o'clock P. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Kelly, Prendergast, Russell, and Wenter—seven (7) members were present.

EQUIPMENT OF DEPARTMENT OF POLICE.

Mr. Boldenweck, for the Joint Committee on Health and Public Order and Finance, presented a report, with reference to and enclosing the report of the Marshal, submitting recommendations concerning the equipment of the Department of Police, presented and referred to that Committee at the meeting held July 19, 1893, (page 1340 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Russell, moved that the report be adopted, ordered printed, and, with enclosure, placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with enclosure, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, July 21, 1893.

To the Honorable the Board of the Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee on Health and Public Order and Finance, to whom was referred the report of the Marshal, making recommendations concerning the equipment of the Department of Police of the District, presented at the meeting held July 19, 1893, (Page 1340 of the Proceedings) respectfully report that they have considered the same, and return it herewith with the recommendation that your Honorable Body concur in the suggestions made therein, and that the Clerk, in conjunction with the Marshal, be directed to secure propositions and make arrangements for the purchase of the necessary uniforms, equipage and articles of all kinds as required for the proper equipment of the Department of Police of the District, and for the construction of four (4) police stations, as set forth in the said recommendations of the Marshal's report, and report such action to the Board.

The Committee further recommend, that the Chief Engineer be directed to proceed at once to repair and put in good order the railroad bridge over the Illinois & Michigan Canal at Sag, as suggested by the Marshal, at an expense not to exceed $500. All of which is

Respectfully submitted,

(Signed) A. P. GILMORE,
Chairman.

WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
THOMAS KELLY,

Joint Committee on Health and Public Order and Finance."

CLERK AND MARSHAL TO ARRANGE FOR PURCHASE OF EQUIPMENT OF DEPARTMENT OF POLICE.

Mr. Boldenweck presented an order directing the Clerk, in conjunction with the Marshal, to obtain propositions and make arrangements for the purchase of equipment, as provided in the order, for the Department of Police of the District, and further directing the Chief Engineer to repair the Canal bridge at Sag, as provided in the order; and the order was read.

Mr. Boldenweck, seconded by Mr. Russell, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk and Chief Engineer instructed in accordance with same.

The following is

THE ORDER:

"*Ordered*, That the Clerk of the District, in conjunction with the Marshal of the District, be and he is hereby directed to secure propositions and make arrangements for the purchase of the necessary uniforms, equipage and articles of all kinds as required for the proper equipment of the Department of Police of the District, and for the construction of four (4) police stations, as set forth in the recommendations of the report of the Marshal, presented at the meeting held July 19, 1893, (Page 1340 of the Proceedings); and be it further

Ordered, That the Chief Engineer be and he is hereby directed to proceed at once to repair and put in good order the railroad bridge over the Illinois & Michigan Canal at Sag, at an expense not to exceed $500."

REPORT ON REQUISITIONS NOS. 353 AND 354.

Mr. Cooley, Chairman, presented a report from the Committee on Engineering with reference to and accompanied by Requisitions Nos. 353 and 354, for the Engineering Department, presented and referred to that Committee at the meeting held July 19, 1893, (Page 1334 of the Proceedings) and recommending that the same be allowed; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed and placed on file, and the accompanying Requisitions Nos. 353 and 354, for the Engineering Department, allowed.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file; and the accompanying Requisitions Nos. 353 and 354, for the Engineering Department, allowed.

The following is

THE REPORT:

"Chicago, July 21, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We report back Requisitions Nos 353 and 354, from the Engineering Department, referred to this Committee on July 19th, and recommend that the same be allowed

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
THOMAS KELLY,
Committee on Engineering."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

JULY 26, 1893.

OFFICIAL RECORD.
Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eightieth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, July 26, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held July 19, 1893, and of the adjourned session of the same meeting, held July 21, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Eckhart.

VOUCHERS.

The Clerk presented the following vouchers:

CLERICAL DEPARTMENT.

Waukesha Hygeia Mineral Springs Co. (water).....		$ 8 75

LAW DEPARTMENT.

Orrin N. Carter, (expense).....	$ 89 13	
Orrin N. Carter, (expense).....	78 36	
		$ 167 49

GENERAL ACCOUNT.

Chicago Edison Co. (electric lighting, etc.)	$ 68 92

Tobey Furniture Co. (Board room furniture).....	$298 00	
Green's Dredging Co. (tug, Trustees' trip, May 1, 1893).....	50 00	
Thos. F. Judge, (payroll and sundry expense).....	27 77	
		$ 444 69
Grand total.....		$ 620 93

Mr. Eckhart, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 1048, Clerical Department and General Account(stationery,etc.)$21 15

Mr. Kelly, seconded by Mr. Eckhart, moved that Requisition No. 1048, for the Clerical Department and General Account, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisisition No. 1048, for the Clerical Department and General Account, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending July 22, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending July 22, 1893, as the same have been reported to me:

Engineering Department.....	89
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	100

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

CONDITION OF WORK ON MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer, transmitting a report from the Superintendent of Construction, showing the condition at that date of the work on all the sections of the Main Channel under contract; and the report and enclosure were read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith a report made to me by the Superintendent of Construction, Mr. U. W. Weston, showing conditions prevailing upon each of the sections now under contract. This report is a fair presentation of the facts as they exist and it clearly demonstrates the importance of promptly using all of our powers under our several contracts to enforce more vigorous work upon those sections on which the output of material is shown to be largely in arrears of the rate of progress called for by the contracts covering same.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure.)

"CHICAGO, July 26, 1893.

Isham Randolph, Esq., Chief Engineer, Sanitary District:

DEAR SIR—I beg herewith to submit

my report as to the progress of the work under contract as follows:

Commencing with Section "F" at the Summit, or upper end, the contractors have made reasonable progress, considering the stage of water, with their preliminary work of dyking and the construction of the necessary railway track to enable them to haul the material from the Main Channel which they are about commencing. Their River Diversion is well along and the general character and conduct of their proceedings thus far indicate that they will fulfill their contract requirements.

On the next Section ("E") the contractors are doing nicely. They are now working between 200 and 300 head of mules and have excavated nearly 200,000 yards, which is considerably in excess of the required rate of progress. Their section has been opened its entire length which will soon be excavated to such depth that teams will have to be supplanted by steam shovels, which are now being put in place. The condition of this section is at present very favorable.

Section "D"—While the amount done upon this section is not yet up to the required rate of progress, the contractors have been opening up the work in good shape and provided a plant, including two steam shovels, four locomotives with the necessary cars and between two and three miles of standard gauge railway track. The indications thus far, together with the well known character of the contractors warrant the belief that they will complete their section within their contract time if not before.

Section "C"—This section contains about 1,800,000 cubic yards of excavation in the Main Channel and 176,000 cubic yards of River Diversion. In accordance with the terms of their contract the River Diversion must be finished by December 1st, 1893, and before any work is done on the Main Channel. This must necessarily be completed before anything can be done on the Main Channel on Sections "B" and "A," immediately below it, and hence it is of prime importance that this River Diversion be pushed to completion during the present season of low water, which is of such uncertain duration as to render its expedition imperative. Thus far this season (year) they have employed one steam shovel with an incline tramway to dispose of the waste material, and up to the 15th inst. they have removed but 15,581 cubic yards of the 176,000 cubic yards contained in the River Diversion, or about 8 per cent. of the amount required to be done before December 1st next. They are about to double their present capacity by the addition of another steam shovel and the erection of another incline tramway; but this, in my opinion, will be wholly inadequate to complete this part of the work this season, and inasmuch as the prosecution of any work upon the sections above referred is wholly contingent upon the completion of this work, immediate action should be taken to expedite this work which can be done by the aid of teams and wheel scrapers and other auxiliary forces. There is about two-fifths of the Main Channel of this section which might now be opened, provided the contractors be permitted to waste the material excavated within the lines designated upon the original plans, which I would respectfully recommend be modified accordingly and directions given to proceed with the work on such part of the Main Channel forthwith.

Sections "A" and "B"—These sections contain about 340,000 cubic yards of River Diversion which must necessarily be done before work can proceed upon the corresponding Main Channel. Unfruitful experiments and disagreements retarded progress on these sections until recently, when, after receiving proper notice, the contractors are making commendable efforts to complete this part of the work by December 1st, in which it now seems probable that they will be successful. In this connection I would recommend that in all cases where it would tend to expedite the work of River Diversion, that the contractors be permitted to exceed (or increase) the prescribed slope of 1½ to 1, maintaining the same area in cross section.

Section 1—The contractors on this Section are making more determined efforts to open up this work, and evince a disposition to do all in their power to comply with their contract.

Sections 2, 3 and 4—Work was suspended upon these sections about June 1, with the apparent intention on the part of the contractors to force the Board of Trustees to accept their construction or interpretation of their contract relative to the proper classification of the material excavated; and, although the said contractors recently expressed their intention to resume work, there is no real evidence thereof up to this time.

Section 5—This section contains over 1,200,000 cubic yards of material, about one-fourth of which is rock. Of this amount there has been excavated some

55,000 yards, being only about five per cent. The plant consists of one steam shovel, the out-put of which is conveyed to the spoil bank by means of a derrick which is wholly inadequate to handle the capacity of the shovel. Even by this slow method, in my opinion, the waste is deposited in too close proximity to the main channel, and will greatly interfere with the disposition of the work found in the lower half of the channel, as well as imperiling the integrity of the main channel from the possible sloughing or sliding of the banks thereof, which trouble was experienced in the deepening of the present I. & M. Canal nearly opposite this point. In addition to the above mentioned plant there is now in course of construction what is called a clam shell dredge (or derrick) with a reach of about ninety feet. While such an apparatus will work in some kinds of material, I very much doubt its efficiency here, for the reason that the material is too plastic and gummy to be readily discharged, and, though this could be done, it could not be deposited a suitable distance from the channel to properly and economically execute the work. Much of the 55,000 yards above stated as excavated on this section was done with teams and scrapers. During the first half of this—one of the best months of the season—but 3,300 yards were excavated, and it is my deliberate opinion that as to both present method and manner there is no probability of the successful execution of the contract on this section.

Section 6.—In this section are about 1,100,000 cubic yards, about one-half being rock. There has been about the same amount of material excavated as in the preceeding section, and, although different methods are employed, the spoil is similarly deposited and the same condition of inefficiency prevails in every respect.

Sections 7, 8 and 9 —These sections are all inexcusably behind the contract requirements—the first and last named (7 and 9) especially so. Delay in getting special machinery and appliances has been set forth in mitigation of this delinquency, whereas no extraordinary machinery is at present required. The work can readily be opened at a number of different points on each section and the first cut of about twelve feet off the top taken out with cars, inclines, carts, etc., methods that are readily available and economical, and in successful operation upon other sections. There is no reason whatever why all these sections should not now be equipped with more of the available and successful appliances herein suggested and the work speedily brought up to the progress requirements of the contracts. There has been recently added one of these car systems on Section 7, but there should be one or two more of them in order to catch up, The equipment of Sections 8 and 9 should also be similarly strengthened.

Sections 10, 11, 12 and 13.—These sections are all well equipped and rapidly nearing their full quota which will doubtless soon be exceeded. The upper cuts on these sections have all been removed by the methods above suggested —viz: cars, inclines and carts. These are being followed in the lower cuts by Cantilever derricks of which there is now one in operation, three in course of erection, and six more under contract. These are all solid rock sections and there is every indication now that they will be completed on time if not before.

Section 14.—This section is largely in arrears owing to complications which I am now assured have been overcome, and that the contracting company has now been placed in such financial condition as will enable them to properly equip the work and bring same up to progress requirements.

Yours very truly,

(Signed) U. W. WESTON,

Supt. of Construction."

BIDS FOR SERVICE BOAT.

The Clerk presented a report from the Chief Engineer, transmitting two bids for service boat, secured as directed in the report presented to the Board and concurred in at the meeting held June 28, 1893, (page 1303 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be ordered printed, and, with enclosures, referred to the Committee on Health and Public Order.

Mr. Eckhart, seconded by Mr. Kelly, moved as a substitute that the report be ordered printed, and with enclosures, placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Eckhart, Gilmore, Kelly, Prendergast and Russell—six (6). Nays—Messrs. Cooley and Wenter—two (2).

Upon which result the President declared the substitute carried, and the

report ordered printed, and with enclosures, placed on file.

The following is

THE REPORT:

"CHICAGO, July 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith a letter from Rice & Whitacre Manufacturing Co. proposing to furnish a "service boat" for the sum of $4,985, which will conform to our specifications heretofore submitted to you; also proposals from Chas. P. Willard & Co. for the same boat, based upon the same specifications, for the sum of $4,985.

The Willard bid does not include stationary wash bowl, seats, cushions, etc. for the cabin, and they make an additional price of $250 to cover these items, so that their total bid would be $5,235. Neither one of the bidders submit drawings of any kind for the boat, which drawings are called for by our specifications.

The Willard Co. will deliver the boat (and they guarantee a speed of 12 miles an hour) within 45 days after the acceptance of their proposition.

Rice & Whitacre will not guarantee the speed and cannot deliver the boat under 90 days, hence the Willard proposition is the best for us if either is accepted.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Three (3) enclosures.)

PROJECT FOR ROAD ALONG THE MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer, submitting a project for a road along the Main Channel, presented in response to an order passed at the meeting held July 5, 1893, (page 1318 of the Proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed, and referred to the Joint Committee on Engineering and Finance, with directions to report back at the next meeting.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Referring to your order of the 5th inst., calling for a project for a road along the works of the District I have to advise you, as the result of investigations which I have made, that the most favorable and economical road which I can recommend is along the tow-path of the Illinois and Michigan Canal. My recommendation is that the existing roadway be repaired and widened to eighteen (18) feet. The expense involved would be, in my judgment, about $300 per mile. As to the execution of the work I recommend that so much of it as is parallel with our sections now under contract, be done by the contractors in lengths corresponding to the lengths of their respective sections, under the provisions of their contract governing extra work.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

SURVEY BETWEEN LEAVITT AND ROBEY STREETS.

The Clerk presented a report from the Chief Engineer, making requisition for authority to employ S. S. Greeley for the survey of fourteen blocks in the right of way between Leavitt and Robey streets; and the report was read.

Mr. Cooley, seconded by Mr. Eckhart moved that the report be ordered printed and placed on file, the requisition made therein allowed, and the Chief Engineer authorized to employ S. S. Greeley for the survey proposed in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the requisition made therein allowed, and the Chief Engineer authorized to employ S. S. Greeley for the survey proposed in the report.

The following is

THE REPORT:

"CHICAGO, July 24, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby make requisition

for authority to employ S. S. Greeley to make survey of fourteen blocks in the Canalport Subdivision, bounded by Leavitt and Robey streets and by the north and south ordinance lines of our Sanitary Channel. The original notes in this subdivision are in possession of Greeley, Carlson & Co. and they decline to give copies of them. I will make the best arrangement with them for the survey that I can as to terms.

We shall need this survey in procuring right of way.

Respectfully submitted,

Signed) ISHAM RANDOLPH,
Chief Engineer."

APPOINTMENT OF SPECIAL ASSISTANT ENGINEER.

The Clerk presented a report from the Chief Engineer asking authority to employ Frank Ewald as Special Assistant Engineer as provided in the report; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be ordered printed and placed on file, and the Chief Engineer authorized to employ Frank Ewald as Special Assistant Engineer, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, and the Chief Engineer authorized to employ Frank Ewald as Special Assistant Engineer, as provided in the report.

The following is

THE REPORT:

"CHICAGO, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I respectfully ask to employ Mr. Frank Ewald, Civil Engineer, as special assistant, at a salary of two (2) hundred dollars per month, said appointment to date from July 20th.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

CONDITION OF RIVER DIVERSION AND PROTECTION WORK.

Mr. Kelly, Chairman, presented a report from the Committee on Judiciary, with reference to and accompanied by a report from the Chief Engineer, concerning progress on the River Diversion and protection work, presented and referred to that Committee at the meeting held November 16, 1892 (page 880 of the Proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report be ordered printed, and with enclosure, placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Judiciary, to whom was referred, in conjunction with the Attorney and the Engineer, the report of the Chief Engineer (with enclosure) on the progress of river diversion and protection work between Willow Springs and Lockport, presented at the meeting held November 16, 1892 (page 880 of the Proceedings), respectfully return the same herewith with the recommendation that it be placed on file.

The report was simply one of information, and needs no further action at the hands of the Board.

Respectfully submitted,

(Signed) THOMAS KELLY,
Chairman.
JOHN J. ALTPETER,
Committee on Judiciary."

(Enclosure)

PLACE OF INTERMENT FOR UNCLAIMED DEAD.

Mr. Gilmore, Chairman, presented a report from the Committee on Health and Public Order, transmitting reports of the Sanitary Inspector for the months of February and June, 1893, concerning the securing of a place of interment for unclaimed dead and sundry other matters, presented and referred to that Committee at the meetings held March 8 and July 5, 1893 (pages 1090 and 1314 of the Proceedings); and the report was read.

Mr. Gilmore, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed, and with enclosures,

placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosures, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"Chicago, July 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Health and Public order, to whom were referred the reports of the Sanitary Inspector of February and June, 1893, presented at the meetings held March 8 and July 5, 1893, (pages 1090 and 1314 of the Proceedings) respectfully return the same, after due consideration, with the recommendation that both reports be placed on file.

With reference to the suggestion of the Sanitary Inspector in the report for June, 1893, concerning the securing of a burial place for unknown men who die on the works, the Committee have carefully considered the same, and recommend that the Clerk and Sanitary Inspector be directed to communicate with the authorities at Willow Springs, and make arrangements, subject to the approval of the Board, looking toward the setting aside of a portion of the local cemetery for such unknown persons who die on the work, and the payment by the District of a fixed amount for cost of interment therein.

The recommendation of the February report, as to the ventilation of sleeping apartments and the regulations of the same are at this time under further consideration by the Sanitary Inspector. All of which is

Respectfully submitted,

(Signed) A. P. GILMORE,
Chairman.
JOHN J. ALTPETER,
Committee on Health and Public Order."

ADJOURNMENT TO SPECIAL TIME.

Mr. Kelly, seconded by Mr. Eckhart, moved that when the Board adjourn, it do adjourn to meet Monday, July 31, 1893, at 10 o'clock A. M.

The motion prevailed unanimously, and it was so ordered.

RECESS.

The Board then took a recess, during which Messrs. John P. Agnew and John McGillen, representing the firm of Agnew & Co., contractors on Sections 5 to 9 inclusive, appeared before the Board with reference to progress on their sections and new machinery to be put in place thereon.

REPORT ON CONDITION OF AGNEW SECTIONS.

On re-assembling at the close of the recess, Mr. Prendergast, seconded by Mr. Gilmore, moved that Agnew & Co. be requested to lay before the Chief Engineer for his consideration the drawings and contracts for all the machinery to be placed on the sections contracted for by them, and that the Chief Engineer report on same to the Board at the next meeting.

The motion prevailed unanimously, and the Chief Engineer was so instructed.

BOND FOR COSTS IN "SANTA FE" CASE.

Mr. Kelly presented an order, authorizing and directing the President and Clerk to execute a bond in the Circuit Court of the United States for the payment of all costs in the Santa Fe suit; and the same was read.

Mr. Kelly, seconded by Mr. Prendergast, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the President and Clerk authorized and directed to execute a bond in the Circuit Court of the United States for the payment of all costs in the "Santa Fe" suit, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the President and Clerk be authorized and directed in the case of the Sanitary District of Chicago vs. Farmers' Loan and Trust Company, et al., commenced in the Circuit Court of Cook County, Illinois, transferred on petition of one of the defendants to the

Circuit Court of the United States, Northern District of Illinois, and also, in the case of the Sanitary District of Chicago vs. Chicago, Santa Fe and California Railway Company, et al., commenced in the Circuit Court of Cook County, Illinois, and transferred on petition of one of the defendants to the Circuit Court of the United States, Northern District of Illinois, in each of said suits to execute a bond of this District, to be filed in said Circuit Court of the United States, conditioned for the payment of all costs which have accrued or may hereafter accrue in said suits; said bond to contain all other conditions as required by law, and that the matter of securing sureties on said bond be referred to the Joint Committee on Finance and Judiciary with full power to act and in its discretion to secure such sureties, either individuals or a surety company."

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Russell, the Board then adiourned to meet Monday, July 31, 1893, at 10 o'clock A. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

ADJOURNED MEETING.

The adjourned session of the one hundred and eightieth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Monday, July 31, 1893, at 10 o'clock A. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call Messrs. Prendergast and Wenter—two (2) members were present.

There being no quorum at 10:30 o'clock, the meeting stood adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

AUGUST 2 AND 4, 1893.

OFFICIAL RECORD.
Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, August 2, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held July 26, 1893, were approved as printed, on motion of Mr. Russell, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, July, 1893	$ 3,066 67	
Eng. Dept., Div. No. 1, (half month, ending July 31, 1893)	2,166 55	
Eng. Dept., Div. No. 2, (half month, ending July 31, 1893)	470 46	
Eng. Dept., Div. No. 3, (half month, ending July 31, 1893)	809 43	
Eng. Dept., Div. No. 4, (half month, ending July 31, 1893)	107 50	
		$ 6,620 61

Clerical Dept., Clerk's roll, July, 1893	$ 566 67	
Clerical Dept., office roll, (half month, ending July 31, 1893)	87 50	
		$ 654 17
Treasury Dept., Treasurer's roll, July, 1893		166 66
Law Dept., Attorney's roll, July, 1893	$1,191 67	
Law Dept., Joliet roll, July, 1893	333 33	
Law Dept., office roll, (half month, ending July 31, 1893)	97 50	
		1,622 50
Police Dept., Marshal's roll, July, 1893		150 00
General Account, Sanitary Inspector's roll, July, 1893	200 00	
General Account, Trustee's roll, July, 1893	2 333 34	
		2,533 34
Total		$11,747 28

ENGINEERING DEPARTMENT.

Keuffel & Esser Co (drafting material)	$14 50	
A. H. Abbott & Co., (drafting material)	13 00	
Marshall Field & Co., (curtains)	15 50	
F. Mayer & Co. (blue prints)	23 08	
Western Stone Co., (repairing boring machine)	5 00	
Hibbard, Spencer, Bartlett & Co. (hardware)	4 60	
B. Williams, (map rack)	15 00	
T. E. Copelin, (gauge tin tubes)	3 60	
Morrisson, Plummer & Co. (paint—Sag building)	24 97	
Trevor Spring Water Co. (ice)	12 00	
D. C. Dunlap, (horse and buggy)	45 00	
A. M. Munson, (rent, Mt. Forest)	20 00	
Waukesha Hygeia Mineral Springs Co, (water)	21 25	
W. T. Keating, (expense)	36 60	
J. B. Rohrer, (traveling)	25 53	
		$ 279 63

CLERICAL DEPARTMENT

Trevor Spring Water Co., (ice)	$3 00	
Warner's Towel Supply (toweling)	1 50	
		$ 4 50

LAW DEPARTMENT.

Adams A. Goodrich, (legal services)	$500 00	
R. M. Wing, (legal services)	350 00	
		$ 850 00

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings, July, 1893)	108 35
Grand total	$12,989 76

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 357, Engineering Department. (gauges and stakes)	$17 00
No. 459, Law Department, (stationery, etc.)	33 00
No. 1049, Clerical Department, (stationery, etc.)	27 50
Total	877 50

Mr. Boldenweck, seconded by Mr. Russell, moved that Requisition No. 357, for the Engineering Department, No. 459, for the Law Department, and No. 1049, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 357, for the Engineering Department, No. 459, for the Law Department, and No. 1049, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending July 29, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending July 29, 1893, as the same have been reported to me:

Engineering Department.....	88
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	99

Respectfully submitted,

(Signed) THOS. F JUDGE,
Clerk."

CONDITION OF WORK ON "M'ARTHUR SECTIONS."

The Clerk presented a report from the Chief Engineer, accompanied by a communication from McArthur Brothers, with reference to the condition of work on Sections 2, 3 and 4 of the Main Channel; and the report and accompanying communication were read.

Mr. Boldenweck, seconded by Mr Russell, moved that the report and accompanying communication be ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report and accompanying communication ordered printed and placed on file.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby certify that I am of the opinion that the work agreed to be performed by McArthur Brothers under each of their contracts with the Sanitary District of Chicago is unnecessarily and unreasonably delayed, and that the said contractors are willfully and persistently violating the conditions and covenants of each of their said contracts in regard to the amount of work to be done by them from month to month under each of said contracts.

This certificate is made under and in pursuance of a provision therefor contained in each of said contracts.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure.)

"CHICAGO, July 28, 1893.

Mr. Isham Randolph, Chief Engineer, Sanitary District of Chicago, Rialto Building, Chicago:

DEAR SIR—Your esteemed favor of July 26th is received. We regret your impression that the work under our contracts has been 'unnecessarily and unreasonably delayed. It is true that there has been some delay, due to neglect on the part of the District to pass upon our application for a just and proper classification of certain 'cemented conglomerate rock' unexpectedly met with in our excavations; six weeks having elapsed pending a report upon that application. Recently we have, in accordance with the request of the Board, resumed operations upon each of our contracts. You can be assured that our sections will not delay the opening of the Channel, if we receive from the Board such a classification or adjustment of the controversy as we are justly entitled to, in view of the unexpected material encountered. Had the proper information been given to us, as you so well know should have been given by the Engineer and the District, of the character of the material to be met with in excavation, at the time of the letting, we would most certainly have had our sections well advanced, so as to insure completion at the date mentioned in our contracts, which which may yet be done by us if a proper and just classification or adjustment shall be made. We trust that you will use your influence with the Board to correct the errors heretofore made in classification, and to obtain for us just compensation for the 'cemented conglomerate rock' already excavated by us at great cost.

You will kindly notice that prior to meeting with the 'cemented conglomerate' we were in preparatory work the most advanced contractors on the line, for which preparatory work we have received no pay from the District, and

which, therefore, does not appear in the District's records of work performed.

Yours truly,

(Signed) MCARTHUR BROS."

CHANGE IN RIVER DIVERSION.

The Clerk presented a report from the Chief Engineer, with reference to a change in the river diversion on Sections E and F, which matter was referred back to the Chief Engineer at the meeting held June 21, 1893 (page 1293 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Referring to the subject of river diversion referred back to this department with other matters, under your order of June 21st last, I desire to make a recommendation covering that portion of the river diversion between the Santa Fe bridge and the Calumet Terminal Railway, which is: that only so much of the proposed river diversion channel be excavated as is necessary for use in building the levee which has been projected along the northerly limit of the right of way of the District provided for in the contracts with land owners, and that the southerly levee be made with spoil from the main channel. This will result in a saving of about forty-nine thousand ($49,000) dollars to the District. I ask that this be ordered in advance of any comprehensive report upon the whole subject of river diversion, so that the work may be confined to the north levee.

Respectfully submitted,

(Signed) ISHAM RANDOLPH.

Chief Engineer."

REPORT ON CONDITION OF AGNEW SECTIONS.

The Clerk presented a report from the Chief Engineer with reference to the condition of work and the proposed machinery to be used by Agnew & Company on Sections 5 to 9 of the Main Channel, said report being made in response to an order passed at the meeting held July 26, 1893 (page 1354 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the work upon the Agnew contracts, I have to report that there now seems a reasonable ground for believing that good progress will be made upon Sections 5 and 6 in excavating the earth, inasmuch as Messrs. Agnew & Co. have arranged to put in a hydraulic dredge on those sections, the capabilities of which are such that the rate of progress which we require can be largely exceeded. I have seen Mr. Bates, the proprietor of this dredge, and he tells me that he figures that it will take him about fifteen days to get his dredge down through the Illinois and Michigan Canal and cut his way into the work which he has undertaken on the sections named.

As to the rock sections, I am assured by Messrs. Agnew & Co. that beginning from yesterday they would increase their forces and work double time, and that they will have additional machinery in the shape of high-power derricks in place by September 1st. The plans of these derricks were submitted to me yesterday and their workings explained. There are some very good features in these devices and I am of the opinion that they will do good work, in fact that they have a capacity for handling material faster than it can be supplied to them by the operatives in the pit. The contract under which these machines are being erected was not submitted with the drawings, so that I am not in position to state the terms or guarantys under which they are being furnished.

To remove the rock remaining upon Sections 7, 8 and 9 within the time remaining under the contracts, about 91,000 cubic yards must be moved each month, or, figuring a month as twenty-six working days, about 3,500 cubic yards per day. The five derricks ordered for the work would therefore have to move 700 cubic yards per day each. They are rated at 80 cubic yards

per hour. It would seem therefore that by working double time they could accomplish what we require, even should they prove equal to only half the work they are rated at.

Respectfully submitted,

(Signed) ISHAM. RANDOLPH,
Chief Engineer.

TEST PITS ON MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer, asking authority to sink test pits, as provided in the report, at certain points on the line of the Main Channel; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, August 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—As it is important, in view of the conditions which now prevail, that fuller knowledge should be had of the character of material overlying the solid rock on certain portions of this work, I hereby ask for authority to sink test pits sufficient in number and depth to enable reasonably approximate estimate to be made as to the quantities of the different kinds of material to be encountered in prosecuting the work of construction. I propose doing this work either by contract, at so much per foot for each pit, or by day's labor, whichever will prove best for the District.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

CHANGE IN GRADE OF MAIN CHANNEL.

The Clerk presented a report, accompanied by three enclosures and drawing, from the Chief Engineer, with reference to the change in grade of the Main Channel, which matter was referred back to the Chief Engineer at the meeting held June 21, 1893, (page 1293 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be printed, and, with enclosures and drawing, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and with enclosures and plat so referred.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—As the time is fast approaching when the grade of the channel now being constructed must be finally determined, it seems desirable that you should consider the subject in its bearings upon capacity and cost. For my own enlightenment upon the merits of these questions I have had Mr. Johnston make the calculations necessary for developing the comparative merits of the questions involved, and I submit herewith his reports to me. Guided by this information I am decidedly opposed to a reduction of grade to .053, as recommended by my predecessor, without a compensating enlargement of channel, but I recognize the advantage of raising the grade of mean low water at Station 1480, as urged by him. This result, however, can be accomplished, as shown by Mr. Johnston's report, by deepening the channel to 22 feet. This increased depth between Robey street and Station 1480 would increase the cost of the work about $200,000, or less than 1½ per cent. This excess of cost, however, will be diminished by an amount not yet ascertained in the cheapening of the work beyond Station 1480, by reason of the lessened depth of cutting required in making the channel.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Three (3) enclosures and drawing.)

REPORT ON RETAINING WALLS.

The Clerk presented a report from the Chief Engineer, with reference to changes in specifications for retaining walls along the Main Channel; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, July 31, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The progress of the work on the rock sections has brought up the question of retaining walls, and we find that we cannot meet the provisions of the specifications in several particulars. The opening up of the rock cuttings shows us that we cannot rely upon an adequate supply of suitable stone for building dry rubble walls in courses of the dimensions called for. The requirement which places the retaining wall flush with the channel sides at base and batters back to a width of 83 feet at top is not proper for shallow walls, and placing such walls flush with the channel sides will involve the removal of a large amount of shell rock to secure foundations which will stand exposure to frost and weather. It seems desirable that these conditions be gone into pretty carefully and conclusions reached which will meet them before any building is done. Rubble walls laid in cement will have to be resorted to in many instances, and their channel faces should be carried up vertically in the same plane with the rock as cut by channeling machine.

I am of the opinion that very low walls may be dispensed with entirely and levees built parallel with the channel at such distance from its sides as the safety of the work makes advisable. In some cases I would recommend building the retaining walls far enough back from the channel to be beyond the line of probable slope likely to be assumed by the upper layers of poor rock under the process of disintegration.

Owing to the varying conditions prevailing at different points along the line there should be more latitude allowed in carrying on the work than the specifications admit of.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

RE-LOCATION OF MAIN CHANNEL ON SECTIONS E AND F.

The Clerk presented a report, accompanied by plat and six tracings, from the Chief Engineer, with reference to the relocation of the Main Channel on Sections E and F, presented in response to an order passed at the meeting held May 24, 1893, (page 1246 of the Proceedings); and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed and, with accompanying plat and tracings, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and, with accompanying plat and tracings, referred to the Joint Committee on Engineering and Finance.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit a series of plats and cross-sections which I have used in arriving at a conclusion as to the proper location of the main channel east of Range line 12 and 13, east of Third Principal Meridian. Three of these plats illustrate the conditions for a channel with 20-foot flow and three for a channel of 22-foot flow. I am of the opinion that the proper location for the center line of the main channel for 20-foot flow, width at bottom 210 feet, capacity 600,000 cubic feet per minute, is 600 feet from the northerly line of right of way and parallel therewith (see plan No. 3, case No. 3), and should the 22-foot channel, width at bottom 183 2-10 feet, capacity 600,000 cubic feet per minute, be adopted (see plan No. 3, case No. 6) the proper location would still be 600 feet from and parallel with the northerly line of right of way. I therefore recommend, and urge, that whatever depth of channel is adopted it be so located that its center line for 600,000 cubic feet per minute flow be located 600 feet from and parallel with the northerly limit of right of way.

Inasmuch as work is now under way west of the range line this question of location should be speedily determined and the line on Section F adjusted to it.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

(Accompanied by six (6) tracings and one (1) plat).

SEMI-ANNUAL PROPERTY RETURN FROM ENGINEERING DEPARTMENT.

The Clerk presented a report from the Chief Engineer, transmitting the semi-annual property return from the Engi-

neering Department, for the half year ending June 30, 1893; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be ordered printed and, with accompanying property return, placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, July 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the property return of the Engineering Department for the half year ending June 30th, 1893.

Yours very truly,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosing semi-annual return).

MONTHLY REPORT FROM SANITARY INSPECTOR

The Clerk presented a report from the Sanitary Inspector for the month of July, 1893; and the same was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The usual high degree of health has been maintained in the various camps of the Sanitary District during the month of July. This has been a very gratifying fact, as the temperature has ranged unusually high, and was well calculated to bring out any sanitary deficiencies did any exist. My attention having been called to complaints made to this Board in regard to the bad quality of food served to the men on Section 7, I have made a special investigation of this matter, but failed to find any good ground for the charge. The material provided was of good quality, meat fresh and untainted, vegetables sound and they seem to be well cooked. I have been in all of the camps at various times when meals were being served, and I don't think that the charge of inferior poorly cooked food will apply to any of them. What is served to the men will compare favorably in every respect with what they receive in the boarding houses that they patronize in the cities, where prices for board and lodging are on a similar scale. The contractors are men of sufficient intelligence to know that a laborer cannot do his best on poor food, and self interest, if no other consideration, will prompt them to provide good material and see that it is well prepared.

Most respectfully submitted,

(Signed) WM. MARTIN, M. D.
Sanitary Inspector."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of July, 1893, and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"Balance on hand at date of last report.....		$2,597,928.82
Received from County Treasurer, Tax Account.....	$100,000 00	
Received from County Treasurer, Tax Account.....	25,000 00	
Received from Law Department, Land Account, (buildings and machinery on right of way).....	600 00	
Received from Engineering Department, (for lost freight).....	9 39	
Received from County Treasurer, Tax Account.....	25,000 00	
Received from Metropolitan National Bank, interest for July.....	1,037 19	
Received from National Bank of Illinois, interest for July.....	1,055 48	
Received from Ft. Dearborn National Bank, interest for July.....	1,031 45	
Received from Chicago National Bank, interest for July.....	1,057 79	
Received from American Trust and Savings		

Bank, interest for July	$ 1,190 07	$ 155,981 37
Total cash received for month		$2,753,910 19
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 831 83	
Treasury Department	166 67	
Engineering Departm't	11,200 50	
Engineering—Construction—Department	142,379 60	
Law Department	3,824 85	
Law Department—Land Account	117,139 65	
General Account	5,151 62	$280,694 72
Balance this date, in banks as per schedule endorsed hereon		$2,473,215 47

(Signed) MELVILLE E. STONE,
Treasurer.

Chicago, August 2, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 476,122 08
Chicago National Bank	475,638 08
Metropolitan National Bank	478,859 95
National Bank of Illinois	476,962 61
American Trust and Savings Bank	565,632 75
Total	$2,473,215 47

SETTLEMENT OF REPAUNO CHEMICAL COMPANY CLAIM AND APPROVAL OF M'CORMICK COMPANY VOUCHER.

Mr. Kelly, Chairman, presented a report from the Committee on Judiciary, with reference to and accompanied by the communication and statement from the Repauno Chemical Company concerning money claimed to be due them from the McCormick Construction Company, and transmitting the voucher for the McCormick Construction Company for $2,927.75 for work done on Section 14 of the Main Channel, with the recommendation that the same be approved and ordered paid, said communication and voucher having been referred to that Committee at the meeting held July 19, 1893 (pages 1343 and 1344 of the Proceedings); and the report was read.

In connection with the report, the Clerk presented a communication from Messrs. Thornton & Chancellor, attorneys for the Repauno Chemical Company, stating that the claim of that company against the McCormick Construction Company had been paid in full; and the communication was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and, with accompanying communication from the Repauno Chemical Company, placed on file, the recommendations made therein concurred in, the voucher for the McCormick Construction Company, for $2,927.75, for work done on Section 14, approved and ordered paid, and the communication from Messrs. Thornton & Chancellor ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with accompanying communication from the Repauno Chemical Company, placed on file, the recommendations made therein concurred in, the voucher for the McCormick Construction Company for $2,927.75, for work done on Section 14, approved and ordered paid, and the communication from Messrs. Thornton & Chancellor ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Judiciary, to whom was referred the communication from the Repauno Chemical Company, by Charles L. Patterson, dated July 19, 1893, making claim against the McCormick Construction Company, and also the estimate of the McCormick Construction Company, for work done on Section 14, return the same herewith and report back as follows:

The claim of the Repauno Chemical Company has been paid in full, as shown by the communication this day presented to the Board.

Your Committee is advised that all claims against said construction company have been satisfactorily adjusted, and therefore recommend that said estimate be approved and ordered paid.

Respectfully submitted,

(Signed) THOMAS KELLY,
Chairman.
WM. BOLDENWECK,
JOHN J. ALTPETER,
Committee on Judiciary."

(Enclosing communication and estimate voucher.)

The following is

THE COMMUNICATION:

"CHICAGO, July 31, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The claim of the Repauno Chemical Company against the McCormick Construction Company has been paid in full, and we are authorized by the former company to withdraw its petition lately presented to you for the payment of its claim out of the proceeds in your hands to the credit of the Construction Company.

Very respectfully yours,

(Signed) THORNTON & CHANCELLOR.

Per S. S."

PURCHASE OF "O'CONNELL LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from Thomas O'Connell of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Thomas O'Connell, on the voucher of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Thomas O'Connell, on the voucher of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Thomas O'Connell for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of twenty-nine hundred ($2,900) dollars.

Your Committee recommend that the Clerk of the District be directed to pay, on the voucher of the Attorney, to the said Thomas O'Connell the sum of twenty-nine hundred ($2,900) dollars in full payment for the following described lands, to-wit:

That part of Lot five (5) of a Subdivision of the southeast fractional quarter (¼) of Section eleven (11), Township thirty-eight (38) North, Range twelve (12) East of the Third Principal Meridian, as per plat recorded in the Recorder's office of Cook County, Illinois, in Book 173 of Maps, page 27, bounded and described as follows:

Beginning at the intersection of a line drawn from the northeast corner of said southeast fractional quarter (¼) to a point in the south line of said southeast fractional quarter (¼), 900 feet east of the southwest corner of said southeast fractional quarter (¼) with the north line of said Lot five (5), and running thence east on said north line to the westerly margin of the Desplaines River, thence easterly at right angles with the general course of said river there to the center thread of the current of said river, thence southerly down said center thread to its intersection with a line drawn easterly from the point of contact of the south line of said Lot five (5) with the westerly margin of said river and at right angles with the general course of said river there, thence westerly along said line to said westerly margin, thence west on said south line to its intersection with said first line herein described, thence northeasterly on said last mentioned line to the point of beginning.

Said premises lying and being situate in the County of Cook, in the State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY.
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,
WM. BOLDENWECK.

Joint Committee on Finance and Engineering."

PROJECT FOR DRAINING GOOSE LAKE.

Mr. Cooley, Chairman, presented a report (accompanied by two communications from the Chief Engineer) from the Joint Committee on Engineering and Finance, with reference to the report of the Chief Engineer concerning the project for draining Goose Lake, presented and referred to that Committee at the meeting held July 19, 1893, (page 1339 of Proceedings); and the report and accompanying communications from the Chief Engineer were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, and with enclosures, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck. Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with enclosures, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the project for draining Goose Lake and improving the Desplaines River along the east branch at Romeo Island, submitted by the Chief Engineer on July 19, 1893, your Committee reports as follows:

We have considered the subject matter, and the Chief Engineer has submitted additional estimates, which are submitted herewith for a channel which is deemed sufficient to drain Goose Lake during the season of low water and draw down the level thereof so as to facilitate the completion of the river diversion above, and the construction of the embankment opposite.

This work, to the extent recommended in the accompanying communication, is deemed of immediate importance, and should be constructed as soon as practicable in order to facilitate other work which must be completed this season.

The Committee therefore recommends that the Chief Engineer be authorized and directed to have the work done as soon as practicable, under the provisions of the contract governing the extra work, and that he carry out the same substantially as recommended in his communication herewith, subject to such modifications as in his judgment may be required during the progress of the work.

Respectfully submitted,

Signed) E. COOLEY,
Chairman.
THOMAS KELLY,
B. A. ECKHART,
WM. BOLDENWECK,
JOHN J. ALTPETER,
Joint Committee on Engineering and Finance."

(Enclosures.)

"CHICAGO, August 1, 1893.

To the Committee on Engineering:

GENTLEMEN—I submit for your consideration a report on a revised project for draining off Goose Lake by a narrow channel. This work amounts to but a little more than scalping off the rock ledges which now obstruct the flow of water at low stages. Besides the favorable results to be attained in the line of sanitation, the execution of this project would accomplish an immediate good in drawing down the waters which are now interfering with the completion of the river diversion as far back as Section No. 9. This back water was pointed out to several of the Trustees when they visited this portion of the work on Tuesday last.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer"

"CHICAGO, July 31, 1893.

To the Committee on Engineering:

GENTLEMEN—I submit herewith an approximate estimate of the amount of material which must be removed between Stations 1318 and 1390 to give a channel twenty-five feet wide for the purpose of draining Goose Lake at stages of low water. The elevation of Station 1318 to be +1.4; rate of grade 0.12 per one thousand feet. Elevation of Station 1390, +0.54.

Rock excavation.....4600 cubic yards.
Earth excavation..... 936 cubic yards.

Total.....5536 cubic yards.

At the contract prices on the sections opposite, this improvement would cost $3,926.30.

Respectfully submitted.

(Signed) ISHAM RANDOLPH,
Chief Engineer."

VISITING ENGINEERS, INSPECTION OF THE MAIN CHANNEL.

The Clerk presented a communication, directed to President Wenter, from O. Chanute, Chairman of the General Committee of Engineering Societies, World's Columbian Exposition, suggesting an inspection of the Main Channel by the visiting engineers attending the Engineering Congress; and the communication was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the communication be ordered printed and referred to the Joint Committee on Finance and Engineering, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Cooley—one (1).

Upon which result the President declared the motion carried, and the communication ordered printed and so referred.

The following is

THE COMMUNICATION:

"CHICAGO, August 2, 1893.

Hon. Frank Wenter, President, Board of Sanitary Trustees, Rialto Building, Room 526, Chicago, Illinois:

DEAR SIR—The General Committee of Associated Engineering Societies understands that a number of the foreign engineers now in attendance upon the Engineering Congress have expressed the desire to make an inspection of the great work now being carried on by your Board between here and Joliet. It has also been told that your Board would be disposed to further such an excursion.

It also understands that the Atchison, Topeka & Santa Fe Railway would probably be willing to furnish a special train for that excursion, if advised in time, and make a very small, or no, charge therefor.

Will you kindly advise me whether such an excursion can be arranged?

I beg to suggest that it would be preferable that such an excursion should take place next Monday, after the adjournment of the Congress, and that it might be arranged to leave at 10 o'clock in the morning, returning at such time as would enable the foreign engineers to see your works.

The details as to time, program, etc., should be arranged very soon, in order that notice may be given during the Congress to all engineers who desire to go, to file their names with the Secretary of the Associated Engineering Societies, Mr. Max E. Schmidt, 10 Van Buren street.

Yours respectfully,

(Signed) O. CHANUTE,
Chairman."

MC'ARTHUR BROTHERS TO DISCONTINUE WORK ON SECTIONS 2, 3 AND 4.

Mr. Kelly presented an order directing the Clerk to notify McArthur Brothers to discontinue all work on sections 2, 3 and 4 of the Main Channel, under their contracts with the District, and that the District will proceed to have said work completed, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk directed to notify McArthur Brothers in accordance with the same.

The following is

THE ORDER:

"The Chief Engineer of the Sanitary District of Chicago having certified to this Board that the work called for by each of the contracts between McArthur Brothers and the Sanitary District of Chicago is unnecessarily and unreasonably delayed, and that said contractors are willfully and persistently violating the conditions and covenants of each of their said contracts in regard to the quantity of work done thereunder from month to month; it is, therefore,

Ordered, That the Clerk of the Sanitary District of Chicago notify the said McArthur Brothers to discontinue all work under each and every of their contracts with the Sanitary District of Chica.

go, and that the District will proceed to have said work completed, as provided in each and every of said contracts, and charge the cost thereof to said McArthur Brothers in accordance with the provisions of each and every of their said contracts; and,

Ordered further, That the said Clerk also deliver to said McArthur Brothers a certified copy of this order and a copy of the certificate filed with this Board by the Chief Engineer of the District in relation to the work being done by said McArthur Brothers under each and every of their said contracts."

ADJOURNMENT TO SPECIAL TIME.

Mr. Eckhart, seconded by Mr. Kelly, moved that when the Board adjourn, it do adjourn to meet Friday, August 4, 1893, at 9:30 o'clock A. M.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7). Excused and not voting—Mr. Russell—one (1). Nays—None.

Upon which result the President declared the motion carried, and that when the Board adjourn, it do adjourn to meet Friday, August 4, 1893, at 9:30 o'clock A. M.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned to meet Friday, August 4, 1893, at 9:30 o'clock A. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

ADJOURNED MEETING.

The adjourned session of the one hundred and eighty-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Friday, August 4, 1893, at 9:30 o'clock A. M., pursuant to motion

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7) members were present.

ADVERTISEMENT, SPECIFICATIONS, BOND AND PROPOSALS FOR RE-LETTING OF SECTIONS 2, 3 AND 4.

Mr. Kelly, for the Joint Committee on Engineering and Judiciary, presented a report transmitting a form of advertisement, specifications, bond and form of proposals for the re-letting of Sections 2, 3 and 4 of the Main Channel, prepared in pursuance of an order passed by the Board at the meeting held August 2, 1893, (page 1366 of the Proceedings), directing McArthur Brothers, present contractors for said Sections, to discontinue all work under their contracts, and determining upon the completion of the same by the District, as provided in the order, and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted and, with enclosures, ordered printed and placed, on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with enclosures, ordered printed placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT, WITH ACCOMPANYING SPECIFICATIONS, ETC.:

"CHICAGO, August 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Judiciary have had under advisement the form of advertisement for bids, proposals and specifications for re-letting Sections two, three and four, known as the McArthur Brothers' sections. In view of the fact that the Board at its last meeting ordered said McArthur Brothers to discontinue all work on said sections and instructed the Clerk to notify said McArthur Brothers of said order and said Clerk having duly notified the said McArthur Brothers, in accordance with the said instructions, your Committee recommend that contract Sections two, three and four be immediately advertised for re-letting in accordance with the terms of said order passed at the last meeting of the Board, and further recommend that the inclosed form of advertisement, form of proposal, contract and specifications and bond for the re-letting of said Sections two, three and four be adopted by the Board.

It is also recommended that the Clerk be instructed to advertise at once for proposals, as follows:

One insertion daily in a paper of gen-

eral circulation from August 5th, 1893, to October 4th, 1893, inclusive; one single insertion in each of the twelve Chicago daily papers; one insertion, weekly, in each of the four technical papers for the seven weeks prior to October 4th, 1893.

The form of advertisement, the form of proposal for bids and the contracts and specifications herewith submitted are the same as those under which said contract Sections two, three and four were let to McArthur Brothers. The only changes are those rendered necessary by the change of time.

Respectfully submitted,

(Signed) THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
Joint Committee on Engineering and Judiciary."

The following is

THE ADVERTISEMENT:

THE SANITARY DISTRICT OF CHICAGO.

To Contractors:

Sealed proposals addressed to the Board of Trustees of the Sanitary District of Chicago, and indorsed

"Proposal for excavating a portion of the Main Drainage Channel" will be received by the Clerk of the said Sanitary District at Room H, Rialto Building, Chicago, Ill., until 12 M. (standard time) of Wednesday, the 4th day of October, 1893, and will be publicly opened by the said Board of Trustees at the regular meeting held that day, or at a special meeting called for that purpose.

The work for which the said tenders are invited is the excavation of that portion of the Main Drainage Channel for the said Sanitary District between Willow Springs and Joliet, Ill., known as contract Sections two (2), three (3) and four (4) and consists in all of about 1,484,800 cubic yards of rock, of about 2,179,500 cubic yards of earth, and the building of about 76,466 cubic yards of dry rubble walls.

Each of said sections will be treated as a separate contract in canvassing the proposals and making awards. As all awards will be made by individual sections each bidder must make prices for each section, separate and distinct from every other.

Each proposal must be accompanied by a certified check or cash to an amount equal to $3,000 multiplied by the number of sections bid upon.

All certified checks must be drawn on some responsible bank doing business in the City of Chicago and be made payable to the order of the Clerk of the Sanitary District of Chicago. Said amount of $3,000 for each section will be held by the Sanitary District until all of said proposals have been canvassed and contracts awarded and signed, the return of said check or cash being conditioned upon any bidder to whom an award of any portion of said work may be made appearing within ten days after notice of such award being given, with bondsmen, and executing a contract with the Sanitary District for the section or sections of said work so awarded, and giving a bond satisfactory to the said Board of Trustees for the fulfillment of the same in the amount of $100,000 for each section of work awarded him.

All proposals must be made upon blank forms furnished by the Sanitary District and must give the price for each separate item of work.

The bids will be compared on the basis of the Engineer's approximate estimate of quantities, which will be furnished with copies of the specifications.

No proposal will be considered unless the party making it shall furnish evidence satisfactory to the Board of Trustees of his ability to do the work, and that he has the necessary pecuniary resources to fulfill the conditions of the contract, provided such contract shall be awarded him.

Bidders are required to state in their proposals their individual names and places of residence in full.

Specifications and plans may be seen at the office of the Chief Engineer, Rialto Building, Chicago, Ill.

The said Board of Trustees reserves the right to reject any and all bids.

THE SANITARY DISTRICT OF CHICAGO,
By FRANK WENTER,
President of its Board of Trustees.
Attest:

THOS. F. JUDGE,
Clerk.

CHICAGO, ILL., August 5, 1893.

The following are

THE SPECIFICATIONS:

THE SANITARY DISTRICT OF CHICAGO.

Contract and specifications for Sections two (2), three (3) and four (4) of the Main Drainage Channel in the Valley of the Desplaines River below Willow Springs, Illinois.

This Agreement, Made and entered into this ..... day of ..... A. D. 189 , by and between the Sanitary District of Chicago, of the first part, and .....
.....
.....
of .....
in .....
of the second part.

A—

WITNESSETH: That the said party of the second part has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with said party of the first part, for the consideration of the payments to be made as provided for herein, to the said party of the second part, by the said party of the first part, and under a penalty expressed in a bond bearing even date herewith, at his own proper cost and expense to do all the work, and to furnish all material, tools, explosives, labor and all appliances and appurtenances called for by this agreement, in the manner and under the conditions hereinafter stipulated, that are necessary to the complete excavation and entire removal of earth, rock, glacial drift and other material, from that portion of the said Main Drainage Channel, known and distinguished by the specifications herein contained, and the plans accompanying them, as Section ....
.....
together with the building of all collateral works, which by the terms of this contract are included in the same. Said section to be entirely completed and prepared ready for inspection as provided for in Section 27 of an Act of the Legislature of the State of Illinois, entitled "An Act to create Sanitary Districts and to remove obstructions in the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889.

B—

It is further covenanted, contracted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of the Sanitary District of Chicago, and such assistants, superintendents and inspectors as the Chief Engineer may appoint, and by whose measurements and calculations the quantities and amounts of the several kinds of work performed under this contract shall be determined, and on whose inspection all work shall be accepted or condemned. The said Chief Engineer and his assistants and inspectors shall have full power to reject or condemn all materials furnished or work performed under this contract which does not fully conform to its spirit, and to the terms and conditions herein expressed; and the Chief Engineer shall decide every question which may arise between the parties hereto relative to the execution thereof, and his decision shall be final and binding upon both parties.

C—

Whenever the words "Sanitary District" are used in this contract they shall be understood to mean the Sanitary District of Chicago as represented by the Board of Trustees or their duly authorized and accredited agents.

Whenever the word "Engineer" is used herein it shall be understood to mean the Chief Engineer of the Sanitary District of Chicago or his properly authorized agents, limited by the particular duties entrusted to them.

Whenever the word "Contractor" is used herein it shall be understood to mean the person or persons, or copartnership, or corporation entering into the contract as party of the second part.

SPECIFICATIONS.

D—

1. *Location*—The work covered by and included in these specifications is the excavation of that part of the Main Drainage Channel known as Sections two (2), three (3) and four (4) and the building of certain collateral works for the Sanitary District of Chicago, located below the Willow Springs road, in Cook County, Illinois, and north and west of the Illinois and Michigan Canal, approximately as shown on the accompanying plans, marked "2 a," "2 b" and "D," and as shall be located by

the Engineer. The total length is approximately 15,000 feet.

2. *Sections*—Said sections form three of the fourteen sections into which said Main Drainage Channel below Willow Springs is divided, which fourteen (14) sections are described as follows:

Section 1. Extending from the station designated 740 to the station designated 800.

Section 2 Extending from the station designated 800 to the station designated 850.

Section 3. Extending from the station designated 850 to the station designated 900.

Section 4. Extending from the station designated 900 to the station designated 950.

Section 5. Extending from the station designated 950 to the station designated 1000.

Section 6. Extending from the station designated 1000 to the station designated 1050.

Section 7. Extending from the station designated 1050 to the station designated 1097.

Section 8. Extending from the station designated 1097 to the station designated 1155.

Section 9. Extending from the station designated 1155 to the station designated 1208.

Section 10. Extending from the station designated 1208 to the station designated 1268.

Section 11. Extending from the station designated 1268 to the station designated 1320.

Section 12. Extending from the station designated 1320 to the station designated 1370.

Section 13. Extending from the station designated 1370 to the station designated 1420.

Section 14. Extending from the station designated 1420 to the station designated 1480.

Sections 1, 2, 7, 8, 9 and 10 involve certain changes in the river channel opposite. Section 9 involves a possible relocation of the Illinois and Michigan Canal, and Sections 8 to 14, inclusive, may require railway changes. The Sanitary District reserves the right to make all river, canal and railway changes, independent of the main work.

3. *Grade*—The grade line of the bottom of said Main Channel at the station designated 740 shall be at an elevation of 24 feet below the datum established by the Illinois and Michigan Canal Trustees in 1847, and shall slope thence uniformly at the rate of 0 08 of a foot vertical to 1 000 feet horizontal to the end of the standard excavation at station 1480, where it shall have an elevation of 29.92 feet below datum.

The Sanitary District reserves the right to change said grade by raising or lowering it, or by increasing or decreasing the slope, thereby increasing or decreasing the amount of excavation; provided, that said change shall in nowise affect the terms of this contract as to price, or entitle the said contractor to any compensation additional to the rate fixed by this contract, or render the Sanitary District liable for any damages whatsoever, direct or indirect. Provided, further, that the said change shall in no place affect the grade by an amount exceeding four feet; and that the Sanitary District shall notify the said contractor of any such change before any portion of said channel shall have been finished in conformity to the grade as hereinbefore specified.

4. *Dimensions of Cross Sections*—The bottom of the finished channel shall have a width of 160 feet in the clear; where the channel is in rock the sides of said channel shall be kept vertical, except as to necessary offsets occasioned by the use of a channeling machine.

The sides of the rock channel are to be worked out with a channeling machine from top to bottom, the channels being cut ahead of the blasting. In doing this the bottom of each cut of the machine is to be made to a uniform level above the grade, and each succeeding one offset six inches from the one just preceding. The contractor will be allowed to work the rock in one or more stopes, at his option, so far as concerns the main portion of the width of the channel, but in case he elects to work

the face in stopes having a greater height than the reach of the channeling machine in depth, then the blast holes are to be so disposed as to effectually prevent any blast from breaking or shattering the rock beyond the sides of the prism of the channel, which are to be left as smooth and solid as can be obtained with a skillful and proper use of a channeling machine.

In determining the width of the channel at the top of the rock, the necessary offsets made by the operation of the machine are to be allowed for. Provided, that where the depth of the rock does not exceed 16 feet there shall be but one reach or cut of the channeling machine made, and that when its depth is over 16 feet, and not greater than 24 feet, there shall be but two cuts made; and that nowhere is there to be more than three cuts made for the whole depth of the rock excavation.

Where the channel is partly in earth and partly in rock, the earth shall be so excavated as to leave a berm on top of the rock equal to three-eighths (⅜) of the depth of the rock surface below a level 5 feet above datum; provided that the berm shall be in no event less than 5 feet; and provided further, that where the section is entirely in earth the additional width at bottom shall conform to the above rule: and provided also, that at the level of 5 feet above datum the berm shall not be less than 10 feet, with a slope toward the channel of one-half foot. In all cases the earth shall be taken out with the least slope which it is found can be safely maintained until the retaining walls are built, and as may be directed by the Engineer from time to time.

5. *Retaining Walls*—Wherever the top of the rock at the sides of the channel is below a level of five (5) feet above datum, the sides above the rock are to be walled with dry rubble masonry as soon as practicable after the channel is opened.

If the bottom of the channel is in earth, or glacial drift, the retaining walls shall be founded upon a footing made in a trench dug not less than one foot below grade, and as much deeper as may be directed by the Engineer, said footing course to project 12 inches beyond the face of the wall. If the bottom of the channel is in rock, the retaining walls are to be founded upon the surface of the rock. Before beginning the construction of the wall the surface of the rock is to be cleared of earth and foreign substances, and all loose and soft rock is to be removed for the full width of its base, that the wall may be founded upon a clean, solid stratum. If this stratum of natural rock inclines towards the Main Channel with such an inclination and in such a manner as, in the opinion of the Engineer, to render the footing of the wall liable to slip on the same, then the contractor shall excavate the top surface of the rock parallel with and beneath the proposed wall, in accordance with the directions of the Engineer, so as to effectively remove all liability of slipping. The walls in all cases are to be built to a height of five feet above datum. Their thickness at the top shall be four (4) feet, and at the bottom they shall have a thickness equal to one-half of their total height; provided that their thickness at the bottom shall never be less than their top thickness plus their total batter. At no point is their thickness to be less than one-half their height. The back of each wall is to be built in vertical planes with offsets, as shown on plans marked "D."

The bottoms of the walls shall be fair with the sides of the channel. The tops of the walls on different sides of the channel are to be 83 feet from the center line of the channel, making a distance apart in the clear of 166 feet, or otherwise, as directed by the Engineer.

The retaining walls are to be built of stone taken out of the excavation, those of the largest size and the most regular rectangular shape being selected for the faces and for main binding stones; the face of each wall to be laid true to line, the stones being scabbled and carefully placed in a firm position on their natural quarry beds without the use of spawls or small stone in their joints. The walls are to be laid in courses not less than 12 inches nor more than 30 inches in thickness, no stone being used in the face less than 12 inches in thickness, and whose depth and width is less than twice its thickness, each course being carried through the whole thickness of the wall before another course is begun. In laying each course the larger stones are to be carefully placed in position, covering the whole surface of the wall in such manner as to break joints with the larger stones of the preceding course, thereby thoroughly binding the wall into a solid mass; all

spaces between the larger stones to be filled with smaller ones, which shall be reduced to such size with a hammer that all the larger interstices and uneven places shall be entirely filled, and an even and uniform bed prepared for the succeeding course. Only selected stones of a size sufficiently large to cover the whole thickness of the wall are to be used for the top course.

The spaces between the back of the walls and the slope of the excavation are to be filled by the contractor with broken rock or gravel taken from the excavation. The surface of the back filled material when finished to be inclined toward the wall at the rate of one vertical to ten horizontal, unless otherwise directed by the Engineer. Where the Main Channel runs through the quarries or depressions of any kind which are lower than the top of the walls, the whole space shall be filled from the retaining walls to the sides of the depressions.

6. *River Diversion*—In sections hereinbefore specified, the contractor is to change the course of the Desplaines River within the limits of the right of way in the manner shown on plan "2 a," the south boundary of said course when changed to be nowhere nearer to the center line of the channel than 360 feet.

The diversion channel in each case is to be excavated to one foot below the level of low water in the river, and to a width of 200 feet with slopes of one to one. All the material from the excavation in each section is to be wasted on the south side of the new river channel except as otherwise permitted by the Engineer. That portion of the river diversion channel in each respective section is to be classed as belonging to that section.

7. *Clearing and Grubbing*—The contractor will be required to remove all trees, stumps, buildings, fences, or other incumbrances within 150 feet of the center line of the channel, or that may be in the way of any collateral or subsidiary work herein specified. All such material of value shall be the property of the contractor, and all worthless material shall be disposed of as directed by the Engineer. The cost of this work shall be included in the prices for excavation as hereinafter stated.

8. *Levee*—The said contractor shall build at his own cost and expense all or any levees which may be necessary to protect the work, provided for in this contract, during the progress of the same. And should flooding occur either before or after the building of any such levees, any and all expenses and damages to which he may be put shall be borne by the said contractor.

9. *Disposition of Material*—The contractor, except as hereinbefore specified, is to dispose of all material to be excavated under the terms of this contract at his own expense and in the most convenient manner, in waste banks on the right of way; provided, that the foot of the inner slope of said banks shall not be nearer to the edge of the Main Channel than 50 feet, measured at an elevation of 10 feet above datum, and that the foot of the outer slope shall not approach the margin of the right of way closer than 10 feet, nor encroach on the channel of the Desplaines River as finally established, and so as to materially interfere with the flow thereof; the slopes next the channel and said margin of river to be not less than one and one-half to one, and said waste banks to be within the limits of 450 feet from the edge of the Main Channel, and provided that this shall not be construed to prevent any other disposition of the material with the consent of the Engineer.

10. *Drainage*—The contractor is to provide all pumping machinery and operate the same at his own cost and expense during the time of excavation, and until the whole work is fully completed and inspected, as provided for in other sections of this contract. The contractor shall dispose of any water pumped in such manner as not to interfere with the operations of other contractors for the Sanitary District.

11. *Classification of Material*—All material excavated under the provisions of this contract is to be classified under one or the other of two heads, viz.: "glacial drift" and "solid rock."

Glacial drift shall comprise the top soil, earth, muck, sand, gravel, clay, hard-pan, boulders, fragmentary rock displaced from its original bed, and any other material that overlies the bed rock.

Solid rock shall comprise all rock found in its original bed, even though it may be so loosened from the adjacent underlying rock that it can be removed without blasting.

12. *Quantity of Material*—A profile of the surface of the ground approximately on the line of the Main Channel, and also of the supposed surface of the bed rock is shown on plan "2 b." These profiles, though approximately correct, do not purport to be absolutely so, and are only presented as approximations, as is also the schedule of quantities attached as an appendix hereto. The contractor is to take all risk as to variations of the total quantity of material excavated, as well as the relative amount of glacial drift and solid rock.

13. *Highways*—All public roads, crossing or lying adjacent to the Main Channel, shall be kept open and unobstructed during the progress of the work. No interference with any public road will be allowed until a temporary or permanent road has been provided, under the direction of the Engineer, which will permit safe and free travel No interference will be allowed with any railway or canal until such time as other and proper provision for the operation of such railway or canal has been made.

14. *Bridges and Structures*—The Sanitary District reserves the right to enter upon the said Main Channel and right of way, at any time or place, after or before the excavation has been completed, for the purpose of erecting, or preparing for the erection, of any bridge, or bridges, or the building of any road or other structure, provided that such work of erection or preparation therefor shall not interfere with the contractor in carrying out the provisions of this contract. To this end the contractor shall make, or allow the Sanitary District to make, at the expense of said Sanitary District, such changes in railroad tracks, buildings or structures used by him as will not interfere with the operations of said contractor, and that, in the opinion of the Engineer, are necessary to the accomplishment of the purpose in view.

Said contractor is to make all necessary excavations in or adjacent to the Main Channel, and do all necessary grading, as directed by the Engineer, that may be needed for the building of any kind of structure which the Sanitary District may wish to erect, and he is to be paid therefor at the rates hereinafter given for the Main Channel; provided, that in case a bridge is to be built having a center and a protection pier, the said contractor is to widen out the sides of the Main Channel as may be directed by the Engineer, and is to leave a mass of rock in the middle of the channel to serve as a protection pier of the dimensions and shape directed by the Engineer, the sides of said mass being taken out with a channeling machine as hereinbefore specified for the Main Channel.

15. *Explosives*—The contractor is to furnish all explosive compounds for blasting the material provided to be excavated under this contract; and, whereas, the storing, handling and use of so large an amount of explosive material requires the utmost care and discrimination, it is therefore understood and agreed that the said contractor shall arrange for the storage of all explosive materials at a distance not less than 600 feet from the work, or from any other magazine, or from any dwelling occupied for a habitation, and that not more than 5,000 pounds shall be kept in one place. It is further understood and agreed that said explosive material shall in no case be brought onto the work except when needed for the purpose of charging the blast holes, and then only in such quantity as is needed for the particular work in hand, and that none but skilled and careful men shall be employed in the handling or use of said explosives, and that no liquid explosive shall be used.

It is further understood and agreed that the ground surrounding all magazines shall be kept free of vegetable or combustible material for a radius of one hundred feet, and that their walls shall be made bullet proof, to a height of one foot above the contained explosives, and that in no case shall they be made of brick or stone. It is also understood and agreed that such signals of danger, as may be directed by the Engineer shall be given or displayed before the firing of any blast, and that the said contractor shall conform his acts to and obey all rules and regulations relative to the handling of explosives and the firing of blasts, for the protection of life or property, which may be made by the Engineer from time to time.

16. *Measurement*—Measurement for all excavated material will be made in excavation by the cubic yard of twenty-seven cubic feet, based upon the survey and cross-section notes of the Engineer.

All "glacial drift" excavated under the

direction of the Engineer, whether in or out of the Main Channel, will be included in the measured quantities.

"Solid rock" excavated within the limits of the dimensions and grade of the Main Channel, or of any river diversion channel, or for the placing of any bridge or other structure, as hereinbefore specified, or that shall be taken out by direction of the Engineer, shall be included in the measured quantities; provided, that nothing will be included for rock that comes out below grade in the excavation of any channel.

"Retaining walls" will be measured by their net cubical contents, as specified.

The prices given herewith are to include all work herein specified, as clearing and grubbing, levees for protection, pumping, roadways for working, back filling of retaining walls, and generally all work and material found necessary in prosecuting this contract.

17. *Extra Work*—All claims for extra labor, or material furnished by the contractor, or for damages from any cause whatever, must be reported to the Engineer at the time such labor or material are furnished, or such damages occur, and they must also be presented to him in writing at the end of the month; provided that nothing shall be paid for as extra work that can be classified under any of the heads upon which prices are fixed by this contract.

Whenever work is required to be done which is not now contemplated or covered by the prices hereinafter given, the Engineer shall fix such prices for the work as he shall consider just and equitable, and the contractor shall abide by such prices; provided he enters upon such work with full knowledge of the prices so fixed by the Engineer, but if the contractor declines executing said work at the prices fixed by the Engineer then the Sanitary District may enter into contract with any person or persons for its execution, the same as if this contract had never existed; and if extra work, or work not provided for in this contract is performed by the contractor before prices have been fixed for such work, then the Engineer shall estimate the same at such prices as he shall deem just and reasonable, and his decision shall be final, and the said contractor shall accept of said prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if the extra work done under this contract is of such a nature, being distinct from other work being done by said contractor, that the actual cost of the same can be determined, then the said contractor shall receive and the Sanitary District shall pay, in full satisfaction for the same, the actual cost of the work with 15 per cent. added. Provided further, that nothing shall be deemed extra work which can be measured or estimated under the provisions of this contract.

18. *Responsibility of Contractor*—All the work provided for in this contract is to be done under the direction and supervision of the Chief Engineer and his properly authorized agents. He is to be guided by the lines, stakes, marks and grades given by them, and is to carefully preserve the same as far as possible during the progress of the work, and is to furnish all needed facilities, without charge therefor, to enable the Chief Engineer to properly give lines and grades and to measure the work from time to time.

All work will be subject to inspection by the said Engineer and his said agents, and if not in accordance with the requirements of this contract, it is to be made good by the contractor.

The contractor will be responsible for the entire work until completed and accepted by the Sanitary District. The contractor will be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He is to keep the same under his control, and will not be allowed to sub let all or any part of it, it being distinctly understood and agreed that the sub-letting of the work covered by this contract, or any part thereof, shall, after thirty days' notice, work a forfeiture of the contract at the option of the Sanitary District.

The contractor will not be allowed to assign, by power of attorney or otherwise, any portion of the moneys that may become due through the workings of this contract. In case the contractor fails to comply with the provisions of this contract, as to progress and character of work, he shall be duly notified in writing, and thirty days after the giving of said notice the party of the first part may declare this contract for

feited, if there is substantial failure to comply with its provisions.

19. *Changes in Plan*—In addition to the reservations hereinbefore made, the Sanitary District reserves the right to make alterations in the line, grade, plan, form, dimensions, or material of the work herein provided for, either before or after the beginning of construction; provided that if alterations are made the general character of the work as a whole is not thereby changed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages, or for anticipated profits on the work that may be dispensed with; if they increase the amount of work, such increase shall be paid for according to the quantity of work actually done, and at prices and rates established for such work under this contract. Notice of any change of plan must be given the contractor in writing. And it is expressly agreed that no alterations, or additions, or extra work are to be paid for unless directed in writing.

20. *Tools*—The contractor is to furnish all the tools of every kind and description, including pumps, cars and track, necessary to the full and complete carrying out of this contract, and on completion of the work is to remove all tools, buildings and material of all kinds from the right of way of the Main Drainage Channel.

21. *Precautions*—Whatever precautions may be necessary to render any portion of the work more secure in any respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work, shall be taken by the contractor.

22. *Workmen*—The contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

E—

Damages—If any damages shall be done by the contractor, or by any person or persons in his employ, to the owner or occupants of lands, or to any property adjoining, or in the vicinity of the work herein contracted to be done, or to a neighboring contractor, for which the contractor herein is legally liable, the Engineer shall have the right to estimate the amount of said damage and to cause the Sanitary District to pay the same to the said owner or occupant, and the amount so paid for such damage shall be deducted from the money due said contractor under this contract.

Said contractor covenants and agrees to pay all damage for any personal injury sustained by any person, growing out of any act or doing of himself or his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and to save the Sanitary District harmless against all suits or actions of every name and description brought against the said Sanitary District for or on account of any such injuries or such damages received or sustained by any person or persons by or from said contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any negligence in guarding the same; or by or on account of any act or omission of said contractor, his agents or employes; and the said contractor further agrees that so much of the money due to him, under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of the Sanitary District, may be retained by the said Sanitary District until such suits or claims for damages, as aforesaid, shall have been settled, and evidence to that effect furnished to the satisfaction of the said Board of Trustees.

F—

Sanitary District Law—The said contractor hereby agrees to carry on all the work provided for in this contract, in strict conformity to the requirements of the law under which the Sanitary District of Chicago is organized, entitled "An act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers." Approved May 29, 1889, in force July 1, 1889, which provides in Section 11, among other things, that "No person shall be employed on said work unless he be a citizen of the United States or has in good faith declared his intentions to become such citizen. In all cases where an alien after making his declaration of intention to become a citizen of the United States shall, for the space of three months after he could lawfully do so, fail to take out his final papers and complete his citizenship, such failure shall be *prima facie* evidence that

his declaration of intentions was not made in good faith; and that eight hours shall constitute a day's work."

G—

Time—The contractor agrees to begin work within fifteen days after the execution of this contract. He agrees to carry it on at such points, and in such order of procedure as the Chief Engineer shall direct.

All the work provided to be done under this contract shall be completed and ready for inspection on or before the 30th day of April, of the year 1896; provided, that if for any reason the contractor is not permitted by the Sanitary District to begin the main excavation of the said channel on or before the 1st day of November, 1893, or is otherwise delayed by it, then the said Sanitary District agrees to extend the time for the completion of this contract as much beyond the time specified for its completion as the time of beginning the main work shall be subsequent to the 1st day of November, 1893, and for such other time as he may otherwise be delayed by first party.

The work done each month shall not be less than such proportion of the whole work as one month bears to the total number of months agreed upon for the completion of said work, provided that the first two months after notice to begin shall be considered as one month, and the last two months before date of completion as one month; and, provided further, that this rate shall not be required if at any time the aggregate work done exceeds the total proportion due to the time that has passed since notice to begin work; and always provided that the Sanitary District shall not be obligated to make payment in excess of the above monthly proportion.

H—

Prices—In consideration of the said work being carried on and completed in time and manner as hereinbefore specified the said party of the first part agrees to pay to the said party of the second part the following amounts for each kind of work, respectively, and the said party of the second part agrees to receive and accept the same as full compensation for the performance of the work including the furnishing of the material, tools, labor, etc, to-wit:

a—For each cubic yard of "glacial drift" excavated, as per the terms of this contract, the sum of..... ..... dollars ($ ....).

b—For each cubic yard of "solid rock" excavated, as per the terms of this contract, the sum of..... dollars ($..... ..).

c—For each cubic yard of "dry rubble masonry" measured in the wall (actual geometric contents) the sum of..... .....dollars ($.....).

I—

Time and Manner of Payment—It is agreed by the party of the first part, that on or before the 10th and 25th days of each month, during the progress of the work, and subject to the provisions hereinbefore specified under the head of "Time," that payment will be made to the said party of the second part to the amount of 87½ per cent. of the contract price of the approximate amount of work done during the previous half month, upon written certificates from the Engineer that such approximate amount of work has been done during that period, 12½ per cent. being reserved until the completion and acceptance of the whole work.

J—

Grading of Prices—Since the nature of the material to be excavated under the provisions of this contract is such that the portion lying nearest the surface can be more cheaply excavated than that lying near the bottom, it is hereby agreed by the said party of the second part that if his manner of conducting the work is such that at the time of making any progress estimate a markedly greater proportion of the top material has been excavated than of the bottom material, then the Engineer shall, in making such estimates, ascertain what amount that has been excavated up to that time of any particular class of material lies above, and what below, a horizontal plane dividing the mass of said class of material into equal parts; and if the upper portion exceeds the lower, then the total amount of material found to have been excavated previous to the time of making the estimate shall be reduced by 10 per cent of said excess, and estimates or certificates issued on the remainder, with the percentage deductions provided for in the preceding Section I.

K—

Liquidated Damages—It is agreed by the said party of the second part that should he fail to prosecute or complete the work in time and manner as specified herein, and in full accordance with the terms of this contract, then after notice in writing and failure by second party for 30 days thereafter to comply with the terms hereof, said first party may declare this contract forfeited if there is substantial failure to comply with its provisions, and in such case said first party may, at its election, terminate this contract, and in such case the said reserve of 12½ per cent. to be forever retained by the said party of the first part as liquidated damages for his failure to so prosecute or complete said work.

L—

Certificate—On all the work provided for in this contract being completed, in accordance with the contract, and to the full satisfaction of the Chief Engineer, and on its being inspected by him and a certificate made by him setting forth the amount of said work, and that the said work has been completed, the said party of the first part agrees to pay to the said party of the second part the amount shown to be due to said second party by the said certificate of the said Chief Engineer, including the 12½ per cent. reserve.

M—

Failure to Complete—It is further agreed by the said party of the second part that if the work to be done under this contract shall be abandoned, or if it shall be assigned by him, or if he loses control of the work from any cause, excepting acts of God and the public enemy, or if the rate of progress is not such as to insure its completion within the time specified, or, if at any time the Engineer shall be of the opinion, and shall so certify in writing to the said party of the first part that said work, or any part thereof, is unnecessarily and unreasonably delayed, or that the contractor is wilfully and persistently violating any of the conditions or covenants of this contract, or is fulfilling said contract in bad faith, the said party of the first part shall have the power to notify said contractor to discontinue all work, or any part thereof, as may be designated by said party of the first part, and the said party of the first part shall thereupon have the power either to complete said work by contract or to employ such men and teams, and to obtain such machinery, implements and tools, and to purchase such material as the said Engineer may deem necessary to complete the work herein described, or any part thereof. And in so doing said Engineer may use such tools, implements, and materials as may be found upon the line of said work. The cost of doing such work shall be charged to the said contractor, and the expense so charged shall be deducted and paid by the said party of the first part out of such moneys as may be due, or may at any time thereafter become due, to said contractor, under and by virtue of this contract, or any part thereof, and the balance, if any, shall be paid by said contractor on demand.

N—

Failure to Pay Laborers—If at any time during the progress of said work the said contractor shall fail or neglect to pay for labor performed or material furnished upon said work, for 10 days after it shall become due, then the party of the first part shall have power to pay for such labor or such material out of any money or moneys that may be due to said contractor, and said amount so paid shall be retained out of any money due or to become due to said contractor.

In any such case the party of the first part is hereby authorized and empowered by the said party of the second part to ascertain the amount, or amounts, due or owing to any laborer or laborers, from said contractor, in such manner and upon such proof as it may deem sufficient and without giving any notice of such proceedings to said contractor; and the amount or amounts so found by the said party of the first part to be due and owing to said laborer, or laborers, shall be final and conclusive as against said contractor, and may thereafter be paid over by the said first party to such laborer or laborers.

Final Payment—The said party of the second part further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement, nor until each and all of the stipulations hereinbefore mentioned are complied with, and the said Chief Engineer shall have given his certificate to that effect; where-

upon the said party of the first part will, at the expiration of thirty (30) days after such completion and the delivery of such certificate, pay, and it hereby binds itself to pay the said party of the second part, in cash, the whole amount of money accruing to said second party under this contract, excepting such sum or sums of money as may be lawfully retained under any of the provisions of this contract hereinbefore set forth. Provided, that nothing herein contained shall be construed to effect the right hereby reserved of the said party of the first part to reject the whole or any portion of the aforesaid work should the said certificate be found to be inconsistent with the terms of this agreement or otherwise improperly given.

Health Regulations—Said party of the second part agrees to introduce and enforce among ..... employes, such regulations in regard to cleanliness, the care of dwellings and premises and the disposition of garbage and offal, as shall conduce to their health and tend to prevent the inception and spread of contagious and infectious diseases among them, to make provision for an ample supply of suitable drinking water, and to take such means as shall effectually prevent the creation of a nuisance on any part of the right of way of said Sanitary District, or adjacent thereto.

IN WITNESS WHEREOF, on the day and year first above written, the said the Sanitary District of Chicago has caused this agreement to be signed by its President and attested by its Clerk, and its corporate seal to be hereto affixed, and the said party of the second part has hereunto set..... hand... and seal..

THE SANITARY DISTRICT OF CHICAGO,
[SEAL.]

By.....*President.*

Attest:.....*Clerk.*

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]

The following is the

CONTRACTOR'S BOND:

Know all men by these presents, That we,.....
.....
.....
.....
of .....
are held and firmly bound unto the Sanitary District of Chicago, in the penal sum of .....
dollars, lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, jointly and severally, firmly by these presents.

Sealed with our seals and dated this.....
.....day of
.....A. D. 189..

The condition of the above obligation is such, that whereas, the above bounden.....
.....
.....
ha.... entered into a certain contract with the Sanitary District of Chicago, bearing date the.....day of
.....A. D. 189.., for excavating Section.....of the Main Drainage Channel of the Sanitary District of Chicago, and building certain collateral works in connection therewith between the center of Willow Springs Road, Cook Cook County, Illinois, and Joliet, Will County, Illinois, as set forth in said contract .....
.....
.....
.....

Now, if the said.....
.....
shall in all respects, well and truly keep and perform the said contract on .... part, in accordance with the terms thereof, and the plans and specifications therein contained and referred to, and in the time and manner therein prescribed, and further shall indemnify, keep and save harmless the Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, which may in anywise come against said Sanitary District, in consequence of the granting of such contract, or which may in anywise result from the carelessness or neglect of said.....
.....
agents, employes or workmen, in any respect whatever, or which may result on account of any infringement of any patent, by reason of the materials, machinery, device or apparatus used in the performance

of said contract, and, moreover, shall pay to said Sanitary District any sum or sums of money determined by the Chief Engineer to be due said Sanitary District, by reason of any failure or neglect in the performance of the requirements of said contract, and shall pay all claims and demands whatsoever, which may accrue to each and every person, who shall be employed by .....
in or about the performance of said contract, then this obligation to be null and void, otherwise to remain in full force and effect.

And it is hereby expressly understood and agreed, and made a condition hereof, that any judgment rendered against said Sanitary District, as aforesaid, in any suit for damages occasioned by the carelessness or neglect of said.....
.....or.....agents, employes or workmen, in the premises, when notice of the pendency of such suit, shall have been given said.....
.....shall be conclusive against each and all parties to this obligation, as to amount, liability, and all other things pertaining thereto.

..... [SEAL.]

..... [SEAL.]

..... [SEAL.]

..... [SEAL.]

Approved.....189..

.....
Clerk.

The following is the

FORM OF PROPOSAL:

"*To the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—The undersigned hereby certify that ..... have examined the plans on file in the office of the Chief Engineer of the Sanitary District of Chicago, the annexed specifications and forms of contract for the excavation of Sections 2, 3, and 4, a portion of the main drainage channel of said Sanitary District as therein described, and propose to do all the work and to furnish all material, tools, explosives, labor and all appliances and appurtenances necessary to the full completion of the same, at the rates and prices for the several sections of said work, as follows, to-wit:

Contractor is to furnish and operate pumping plant and to provide all other appliances for doing the work, and to dispose of all material in spoil banks located by the contractor.

NUMBER OF SECTION.	GLACIAL DRIFT. H. a.	SOLID ROCK. H. b.	RETAINING WALLS. H. c.
	Price per cubic yard.	Price per cubic yard.	Price per cubic yard.
	CENTS.	CENTS.	CENTS.
2.....			
3.....			
4.....			

The above proposals are based upon the conditions and stipulations made in the advertisements inviting propoals for said work, and in accordance with the contract, specifications and plans for the same on file in the office of the Chief Engineer of the said Sanitary District, and, should the said Board of Trustees award any of said sections of said work to the undersigned, then we agree to enter into contract for the same and to do the work as specified.

In accordance with the requirements of

said advertisement there is deposited herewith the sum of ..... dollars, which, under the terms of the advertisement, entitle us to bid on ..... sections of said work, the same to be refunded to us upon the faithful performance of all the conditions stipulated in the said advertisement for proposals.

It is further agreed that should the within proposal for excavating certain sections of said Main Drainage Channel be awarded to us, and we should fail or neglect to enter into contract with the said Sanitary District in the time and in the manner required by the said advertisement for proposals, and to furnish bonds as therein required to the satisfaction of the said Board of Trustees, then the said sum of ..... dollars, deposited herewith, shall become forfeited to the Sanitary District as liquidated damages.

Name .....
Address.....
Name .....
Address.....
Name .....
Address.....
Name .....
Address.....

NOTE—Companies or firms bidding must give the individual names and addresses of the persons comprising such firms.

Received from the Sanitary District of Chicago the sum deposited with the above proposal, the same being.....dollars.

.....

.....

CHICAGO, ... 189.

APPROXIMATE QUANTITIES OF WORK.

	EXCAVATION. (CUBIC YARDS.)					Retaining Walls. Cubic Yards.	Filling Behind Retaining Walls. Cubic Yards.
	MAIN CHANNEL.		RIVER DIV'SN.	TOTALS.			
	Glacial Drift.	Solid Rock.	Glacial Drift.	Glacial Drift.	Solid Rock.		
Section No. 2....	725,509	375,168	107,872	833,381	375,168	32,670	42,696
Section No. 3....	312 826	792,140	.....	312 826	792,140	6,304	28,696
Section No. 4....	913,317	317,485	120 000	1,033,317	317,485	47,492	37,711
Totals.....	1,951,652	1,484,793	227,872	2,179,524	1,484,793	86,466	109,103

PROJECT FOR ROAD ALONG THE MAIN CHANNEL.

Mr. Kelly, for the Joint Committee on Engineering and Finance, presented a report, with reference to and accompanied by the report from the Chief Engineer, submitting a project for a road along the Main Channel, presented and referred to that Committee at the meeting held July 26, 1893, (page 1352 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with enclosure, placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—none.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosure, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, August 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance, to whom was referred the letter of the Chief Engineer of the 26th ult. in regard to a road along the Main Channel, with instructions to report back at the next meeting, submits its report as follows:

We recommend that the project of the Chief Engineer be approved, both as to the width of roadway, and as to the manner of executing the same by the several contractors, under the provisions of their contracts governing extra work.

The Committee is of the opinion that so much of the road as lies below the city of Lemont should be constructed on the right of way of the District and to the west of the Santa Fe Railway, and that the roadway between Summit and Lemont should be constructed along the tow-path of the Canal as near as practicable, with inlets at each section. The use of the tow-path will probably require the consent of the Canal authorities, and it is recommended that the President secure the same at once.

It is also recommended that the Chief Engineer take immediate steps to secure the construction of this road as soon as practicable.

Respectfully submitted,

(Signed) THOMAS KELLY,
WM. BOLDENWECK,
B. A. ECKHART,
JOHN J. ALTPETER,
W. H. RUSSELL,
Joint Committee on Engineering and Finance."

CONDITION OF WORK ON ALFRED HARLEV SECTION.

The Clerk presented a report, with one enclosure, from the Chief Engineer, with reference to the condition of work on Section 1 of the Main Channel, for which Alfred Harlev is contractor; and the report and enclosure were read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance, with instructions to report back as soon as possible.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, August 3, 1893.

To the Honorable, the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The estimates on Section No. 1, Alfred Harlev, contractor, up to Julp 31, show a practical abandonment of the River Diversion and a rate of progress on Main Channel barely one-half of what it should be. I append a communication which I have addressed to the said Harlev.

Respectfully,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, Aug. 2, 1893.

Alfred Harlev, Esq., 905 Sawyer avenue, City:

GENTLEMEN—Your estimates to July 31st show a practical abandonment of your River Diversion work and a rate of progress on Main Channel which is barely one-half of what it should be. I am therefore obliged to advise the Board of the facts, and to notify you that further delay of this kind will work a forfeiture of your contract, as therein provided.

Yours respectfully,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

CONDITION OF WORK ON L. D. CONNER & CO. SECTIONS.

The Clerk presented a report, with one enclosure, from the Chief Engineer, with reference to the condition of the work on Sections A and B, of the Main Channel, for which L. D. Conner & Co. are contractors; and the report and enclosure were read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance, with instructions to report back as soon as possible.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, August 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The rate of progress made by Messrs. L. D. Conner & Co. on River Diversion on Sections A and B, as shown by estimates under date of July 31st, is not what it should be, in fact for the last two weeks it fell nearly 30 per cent. behind the required output. I attach hereto a copy of a letter which I have addressed to L. D. Conner & Co.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

"CHICAGO, August 3, 1893.

Messrs. L. D. Conner & Co., Willow Springs, Illinois:

GENTLEMEN—Your estimates for river diversion work up to July 31st make a very discouraging exhibit as your total output on Sections A and B is only 11,815 cubic yards for fifteen days' work, whereas it should have been nearly 51,000 cubic yards, showing that your rate of progress hardly reached 20 per cent. of what it should be. Unless you can give us such evidences of your immediate ability to meet the requirements which are necessary, we shall have to take your river diversion in hand, and prosecute it at your expense.

Yours respectfully.

(Signed) ISHAM RANDOLPH,
Chief Engineer."

VISITING ENGINEERS' INSPECTION OF MAIN CHANNEL.

Mr. Eckhart, Chairman, made a verbal report from the Joint Committee on Finance and Engineering, with reference to the communication from O. Chanute, Chairman of the General Committee of Engineering Societies, World's Columbian Exposition, suggesting an inspection of the Main Channel by the visiting engineers now attending the Engineering Congress, stating that the Committee had appointed a sub-committee, consisting of the President, Clerk and Chief Engineer, who had made arrangements and sent out invitations to the visiting engineers for the trip suggested over the "Santa Fe Route" on Monday, August 7, 1893, at 10 o'clock A. M.

RECESS.

On motion of Mr. Prendergast, seconded by Mr. Boldenweck, the Board then took a recess until 1:30 o'clock P. M. the same day.

On reassembling at the close of the recess at 1:30 o'clock P. M., on roll-call Messrs. Altpeter, Boldenweck, Kelly, Russell and Wenter—five (5) members, were present.

On motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then took a further recess until 2 o'clock P. M.

On reassembling at the close of the recess at 2 o'clock P. M., on roll-call Messrs. Altpeter, Boldenweck, Kelly, Russell and Wenter—five (5) members, were present.

On motion of Mr. Kelly, seconded by Mr. Russell, the Board again took a recess until 2:15 o'clock P. M.

On re-assembling at the close of the recess at 2:15 o'clock P. M., on roll-call, Messrs. Altpeter, Boldenweck, Kelly, Russell and Wenter—five (5) members, were present.

AGREEMENT WITH SANTA FE RAILWAY FOR BRIDGE AND CROSSING NEAR LEMONT.

Mr. Kelly then presented an order, accompanied by a form of agreement, being a stipulation with the Atchison, Topeka & Santa Fe Railroad Company et al., with reference to a bridge, and the crossing of the line of said company near Lemont by the river diversion: and the order and accompanying agreement were read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the order be adopted, and with accompanying agreement, be ordered printed and placed on file, and the President and Clerk authorized and directed to execute the said agreement with the Atchison, Topeka & Santa Fe Railroad Company et al., as provided in the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Kelly, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement with the Atchison, Topeka & Santa Fe Railroad Company et al., as provided in the order.

The following is

THE ORDER:

"*Ordered,* That the President and Clerk of the Board be authorized and instructed to enter into the stipulation and agreement hereto attached with the Atchison, Topeka & Santa Fe Railroad Company and the Chicago, Santa Fe & California Railway Company with reference to the crossing of the River Diversion near Lemont, Illinois, over, through and across certain property in which said railway companies are interested, and with reference to the settlement of certain other questions between said

Sanitary District and said railway companies."

The following is

THE AGREEMENT:

"Sanitary District of Chicago vs. Chicago, Santa Fe & California Railway Company. Farmers' Loan and Trust Company. Boston Safe Deposit and Trust Company, Atchison, Topeka & Santa Fe Railroad Company.	Petition for Condemnation.

WHEREAS, The Sanitary District of Chicago has heretofore filed its two certain petitions in the Circuit Court of Cook County in cases numbered respectively 115,525 and 116,049 for the condemnation of certain property in which the Chicago, Santa Fe & California Railway Company, the Boston Safe Deposit and Trust Company, the Farmers' Loan and Trust Company, and the Atchison, Topeka & Santa Fe Railroad Company are interested and made defendants, in which said petitions the Sanitary District of Chicago seeks to condemn the property in said petitions described for the uses and purposes set forth in said petitions, and asks that the compensation to be made to the owners of, or persons interested in said described premises on account of the taking thereof by the Sanitary District of Chicago for said purposes, may be determined, and such further proceedings be had therein as are provided by law.

AND WHEREAS, Said causes have been removed from said Circuit Court of Cook County, to the United States Circuit Court for the Northern Division of the Northern District of Illinois, on petition of the Atchison, Topeka & Santa Fe Railroad Company; and,

WHEREAS, The Sanitary District of Chicago by reason of the neceessity for an early construction of the diversion of the Desplaines River through said property, desires permission to enter at once on said property for the purpose of constructing said diversion in accordance with the plans and specifications hereto attached, and marked "Exhibit A," and made a part of this agreement; and,

WHEREAS, The Atchison, Topeka & Santa Fe Railroad Company is now in possession of all of said premises, and is operating its main line through a portion thereof, making it necessary in the construction of said river diversion to provide for the construction of the bridge and road-bed shown in said "Exhibit A," in such manner as not to cause any interruption to the use by said railroad company of said main line.

NOW, THEREFORE, It is hereby stipulated and agreed by and between the Sanitary District of Chicago, party of the first part, and the Atchison, Topeka & Santa Fe Railroad Company, and the Chicago, Santa Fe & California Railway Company, parties of the second part, that said Sanitary District shall have immediate possession of so much of said premises as is necessary for the construction of said river diversion, excepting, however, the present road-bed and track on the main line of said railroad company, which shall not be disturbed until the completion of the bridge and road bed, together with the tracks thereon ready for use by said railroad company, as shown by said "Exhibit A;" that such possession and use of said premises by said Sanitary District of Chicago is given up on the express understanding that the same shall be used for such river diversion only, and that such possession and use shall be full and complete for such purpose within the limits herein specified until such time as said Sanitary District shall enter upon the trial in court of proceedings to condemn other portions of said railroad company's right of way, and thereupon the rights of the parties hereto regarding the premises described in the petitions hereinabove referred to, and all questions arising thereunder, shall be determined as part and parcel of such further proceedings to be instituted to condemn other premises of said railroad company, and that all said questions regarding the premises described in the two petitions herein referred to shall be heard and determined as though the possession herein provided for had not been granted or had, and the rights of both the parties hereto, shall be determined without any prejudice whatsoever by reason of such occupation by said Sanitary District and the construction of said river diversion.

It is further hereby mutually agreed that so soon as the said Sanitary District

of Chicago shall determine what property belonging to, or used by the said parties of the second part, it will be necessary for the said Sanitary District to acquire or use for the complete construction of the channel and other works which said Sanitary District is authorized to construct, said Sanitary District shall submit a description and plat thereof to said parties of the second part with a view to an earnest endeavor being made by all the parties hereto to adjust said matters without litigation, and in case of failure to arrive at such adjustment, that then and in that case all said matters, including the questions involved with reference to the property described in the two above mentioned petitions, shall be heard and determined in one proceeding, but it is expressly understood, that nothing herein shall prevent the court from requiring the jury to make separate findings as to the compensation to be awarded for the interest taken by the said Sanitary District as to each particular portion of the property of said parties of the second part that may be taken in such proceeding. And in case the court directs separate findings each party may have the right to move for a new trial as to any one or more of said particular portions, for which separate compensation has been found, and any action of the court on any such motion or motions shall not affect the verdicts or findings as to the other particular portions, and if no motion for new trial is made by either party as to a given portion or portions or being made by either party is overruled, then the court may enter judgment as to such portion or portions and the rights of each of said parties as to such portion shall be the same as if there was a separate proceeding to condemn such particular portion.

Said Sanitary District of Chicago hereby agrees at its own cost and expense to construct the bridge and roadbed aforesaid, with all necessary tracks and connections complete and ready for use by said party of the second part, and that in the construction of the same it will avoid any interference with, or interruption of, the use by said Atchison, Topeka & Santa Fe Railroad Company of its present main line until the completion of said bridge and road-bed, and that the interruption necessary to make the connection between the present line and the said railroad on said bridge and road-bed, shall be made in a manner and at a time to cause as little interruption as possible of the business of said Atchison, Topeka & Santa Fe Railroad Company; the detail plans for said bridge, road-bed and connections to be submitted to, and receive the approval of, the engineer of the Atchison, Topeka & Santa Fe Railroad Company, and said work to be done subject to his approval.

IN WITNESS WHEREOF, The said parties hereto have caused these presents to be signed by their respective officers thereunto duly authorized, this ..... day of August, A. D., 1893."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

AUGUST 9, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, August 9, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7), and subsequently Mr. Prendergast, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held August 2, 1893, and of the adjourned session of the same regular meeting held August 4, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

MESSAGE OF THE PRESIDENT ON POSSESSION OF BRIDGEPORT PUMPS.

The President presented a message with reference to the turning over of the Bridgepart pumps by the city to the Sanitary District, and recommending the appointment of a Committee to confer with the Mayor of Chicago on that subject; and the message was read.

Mr. Kelly seconded by Mr. Eckhart, moved that the message be ordered printed and placed on file, and the recommendations made therein concurred in.

The motion prevailed unanimously, and it was so ordered.

The President then appointed Messrs.

Kelly, Eckhart and Russell as the Committee to wait on the Mayor of Chicago on the subject mentioned in the message.

The following is

THE MESSAGE:

"CHICAGO, August 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—During the month of February, in 1892, your Hororable Board had a special commit ee appointed to confer with the city authorities on the subject of affording temporary relief by having the capacity of the pumping works at Bridgeport increased, and if necessary raising the banks of the Illinois and Michigan Canal at various points between Ashland avenue and a point about a mile above Lockport. The question was discussed at said conference of having the city authorities turn the pumping works over to the Sanitary District, giving us the power to run said pumps and increase their capacity, thereby somewhat bettering the condition of the Chicago River.

That special committee, so appointed by the Board, expressed themselves as willing to have said pumping station turned over to the Sanitary District. The city authorities, however, were not quite ready to do so, as, shortly thereafter, the Common Council made an appropiation of a certain sum to increase the capacity of said pumping station. The Commissioner of Public Works later on sent a number of communications to this Board which are on record in our proceedings, stating that said authorities had entered into a contract with certain parties to have a number of new pumps constructed, and that all of said pumps would be in position before the spring of 1893.

On receipt of these communications, whereby the city authorities took hold of the matter, the Sanitary District did nothing further, as the question of temporary relief was considered settled.

The bad condition of the Chicago River during the spring and summer has brought about an agitation, voiced by the public press, that the Sanitary District should take charge of said pumping works and do what is possible to ameliorate said condition.

I would therefore recommend to your Honorable Board that a committee of three be appointed to call upon His Honor, Mayor Carter H. Harrison, to see what, if any, arrangements can be made to have said pumping station turned over to the Sanitary District. If any arrangements are to be made they must be made within a short time so as to enable the Sanitary District to make the necessary preparation for the increased pumping capacity. The time required to put in additional machinery may be from three to five months. Consequently, in order to be ready for next spring action must be taken at once to accomplish that end.

Respectfully submitted,

(Signed) FRANK WENTER,

President."

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (Sec. 1, July 31, '93)	$ 3,313 88	
Agnew & Co. (Sec. 5, August 1, '93)	1,299 37	
Agnew & Co. (Sec. 6, August 1, '93)	1,582 87	
Agnew & Co. (Sec. 7, August 1, '93)	3,267 08	
Agnew & Co. (Sec. 8, August 1, '93)	3,904 75	
Agnew & Co. (Sec. 9, August 1, '93)	3 599 89	
E. D. Smith & Co. (Sec. 10, August 1, '93)	6,965 60	
Mason, Hoge & Co. (Sec. 11, Aug. 1, '93).	11,178 46	
Mason, Hoge & Co. (Sec. 12, Aug. 1, '93).	11,056 93	
Mason, Hoge & Co. (Sec. 13, Aug. 1, '93).	13,866 12	
McCormick Const. Co. (Sec. 14, Aug. 1, '93)	5,937 75	
L. D. Conner & Co. (Sec. A., Aug. 1, '93)	1,667 30	
L. D. Conner & Co. (Sec. B., Aug. 1, '93)	1,321 85	
Western Dredging and Impt. Co. (Sec. C., August 1, '93)	1,936 78	
E. D. Smith & Co. (Sec. D. August 1. '93)	3,935 36	
Streeter & Kenefick, (Sec. E., Aug. 1, '93).	11,441 01	
Ricker, Lee & Co. (Sec. F., Aug. 1, '93).	1,964 87	
		$88,238 77

ENGINEERING DEPARTMENT.

J. R. Davis & Son, (test pits)	$ 70 00	
J. R. Davis & Son, (test pits)	211 00	
J. R. Davis & Son, (test pits)	255 40	
		$ 536 40

CLERICAL DEPARTMENT.

John Morris Co. (stationery)	$ 3 50	
Bradner Smith & Co. (stationery)	2 00	
J. Underwood & Co. (stationery)	9 90	
		$ 15 40

LAW DEPARTMENT.

Orrin N. Carter, (expense)		$ 39 65

GENERAL ACCOUNT.

Arcade Lunch Co. (expense, engineers' trip)	$ 350 00	
The Cigar Supply Co. (expense, engineers' trip)	72 00	
		$ 422 00
Grand total		$89 252 22

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 358, Engineering Department, (lumber and nails for bridge repairs)	$ 268 73
No. 902, Police Department, (general stationery)	91.20
No. 903, Police Department, (furniture for stations)	351.32
No. 904, Police Department, (furniture for stations)	322.00
No. 905, Police Department, (feed for horses)	36.70
No. 906, Police Department, (horses, wagons and equipment)	482.50
No. 907, Police Department, (stars, belts and batons)	122.50
Total	$1,674.95

Mr. Kelly, seconded by Mr. Cooley, moved that Requisition No. 358, for the Engineering Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 358, for the Engineering Department, as read and shown above, allowed.

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisitions Nos. 902 to 907, both inclusive, for the Police Department, as read and shown above, be allowed.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 903 to 907, both inclusive, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending August 5, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending August 5, 1893, as the same have been reported to me:

Engineering Department	90
Clerical Department	3
Treasury Department	1
Law Department	7
Total employes	101

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the

Clerical Department for the month of July, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of July, 1893, was $820.83, divided as follows:

Salaries	$ 764.16
Stationery	4.42
General expenses	52.25
Total	$820.83

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $800.

The total amount expended and charged to the General Account during the month of July, 1893, was $5,296.31, divided as follows:

Salaries	$2,533 33
Fittings Board Room	298 00
Printing and Stationery	136.31
Rent and Janitor Service	2,115.00
General expenses	213.67
Total	$5,296 31

There are no outstanding liabilities against the General Account, and the expenses for the present month will be about $3,500.

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

ADDITIONAL MACHINERY ON AGNEW & CO.'S SECTIONS.

The Clerk presented a report from the Chief Engineer with reference to the condition of work and additional machinery proposed to be used by Agnew & Company on Sections 5 to 9 on the Main Channel, being supplemental to the report on the same subject presented at the meeting held August 2, 1893, (page 1359 of the Proceedings); and the report was read,

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, August 7, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have to inform you that I am advised the negotiations between Agnew & Co. and Mr. Bates for putting in the hydraulic dredge to work on Sections 5 and 6, are off, and so far as I am advised there is no immediate prospect of better progress upon these two sections than has been made heretofore. This is very unfortunate for the work, and unless it is soon remidied some radical action must be taken to bring about a better condition of affairs.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (enclosing classified statement) from the Engineering Department for the month of July, 1893.

The same was read, and, by unanimous consent, ordered printed and placed on file.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, August 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of July, including a table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of July were as follows;

Contractors estimates	$132,462.43
Pay rolls	10,113.26
Material, etc	1,007.63
Total	$143,583.32

I estimate the expenses for August will be $185,000, including contractor's estimates.

Respectfully submitted,

(Signed) THOS. T. JOHNSTON,
Acting Chief Engineer.

(Enclosures.)

"CHICAGO, August 8, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR — I herewith submit the following report for the month of July:

Pay rolls	$ 5,672.62
Contractor's estimates	132,462.43
Total	$138,135.05

AMOUNT OF WORK DONE TO AUGUST 1, 1893:

SECTION.	MAIN CHANNEL.		RIVER DIVERSION.		RIVER LEVEE.
	Glacial Drift	Solid Rock.	Glacial Drift.	Solid Rock.	Glacial Drift.
Section A	.....	.....	6,222	.....	.....
Section B	.....	.....	7,822	.....	.....
Section C	.....	.....	25,000	.....	.....
Section D	44,557	.....	.....	.....	.....
Section E	181,649	.....	.....	.....	.....
Section F	12 219	.....	.....	.....	40 921
Section 1	28.622	.....	5,876	.....	.....
Section 2	27 600	.....	29,500	.....	.....
Section 3	66,800	.....	.....	.....	.....
Section 4	44,200	.....	.....	.....	.....
Section 5	56,800	.....	.....	.....	.....
Section 6	60,800	.....	.....	.....	.....
Section 7	19.700	10,340	11,800	12,190	.....
Section 8	7,500	14 760	48,900	54,200	.....
Section 9	11,000	26,470	37,700	4,690	.....
Section 10	20.200	48.570	27 400	38,240	.....
Section 11	37 800	98,180	2,600	4,810	.....
Section 12	21 900	134,300	.....	.....	.....
Section 13	32,822	184,900	.....	.....	.....
Section 14	30,800	52,900	.....	.....	.....
Totals	704.969	570,420	202,820	114,130	40.921

Main Channel, glacial drift	704.969
Main Channel, solid rock	570,420
River Diversion, glacial drift	202,820
River Diversion, solid rock	114.130
River Levee, glacial drift	40 921

Total amount of estimates paid previous to August 1, 1893..... $593 058.66

CONDITION OF WORK, AUGUST 1, 1893.

SEC.	CONTRACTOR.	Total amount done Aug. 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done Aug. 1, 1893.	Amount behind as per contract Aug. 1, 1893.	Amo'nt ahead as per contract, Aug. 1, 1893.
A.....	L. D. Conner & Co.....	$ 1,905	$ 20.971	$ 20 971	$ 19,066	.....
B.....	L. D. Conner & Co.....	2,112	12,736	12 736	10,624	.....
C.....	Western Dredg. & Imp Co	5.875	13.995	13 995	8.120	.....
D.....	E. D. Smith & Co.....	11,780	14,585	14 585	2,805	.....
E.....	Streeter & Kenefick.....	49,953	15 287	15 287	.....	34,666
F.....	Ricker, Lee & Co.....	12.621	12 671	12,071	.....	550
1.....	Alfred Harlev.....	9,314	20 867	99.118	89,804	.....
2.....	McArthur Bros.....	15,988	15.611	93,667	77.679	.....
3.....	McArthur Bros.....	18 036	18,983	151.864	133 828	.....
4.....	McArthur Bros.....	11,984	15.780	110,462	98.528	.....
5.....	Agnew & Co.....	15,336	12,476	81.094	65 758	.....
6.....	Agnew & Co.....	16,416	14,233	92 516	76 100	.....
7.....	Agnew & Co.....	24 750	17 816	115.805	91 055	.....
8.....	Agnew & Co.....	66,212	22,760	182 081	115 869	.....
9.....	Agnew & Co.....	36,624	19 348	154 784	118 160	.....
10.....	E. D. Smith & Co.....	81.348	23.291	186,330	104 982	.....
11.....	Mason, Hoge & Co.....	93 841	19 305	155,162	61,321	.....
12.....	Mason, Hoge & Co.....	113 058	18 781	150 250	37,192	.....
13.....	Mason, Hoge & Co.....	146.746	18,461	147,690	944	.....
14.....	McCormick Constr'n Co.	44,777	19,846	158,770	113,993	.....
	Totals.....	$ 778 626	$ 347.803	$1 969 238	$1,225 828	$35.216

Total amount required to be done August 1, 1893..... $1,969,238
Total amount done August 1, 1893..... 778,626

Amount short as per contract August 1, 1893..... $1.190 612

FORCE REPORT—DAILY AVERAGE, JULY, 1893.

SEC.	Men.	Teams.	Steam Shovels.	Locomotives.	Steam and Air Pumps.	Steam Scrapers.	Channelers.	Steam and Air Drills.	Steam and Air Hoists	Cableways.	Cantilever Derricks.	Air Compressors.	Excavator.	Cars.	Pile Drivers.	Wheel Barrows.	Plows.	Wheel Scrapers.	Drag Scrapers.
A.....	49	6	....	....	.5	....	....	....	....	....	....	....	....	....	....	22	.5	3	.5
B.....	37	11	.4	....	....	....	....	....	....	....	....	....	....	....	....	....	.8	5	.5
C.....	42	2	1	....	1	....	....	....	1	....	....	....	....	2	....	....	....	....	....
D.....	105	....	....	3	1	....	....	....	....	....	....	....	1.4	29	....	....	....	....	....
E.....	60	119	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
F.....	43	42	....	.3	.9	....	....	....	....	....	....	....	....	.2	.2	....	....	....	....
1.....	124	35	....	....	1.5	....	....	....	.5	....	....	....	....	....	....	30	3	17.5	3.5
2.....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.3	....	....	....
3.....	6	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4.....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.7	....	....	....
5.....	25	.4	.8	....	.5	....	....	....	....	....	.8	....	....	....	....	....	....	....	....
6.....	16	....	....	....	1.3	1.9	....	....	....	....	....	....	....	....	....	....	....	....	....
7.....	127	5	....	....	1.4	....	1.7	4.4	2.3	....	....	....	....	....	....	....	....	....	....
8.....	166	4	....	....	....	....	1.8	5.6	2.2	.3	....	....	....	....	....	....	....	....	....
9.....	81	2	....	....	1.9	....	1.5	2.8	.9	....	....	....	....	....	....	....	....	....	....
10.....	268	3	....	....	4.6	....	5.8	7	2.9	....	.8	1.1	....	....	....	....	....	....	....
11.....	272	24	....	....	7.6	....	3.4	9.8	1.9	.6	....	1	....	....	....	....	....	....	....
12.....	244	2	....	....	3.0	....	5	8.6	3	....	....	1	....	....	....	....	....	....	....
13.....	326	13	....	....	5	....	4.9	10.6	3	....	....	1	....	....	....	....	....	....	....
14.....	118	19	....	....	2	....	2.7	4	1	....	....	....	....	....	....	....	....	....	....
Total	2113	288.4	2.2	3.3	35.2	1.9	26.8	52.8	18.7	.9	1.6	4.1	1.4	31.2	.2	56.0	4.8	25.5	4.5

Respectfully submitted,
(Signed) D. C. DUNLAP,
Assistant Superintendent of Construction."

"CHICAGO, Aug. 9, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of July was as follows:

Platted cross sections of territory along line of proposed river diversion between Summit and Willow Springs.

Miscellaneous estimates were made with reference to river diversion between Summit and Willow Springs.

Made calculations as to flow of water in river diversion channel through proposed bridge opening at Lemont.

Made comparative table of Desplaines River gauge records—April, May and June, 1892 and 1893—for Division 1. Made copy of Desplaines River hydrographs for Division 1.

A comparative estimate of excavation required for 20 and 22 foot channels from Bridgeport to Lockport was made.

Sketches were made showing four positions of main channel between Bridgeport and Summit and showing junctions of main channel at range line, Summit. Made estimate of excavation required for main channel, Bridgeport to Summit.

Computed records of rainfall at Chicago to date. A statement was prepared showing water pumped by city 1886-1892.

A series of discharge observations was made of the I. & M. Canal in Canal Pumping Works outlet, the results reduced and platted.

Some further topographical work between Bridgeport and Summit was done.

The cross-sectioning of territory along line of river diversion channel in vicinity of Lemont was begun.

A survey of the Desplaines River and I. & M. Canal from Ruby street and through Joliet was commenced

The maintenance and records of water gauges was continued.

Reduction of notes pertaining to Illinois River floods was continued

The sinking of test pits, between Robey street and Summit was commenced.

The work for August will be a continuation of that of July, with such additional surveys as may be ordered.

The expense for August will approximate to the expenses for July.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

"CHICAGO, August 9, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I herewith submit the report of Division 3 for the month of July, 1893:

The right of way surveys from the range line near Summit to the Canalport Subdivision, at Leavitt street, were finished. The party at Summit was transferred to Division 2 on the first of the month, and the party at Bridgeport on the 28th.

The main right of way maps, and several special plats between Chicago and Summit, were finished.

Maps, profiles, and estimates for three proposed channels of the river diversion, from Goose Lake to the south end of Romeo Island, were made.

Plans were drawn of the Stephens street bridge and the crossing of the Chicago, Santa Fe & California Railroad tracks at Lemont, and of the crossing of the Western Stone Company's tracks near the Will County line.

Three progress profiles of the line, tracings of the Chicago River maps from Lake to Sixteenth streets, and a condensed map and profile of the line from Chicago to Joliet were commenced.

It was necessary to transfer the force which was engaged upon the topographical and Chicago River maps to other work, during the latter part of the month.

It is proposed to continue during next month the work now on hand.

Yours respectfully,

(Signed) EDGAR WILLIAMS,

Second Assistant Chief Engineer."

(Enclosing classified statement.)

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of July, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I submit herewith the

monthly report of the Law Department, for July, 1893. The total amount paid out is as follows:

Salaries.

Attorneys	$1,424 99	
Right of way force	416 67	
Office force	295 00	
		$2,136 66

Expenditures.

Right of way	$ 240 89	
Court costs	234 21	
Legal services	1,333 34	
Stationery	9 05	
Furniture	19 00	
Sundries	54 95	
		$1,891 44

Land Account.

Right of way	$115,868 00
Total	$119,896 10

The current expenses for the present month will be practically the same as for July. Negotiations for right of way east of Summit are being carried on for a large number of pieces of land. A petition to condemn all of the land in the right of way—not already purchased—between the range line at Summit and Kedzie avenue, and also including one piece west of the range line, was filed in the Circuit Court of Cook County Monday of this week, returnable at the September term of said court. This petition contains about fifty separate pieces of property and makes about three hundred persons parties defendant, and was filed at the earliest date possible after the opinions of title were obtained trom the Guarantee Company. The property in the right of way east of Kedzie avenue will be put in court as soon as opinions can be obtained covering same.

A suit to condemn a crossing for the river diversion through property of the Santa Fe Railroad near Lemont was set for trial in the Circuit Court on July 19th, 1893. The case was removed to the United States Court on the petition of one of the defendants. After considerable difficulty a judge was obtained in the United States Court to hear a motion to remand the same to the Circuit Court. The motion was argued, and pending the decision an agreement was reached with the Santa Fe interests by which a crossing was obtained, and the question of damages left for future adjustment. The terms of agreement were reported to the Board at its last meeting.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

APPOINTMENT OF PATROLMEN.

The Clerk presented a report from the Police Board, transmitting to the Board the names of thirty-five (35) patrolmen and one (1) driver, examined and appointed to the Police Department of the Sanitary District, and also an additional list of eligibles; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be received, concurred in and placed on file without being printed.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Altpeter—one (1). Nays—None.

Upon which result the President declared the motion carried, and the report received, concurred in and placed on file without being printed.

COST OF POLICE STATIONS.

The Clerk presented a report from the Clerk and the Marshal, made in response to an order passed by the Board at the meeting held July 21, 1893, (page 1347 of the Proceedings), transmitting the lowest bid received for building four (4) police stations, as provided in the report; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and referred to the Police Board with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None

Upon which result the President declared the motion carried, the report adopted, ordered printed, and referred to the Police Board with power to act.

The following is

THE REPORT:

"CHICAGO, August 9, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the instructions of an order, passed by this Board at its meeting on July 21st, 1893, we have made plans and secured propositions for the construction of four police stations, as set forth in the recommendations of the Marshal, presented in his report to this Board, on July 19, 1893.

We find that proper police stations can be built at a cost of forty-five hun-

dred ninety-four and fifty one-hundredth ($4,594.50) dollars for all labor and material for said four stations.

Respectfully submitted.

(Signed) THOS. F. JUDGE,
Clerk.
EDWARD WILLIAMS,
Marshal."

LOCATION AND BUILDING OF POLICE STATIONS.

Mr. Kelly presented an order authorizing and empowering the Police Board to locate and build four police stations, as provided in the order, and authorizing and instructing the President and Clerk to sign all necessary contracts for the same, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted and the Police Board authorized and empowered and the President and Clerk authorized and instructed as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Police Board be authorized and empowered to build four police stations, one at or near Romeo, one at or near Lemont, one at or near Willow Springs, and one at or near Summit, to be located on the right of way of the District at such points as may be selected by said Police Board. The entire aggregate cost for all labor, work and material used in the construction of said four police stations not to exceed $4,594.50.

Ordered, further, That the President and Clerk be authorized and instructed to sign all necessary contracts for the construction of said police stations, said contracts to be drawn by the Attorney."

MANNER OF PAYING WORKMEN ON THE MAIN CHANNEL.

Mr. Altpeter presented a resolution with reference to the manner and method of payment, by all contractors, of men employed on the main channel; and the same was read.

Mr. Altpeter, seconded by Mr. Eckhart, moved the adoption of the resolution.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried and the resolution adopted as the sense of the Board.

The following is

THE RESOLUTION:

"WHEREAS, It is currently reported that the workmen on som of the contract sections of the work of this District are paid by checks or due bills which they find trouble in getting cashed, and for the cashing of which they are sometimes compelled to pay exchange; therefore, be it

Resolved, That it is the sense of this Board that all contractors pay their workmen in legal tender currency, and at regular stated intervals, at least as often as estimates are paid contractors by the District—and that the Clerk be directed to transmit a copy of this resolution to each of said contractors."

COMMUNICATION FROM M'ARTHUR BROS.

The Clerk presented a communication from McArthur Bros. acknowledging receipt of the order to discontinue work, and stating other matters with reference to Sections 2, 3 and 4; and the communication was read.

Mr. Boldenweck, seconded by Mr Kelly, moved that the communication be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, August 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We received yesterday, through your Clerk, an order of the Board of the 2nd of August, with a copy of the letter of Mr. Randolph, Chief Engineer.

We deny being in default, but we will obey the order of the Board to discontinue the work as directed, under protest; and we object and protest against any and all action by the District towards proceeding to have said work completed, and charging the cost thereof to us. We respect-

fully deny the right and power of the Board to thus interfere with our action, in the prosecution of the work, which is believed by us to be solely because we do not proceed to excavate 'solid rock' and accept payment therefor as 'glacial drift.' We now notify the Board that we shall hold the Sanitary District of Chicago responsible to us, for every and all damages we may suffer by reason of this or other action of the District in this regard.

We respectfully demand the balance due us for all the 'solid rock' excavated, for which we have only been paid 'glacial drift' prices.

Very respectfully,

(Signed) McARTHUR BROS."

APPLICATION FOR APPOINTMENT AS SUPERINTENDENT OF CONSTRUCTION.

The Clerk presented an application, accompanied by numerous letters, from M. Haley for appointment of Superintendent of Construction; and the application was read.

Mr. Boldenweck, seconded by Mr. Altpeter, moved the application, with enclosures, be referred to the Chief Engineer.

Mr. Cooley, seconded by Mr. Eckhart, moved, as a substitute, that the application (with enclosures) be received and placed on file without being printed.

Mr. Altpeter, seconded by Mr. Prendergast, moved, as a further substitute, that the application (with enclosures) be received and referred to the Committee on Engineering.

Upon roll-call, on the motion of Mr. Altpeter, the vote stood: Yeas—Messrs. Altpeter, Prendergast and Wenter—three (3). Nays—Messrs. Boldenweck, Cooley, Eckhart, Kelly and Russell—five (5).

Upon which result the President declared the motion lost.

Upon roll-call, on the motion of Mr. Cooley, the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried and the application (with enclosures) received and placed on file without being printed.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

AUGUST 16, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-third regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, August 16, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cobley, Eckhart, Kelly, Russell and Wenter—seven (7). and subsequently Messrs. Gilmore and Prendergast—two (2), making a total of nine (9) members, were present.

MINUTES.

The minutes of the regular meeting, held August 9, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, (half month, ending August 15, 1893).....	$2,159 00	
Eng. Dept., Div. No. 2, (half month, ending August 15, 1893).....	685 36	
Eng. Dept., Div. No. 3, (half month, ending August 15, 1893).....	616 42	
Eng. Dept., Div. No. 4, (half month, ending August 15, 1893).....	107 50	
		$3,568 28
Clerical Dept., office roll, (half month, ending August 15, 1893)		87 50

Law Dept., office roll, (half month, ending August 15, 1893).....		97 50
Total.....		$3,753 28

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery).....	$ 3 25	
L. Manasse, (staff gauges).....	7 00	
R. W. Goodwillie Box Co. (stakes).....	50 00	
Est. of Richard Peters, (stakes).....	10 00	
H. S. Norton, (rent, Lemont).....	18 00	
O. W. Moon, (rent, Lockport).....	20 00	
Douglas Hall Ass'n. (rent, Summit).....	33 33	
J. J. McCaughey, (rent, Summit).....	5 00	
J. J. McCaughey, (teaming).....	4 00	
Kenefick & Co. (teaming).....	4 75	
William Cook, (guarding scow).....	10 00	
Wagner Bros., (livery)	88 00	
Chicago Toilet Supply Co. (toweling).....	5 40	
Geo. Brainard, (gauge reading).....	10 00	
E. Hastings, (gauge reading).....	10 00	
Wm. Kirkham, (gauge reading).....	10 00	
Mary Rusk, (gauge reading).....	10 00	
Patrick McGinnis, (gauge reading).....	10 00	
Alex. E. Kastl, (expense).....	21 14	
D. C. Dunlap, (traveling).....	105 56	
Hiram A. Miller, (traveling).....	6 06	
Chas L. Harrison, (traveling).....	10 15	
Alex E. Kastl, (emergency).....	9 00	
		$ 460 64

CLERICAL DEPARTMENT.

Wm. Friedman, (stenographer).....		$ 10 50

LAW DEPARTMENT.

A. H. Wiant, Recorder, (recording deeds, DuPage County).....	$ 6 75	
M. S. Ellsworth, Clerk, (court costs, DuPage County).....	18 25	
Chas. A. Noble, Recorder, (recording deeds, Will County)	7 00	
T. A. Moran, (legal services).....	1,700 00	
Wyckoff, Seamans & Benedict, (rent of machine).....	$ 2 00	
S. A. Moffett Co. (livery)	9 00	
Orrin N. Carter, (expert witnesses).....	650 00	
Orrin N. Carter, (expense).....	84 68	
		$2,477 68

POLICE DEPARTMENT.

E. S. Rice, (horses)..	$ 200 00

GENERAL ACCOUNT.

The Chicago Deposit Vault Co. (janitor services, July, 1893)	$ 80 00
Grand total.....	$6,982 10

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 908, Police Department, (station tools, etc.).....	$224.00
No. 909, Police Department, (supplies).....	10.25
No. 910, Police Department, (stretchers and lock-ups).....	522.50
No. 911, Police Department, (station and stable supplies)...	25.62
Total.....	$ 782.37

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisitions Nos. 908 to 911 inclusive, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 908 to 911 inclusive, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in ac

cordance with the rules, showing the number of persons in the employ of the District for the week ending August 12, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending August 12, 1893, as the same have been reported to me:

Engineering Department.....	88
Clerical Department.....	3
Treasury Department.....	1
Law Department.....	7
Total employes.....	99

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

LEVEE HEIGHTS BETWEEN SUMMIT AND ROMEO.

The Clerk presented a report, accompanied by plan, from the Chief Engineer, with reference to the levee heights on the river diversion between Summit and Romeo, and asking that the Board authorize the Chief Engineer to have the levees, except in Sections 1 to 4 inclusive, constructed in accordance with accompanying plan.

The report was read, and, by unanimous consent, was ordered printed, and with accompanying plan, placed on file.

The following is

THE REPORT:

"CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The attention of the Board is respectfully directed to the levee heights between Summit and Romeo as established by the existing contracts for work between these places, and as indicated on the accompanying profile of river diversion. These heights having been determined at various times, it has happened that they do not form a grade consistent with the profile of water surface that may have existence at times of high water. Furthermore, there is no provision at all for levee heights in Sections 1 to 4, inclusive, of main channel.

It is recommended that the Board authorize the Chief Engineer to have the levees, except in Sections 1 to 4, inclusive, constructed according to heights indicated on the accompanying plan. The levees are now being constructed and it is therefore asked that early action be taken in this matter.

Respectfully submitted,

(Signed) THOMAS T. JOHNSTON,
Acting Chief Engineer."

(Enclosing Plan)

REPORT ON SALE OF SCOW OWNED BY THE DISTRICT.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, accompanied by receipt from the Treasurer, with reference to the sale of the scow owned by the District, said sale having been made by the Clerk under the direction of the Committee on Finance, in pursuance of an order passed at the meeting held June 28, 1893, (page 1301 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, and with accompanying receipt, ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with accompanying receipt, ordered printed and placed on file.

The following is

THE REPORT, WITH ACCOMPANYING RECEIPT:

"CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In response to an order of the Board passed at the meeting held June 28, 1893, (page 1320 of the Proceedings) your Committee on Finance, in conjunction with the Clerk, disposed of the scow "Roy Corduroy," owned by the District, to William Curran for the sum

of seventy-five ($75.00) dollars, that being the highest bid received.

The receipt of the Treasurer for the said amount is hereto attached

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance.
THOS. F. JUDGE,
Clerk."

"CHICAGO, August 12, 1893.

Received of Thomas F. Judge, Clerk of the Sanitary District of Chicago, for deposit to the credit of the said District, the sum of seventy-five ($75.00) dollars, being in full of money received by said Clerk from sale of the scow "Roy Corduroy," said money to be credited to the account of the Engineering Department.

(Signed) MELVILLE E. STONE,
Treasurer of the Sanitary District of Chicago.
By W. G. STAFFORD,
Assistant Treasurer."

RE-LOCATION OF MAIN CHANNEL ON SECTIONS E AND F.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by the report of the Chief Engineer, concerning the re-location of the main channel on Sections E and F, presented and referred to that Committee at the meeting held August 2, 1893, (page 1361 of the Proceedings), recommending that no change be made; and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and, with accompanying report, placed on file, and the recommendation made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Excused and not voting—Mr. Gilmore—one (1). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with accompanying report, placed on file, and the recommendation made therein concurred in.

The following is

THE REPORT:

" CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the report of the Chief Engineer of August 2, (page 1360 of the Proceedings) recommending a change in the location of the main channel on the right of way between the range line at Summit and Robey street, and referred to this Committee on the same date, we report as follows:

The specific location of the center line of the channel in respect to the right of way was determined after a full consideration by the Committee, and adopted by the Board on May 24, 1893, (page 1241 of the Proceedings) and the line has been staked out in accordance therewith. The Committee at this time is unable to reach a different conclusion, and therefore recommends that no change be made. It is understood that the occasion for the recommendation is on account of insufficient room upon which to deposit the spoil when the channel is enlarged to its full capacity. The Committee, in its former consideration, concluded that there would be sufficient room to spoil the material from the channel now to be excavated, and that any encumbrance on the right of way would be removed before enlargement would become necessary.

We therefore conclude that the right of way is sufficient for the needs of the District, and that a change of location is unnecessary, provided the Chief Engineer spoils the material without regard to the question of enlargement, leaving such bermes as are necessary to insure the stability of the channel.

The report of the Chief Engineer is herewith returned.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
W. H. RUSSELL,
WM. BOLDENWECK,
B. A. ECKHART,
JOHN J. ALTPETER,
THOMAS KELLY,
Joint Committee on Engineering and Finance."

(One Enclosure)

REPORT ON RETAINING WALLS.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by the report of the Chief Engineer, concerning changes in specifications for retaining wal's along the main channel, presented and referred to that Committee at the meeting held August 2 1893, (page 1360 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be adopted, ordered printed and, with accompanying report, placed on file, and the recommendations made therein concurred in.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with accompanying report, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the report of the Chief Engineer of July 31, making certain recommendations upon retaining walls, referred to this Committee on August 2, (page 1360 of the Proceedings) your Committee recommends as follows:

We are of the opinion that the retaining walls upon the rock sections where the rock is practically the surface of the ground, should be made flush with the sides of the channel; and, furthermore, that very low walls of only two or three feet in height and entirely above datum, or the ordinary flow line of the channel, can be properly omitted. In regard to the substitution of retaining walls of cement masonry, using such stone as may be found adjacent and within the section, we are of the opinion that a length of one hundred lineal yards of experimental wall should be constructed, and a careful account kept of the several items of cost; said wall to be founded on the firm rock, and to cover one the pockets.

We therefore recommend that the Chief Engineer be permitted to omit very low walls entirely, and use a low embankment back from the edge of the channel, where, in his opinion, this may be done without prejudice to the work, and that the walls upon the full rock cut shall be constructed flush with the sides of the channel, and that he shall have constructed an experimental wall of cement masonry, one hundred yards in length, under such specifications as he may deem proper, and that he shall account for the several items of cost and report the same to the Board.

Pending the final determination of the question of retaining walls, the request has been made for permission to place dimension rock suitable for walls and structures on the fifty foot berm, leaving a suitable passage way. The Committee sees no objection to the exercise of such discretion by the Chief Engineer.

The report of the Chief Engineer is herewith returned.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

(One Enclosure)

REPORT ON WESTERN STONE COMPANY AND STEPHENS STREET BRIDGES SANTA FE CROSSING NEAR LEMONT—AGREEMENT WITH WESTERN DREDGING & IMPROVEMENT COMPANY AND CHANGE IN RIVER DIVERSION.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, transmitting various reports from the Chief Engineer, presented and referred to that Committee at the several meetings enumerated in the report, accompanied by four (4) orders, with reference to the Western Stone Company and Stephens street bridges, Santa Fe crossing near Lemont, and change in river diversion, and also an agreement with the Western Dredging & Improvement Company, with reference to river diversion work; and the report and accompanying orders and agreement were read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be adopted, with accompanying orders and agreement,

ordered printed, and with enclosures placed on file, the recommendations made therein concurred in, and the orders passed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, with accompanying orders and agreement ordered printed, and with enclosures placed on file, the recommendations made therein concurred in, and the orders passed.

The following is

THE REPORT, ORDERS AND AGREEMENT:

"CHICAGO, August 16, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee has had under advisement various matters pertaining to the completion of the river diversion in the Des Plaines Valley, and reports as follows:

In regard to the bridge of the Western Stone Company's switch, near the Will County line on Section 10, the report and specifications for which were referred on July 19, (page 1339 of the Proceedings), it is recommended that the same be constructed by the contractor for Section 10, under the "extra" clause of his contract. The order and specification therefor are submitted herewith for the approval of the Board.

In regard to the bridge at Stephens street, Lemont, on Section 8, the report and specifications for which were referred on July 19, (page 1345 of the Proceedings) it is recommended that the same be constructed by the Engineering Department. The order and specifications for said bridge and approaches are submitted herewith for the approval of the Board. The agreement with the Highway Commissioners in regard to the same will be transmitted as soon as it can be formally closed.

In regard to the Santa Fe crossing near Lemont, which is the subject of an agreement authorized under date of August 4th, (page 1383 of the Proceeeings) it is recommended that the same be constructed by the Engineering Department. The order and specifications for said bridge and approaches, as prepared by the Engineering Department, are transmitted herewith for the approval of the Board.

These three structures are all that are required across the river diversion, between Willow Springs highway and Romeo road, and their completion is necessary to the use of the river diversion. Said structures are all to be placed at the uniform hight of eleven feet in the clear above the bottom grade of the channel, and are to be 500 feet long, measured at right angles to the channel, and the space beneath the structure and outside the river bed proper is to be excavated to an average level of two feet above said bottom grade, to better accommodate floods.

It is important that these structures be completed at the earliest practicable date, and that the entire river diversion throughout the rock sections should be finished and the river turned therein as soon as possible. Your Committee therefore recommends that the Engineering Department be instructed to secure the earliest possible completion of the entire work of river correction, structures and embankment throughout Sections 6 to 12, inclusive.

The Committee also transmits an agreement with the Western Dredging & Improvement Company in regard to the river diversion on Section C., which provides for the completion of the same on or before November 1, 1893, and recommend that the same be approved.

In regard to the river diversion on Sections E and F, referred to the Committee on August 2, (page 1359 of the Proceedings) the Committee recommends that the grade of the channel be raised so as to conform to the grade as specified for Sections A, B and C, and that the south levee be set back so as to be 600 feet from the north levee as now established. This change will better accommodate floods, will provide a definite channel for ordinary water, and will save a large part of the amount estimated by the Chief Engineer. An order covering specifically the changes proposed is submitted herewith for the approval of the Board.

In the report of July 26, (page 1350 of the Proceedings) transmitted by the Chief Engineer, the Superintendent of Construction suggests that the river diversion will be expedited in certain cases by allowing a less slope than 1½ to 1 in excavation and embankment, the same cross section to be preserved. The Committee suggests that the Chief Engineer in his discretion be permitted to make

alterations of this character, provided no extra cost is entailed thereby.

The Committee suggests that any changes required in existing bridges at and above Willow Springs, shall be taken under immediate advisement, and that measures be taken to secure completion of all river work during the present season. The main works of the District are not free from serious contingencies and grave men ce until all river work is done in the most thorough and substantial manner.

The several reports referred to the Committee are herewith returned for filing.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman
B. A. ECKHART,
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,

Joint Committee on Engineering and Finance."

(Nine (9) Enclosures)

"*Ordered*, That the Chief Engineer be authorized and instructed to direct E. D. Smith & Company to build and reconstruct, under the terms providing for extra work in Section 19 of the contract with E. D. Smith & Company for contract Section 10, the railroad embankment, track and bridge on the Western Stone Company's switch, connecting said Company's stone quarry, in Will County, near the Cook County line, and the Santa Fe Railroad, and that said work be done in accordance with the agreement entered into between this District and said Western Stone Company on July 27th 1892, and also, in accordance with the specifications hereto attached and marked 'Exhibit A,' Western Stone Company Railroad."

(Enclosing Specification)

"*Ordered*, That the Chief Engineer be authorized and instructed to build a bridge with the necessary and suitable approaches thereto over the new river diversion on Stephens street, in Section 20, Township 37 North, Range 11 East of the Third Principal Meridian, in the town of Lemont, Cook County, Illinois, in accordance with the specifications hereto attached marked 'Exhibit A, Stephens street bridge,' provided, that said Engineer shall first secure propositions from responsible and experienced men for the construction of such bridge and its approaches, and that the President and Clerk must first approve one of said propositions before said Engineer proceed to erect said bridge or build said approaches in accordance with the same."

(Enclosing Specification)

"*Ordered*, That the Chief Engineer be authorized and instructed to build and reconstruct the railroad embankment, track and bridge on the main line of Atchison, Topeka & Santa Fe Railroad over and across the new river diversion, in Section 20, Township 37 North, Range 11, East of the Third Principal Meridian, Cook County, Illinois, and in Section 17, Township 37 North, Range 11, East of the Third Principal Meridian, DuPage County, Illinois, in accordance with the specifications hereto attached marked Exhibit A, Santa Fe Railroad,' provided, that said Engineer shall first secure propositions from responsible and experienced men for the construction of such bridge and its approaches, and that the President and Clerk must first approve one of said propositions before said Engineer proceed to erect said bridge or build its approaches in accordance with the same."

(Enclosing Specifications)

"It is hereby agreed by the Sanitary District of Chicago, that should the Western Dredging & Improving Company, contractors for Section C, of the Sanitary Canal, put on a sufficient force to complete the river diversion of said section on or before November 1, 1893, they shall have permission to fill the old river channel at the upper end of said river diversion and divert the water into the new channel. And in case the river diversion below Section C, on Sections A and B, should not be completed at that time, they are hereby granted permission to excavate a tail race about forty (40) feet wide from the lower end of Section C to the river, for which they are to receive the same price per cubic yard as for the river diversion.

In consideration of the foregoing conditions, the Western Dredging & Improvement Company agree to put on an additional force and push the river diversion to completion at the earliest

practicable date, and not later than October 31, 1893.

(Signed)

WESTERN DREDGING & IMPROVEMENT CO,

J. O. WRIGHT.

CHICAGO, August 16, 1893."

"*Ordered*, That the Chief Engineer be authorized and directed to change the plans for River Diversion in Sections E and F of the Main Drainage Channel in such a manner that the grade of the bottom of the River Diversion at its east end shall be 8 4 feet above the established datum and at its west end 7 6 feet above the same datum, and that the grade between the two ends be uniform, and consistent with the elevation and grade of the River Diversions to the westward; and be it further

Ordered, That the Chief Engineer be authorized and directed to change the location of the levee south of the River Diversion in Sections E and F of the Main Dralnage Channel in such manner that the location of the levee shall be moved southward about 150 feet, so that the distance between levees north and south of the River Diversion shall not be less than 600 feet."

COMMUNICATION FROM NAVY DEPARTMENT.

The Clerk presented a communication, directed to President Wenter, from Geo. P. Blow, of the United States Navy Department, requesting certain information concerning the water communication, locks, canals, etc., between Chicago and the Mississippi River; and the communication was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Federal Relations, with power to act and instructions to report back to the Board.

Mr. Boldenweck, seconded by Mr Gilmore, moved as an amendment that the communication be ordered printed and referred to the Chief Engineer with power to act, and instructions to report back to the Board.

On roll-call, on the amendment, the vote stood: Yeas—Messrs. Boldenweck, Cooley and Gilmore—three (3). Nays—Messrs. Altpeter, Eckhart, Kelly, Prendergast, Russell and Wenter—six (6).

Upon which result the President declared the amendment lost.

On roll-call, on the original motion of Mr. Eckhart, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried and the communication ordered printed and referred to the Joint Committee on Engineering and Federal Relations, with power to act and instructions to report back to the Board.

The following is

THE COMMUNICATION:

"CHICAGO, August 12, 1893.

SIR—This office receives frequent inquiries concerning the water communication, locks, canals, etc., between this city and the Mississippi River. In order to give reliable information it is necessary to have some authentic and official data. Will you kindly supply us with such information of this nature as you think may be of service. Charts, blueprints of the canal and proposed changes, and such information as may enable this office to answer the inquiries received, will be greatly appreciated.

The following questions are submitted to this office for an answer. Will you kindly supply the necessary data:

(1) Is it possible for a steamer to go from Chicago to the Mississippi River?

(2) What is the maximum length of vessel that can pass through the locks?

(3) What is the maximum breadth of beam that can pass through the locks?

(4) What is the maximum draft of water that can pass through the locks?

(5) What is the maximum height which can pass under bridges?

Thanking you for the required information in advance, I remain,

Very respectfully,

(Signed) GEO. P. BLOW,

U. S. Navy, in charge.

President of the Board of Drainage Commissioners, Chicago, Ill."

LEVEE HEIGHTS BETWEEN SUMMIT AND ROMEO.

Mr. Cooley presented an order, establishing a uniform declivity for levees on the river diversion between Summit and Romeo, and authorizing and instructing

the Chief Engineer to make certain changes in the grade of the same, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer authorized and instructed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be authorized and instructed to so change the grade of the top of the levee as to make a uniform declivity for said levee from the top of the levee as now established at the Santa Fe crossing above Summit to the top of the levee as established at Willow Springs Road, said levee being 24 feet above datum at said crossing and descending to 20 feet above datum at said road; and be it further

Ordered, That the grade of the top of the embankment from the Western Stone Company's switch near the Will County line to the Romeo Road be established as a uniform grade between said points as heretofore determined, said grade being 11 feet above the bottom of the River Diversion at said switch and 8 feet above datum at said road; *provided*, that in making said changes no extra cost is thereby caused to the District."

PROJECT FOR ROAD ALONG THE MAIN CHANNEL.

Mr. Kelly presented an order, rescinding the action of the Board on the project for a road along the main channel as set forth in the report of the Joint Committee on Engineering and Finance, presented, adopted and concurred in at the meeting held August 4, 1893, (page 1380 of the Proceedings), and directing the Chief Engineer to construct said road as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer directed in accordance with the same.

The following is

THE ORDER:

"*Ordered*, That the action of this Board on the project, for a road along the main channel, proposed by the Chief Engineer and as set forth in the report of the Joint Committee on Engineering and Finance presented, adopted and concurred in at the meeting held August 4, 1893, (page 1380 of the Proceedings) be and the same is hereby rescinded; and, be it further

Ordered, That the Chief Engineer be and he is hereby directed to construct said road along the tow-path of the Illinois and Michigan Canal, from Summit to Romeo, at an expense for the whole line not to exceed the average of $150.00 per mile."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

AUGUST 23, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, August 23, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9) members, were present.

MINUTES.

The minutes of the regular meeting, held August 16, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

MESSAGE OF PRESIDENT REGARDING WORK ON MAIN CHANNEL, AND COMMUNICATION FROM TRADE AND LABOR ASSEMBLY.

The President presented a message, with reference to the mode of operation and the additional employment of men on the work of the main channel, and recommending the appointment of a Committee to consider the subject and report at the next meeting of the Board; and the message was read.

Mr. Kelly, seconded by Mr. Gilmore, moved that the message be ordered printed and placed on file, and the recommendations made therein concurred in.

Mr. Altpeter, seconded by Mr. Cooley, moved as an amendment that the message be ordered printed and referred to the Joint Committee on Finance and Engineering.

As bearing on the same subject, the President presented a communication, addressed to the Board by the Trade and Labor Assembly of Chicago, asking that a Committee of five members of the Board be appointed, to meet and become a part of a Committee of citizens, to devise ways and means of aiding the unemployed of Cook County; and the communication was read.

Mr. Prendergast, seconded by Mr. Gilmore, then moved as a substitute for both of the foregoing motions that the communication be ordered printed and laid over temporarily, and that the President be directed to appoint a Committee of five members of the Board, as requested in the communication.

On roll-call, on the substitute, the vote stood: Yeas—Messrs. Gilmore, Kelly, Prendergast, Russell and Wenter—five (5). Nays—Messrs. Altpeter, Boldenweck, Cooley and Eckhart—four (4).

Upon which result the President declared the motion carried, the communication ordered printed and laid over temporarily, and the President directed to appoint a Committee of five members of the Board, as requested in the communication.

Mr. Prendergast, seconded by Mr. Kelly, then moved that the message of the President be ordered printed and referred to the same Committee of five, with instructions to report back at the next meeting.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the message of the President ordered printed and referred to the same Committee of five, with instructions to report back at the next meeting.

The following is

THE MESSAGE:

"CHICAGO, August 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The matter of progress on the work of the channel in charge of this Board is one of very great importance. Every effort should be made that will lead to an energetic prosecution of the work. Every firm which has taken contracts from the District should be required to do their proportionate share of the work allotted to them, or, in other words, come up to the required monthly estimates, which means the completion of the work in the spring of 1896.

The mode of construction between Summit and Lockport, covering a distance of twenty miles, is carried on by contract, and I believe the course so pursued by the Board of Trustees was wise and prudent. The material found on the twenty miles is rock, hard-pan, boulders, earth and muck, where, with the assistance of the proper machinery, considerable saving can be attained for the District. The line of operation is somewhat remote from the city, and the men at work are housed in buildings erected by the contractors.

Had the District undertaken the work by day labor, a great outlay would have been necessary for the construction of houses, preparations to board the men, the purchasing of expensive machinery, plants, etc. These facts convinced the Trustees that such a mode of operation would not be for the best interests of the Sanitary District, hence the letting of the work by contract.

The outlay for machinery and plants, taken at the lowest estimates, amounts to $60,000 per section, or a total of $1,200,000 for the line on which contracts were let, and accepting the same ratio on the other sections not yet let, it will run close to $2,000,000.

As Trustees of the District, we deem it our duty to build the channel on the most economical basis, and even were the Board otherwise inclined, we could not branch out very far in a liberal, uncalled for expenditure, inasmuch as our taxing power limits us so far and no further. The money raised for the purpose provided by law, is one half of one per cent. annually on the valuation in the District, which amounted in the first year to $900,000. In the second year to $1,050,000. In the third year to $1,400,000. The same amount for the coming three years, with perhaps a slight increase, would amount to a total from general taxation of $4,500,000 for the three years.

The District is allowed by law to issue bonds to the amount of five per cent. on the valuation, and at no time shall the issue

exceed $15,000,000. At the present time, as the valuation stands, we can issue about $13,500,000 bonds, as the valuation is about $275,000,000 annually.

The total amount that can be raised by general taxation is...	$ 7,850,000
Bonds (accepting the maximum)	15,000,000
Making a total of.....	$22,850,000

The Board may receive some money from special assessments.

The lowest estimate of the cost of the channel, accepting present contract prices as a basis, is $22,000,000.

These figures clearly demonstrate that economy is an extreme case of necessity.

At this end, from Summit to the City of Chicago, covering a distance of seven miles, the topography of the country is level, the material, at least the upper ten feet or more, is earth and clay, and it is claimed by many that this can be removed economically by hand work to a depth of five feet from the top without aid of much machinery, and possibly without requiring the housing of men on the ground, as they can get from their homes in the city to the work.

Considering the situation at the present time, when many men with families are out of work, and considering that if the Board should conclude to let this work by contract, sixty days are required to advertise the same, which means the letting of the work probably not earlier than November 15th, I believe that the Board should do something at once, if possible, to relieve the situation.

I believe in employing as many of our home people as it is possible to do, and I believe, also, that the Trustees desire to do justice to the laboring people, and pay them good wages; but we are not expending our own money; it is the peoples'—the tax payers' money.

To get work at once, for as many of these unemployed men as possible, is the question of the hour. If pending land questions east of Summit can be settled, and it is found that the work can be done economically, I would recommend to your Honorable Body the direct employment of men on any part of the work where it is feasible.

I would also recommend that a Committee of three be appointed, in conjunction with the Chief Engineer and Superintendent of Construction, to consider this subject and report at the next meeting of the Board, if possible, some feasible and practicable plan for the immediate employment of additional men for the prosecution of the work.

Respectfully submitted,

(Signed) FRANK WENTER,
President."

The following is

THE COMMUNICATION:

" CHICAGO, August 21, 1893.

The Board of Drainage Trustees, Rialto Building, City:

GENTLEMEN—You are requested to appoint a Committee of five of your Honorable Body to meet with and become a part of a committee of citizens, comprising members of the labor organization, of the Common Council, of the Board of County Commissioners, of the Park Commissioners, and others representing the business interests of Chicago and Cook County, whose purpose it will be to devise ways and means of aiding the unemployed of Cook County.

Yours respectfully,

TRADE AND LABOR ASSEMBLY OF CHICAGO,
Per JOHN, RYAN, *Chairman.*
WM. C. POMEROY, *Acting Secretary.*
Committee of Relief."

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, August 15, '93).....	$ 4,937 63
Agnew & Co. (Sec. 5, August 15, '93).....	2,173 50
Agnew & Co. (Sec. 6, August 15, '93).....	1,275 75
Agnew & Co. (Sec. 7, August 15, '93).....	5,108 55
Agnew & Co. (Sec. 8, August 15, '93).....	4,630 76
Agnew & Co. (Sec. 9, August 15, '93).....	5,113 85
E. D. Smith & Co. (Sec. 10, August 15, '93)...	9,336 25
Mason, Hoge & Co. (Sec. 11, Aug. 15, '93)	14,718 46

Mason, Hoge & Co. (Sec. 12, Aug. 15, '93)	$12,040 44	
Mason, Hoge & Co. (Sec. 13, Aug. 15, '93)	14,520 19	
McCormick Const. Co. (Sec. 14, Aug. 15, '93)	6,098 75	
L. D Conner & Co. (Sec. A, Aug. 15, '93)	5,359 38	
L. D. Conner & Co. (Sec. B, Aug. 15, '93)	5,197 50	
Western Dredging and Impt. Co. (Sec. C, August 15, '93)	2,056 25	
E. D. Smith & Co. (Sec. D, August 15, '93)	3,287 40	
Streeter & Kenefick, (Sec. E, Aug. 15, '93)	9,080 70	
Ricker, Lee & Co. (Sec. F, Aug. 15, '93)	4,325 20	
		$109,260 56

ENGINEERING DEPARTMENT.

J. R. Davis & Son, (test pits)	$175 40	
A. C. Schrader, (traveling)	17 69	
A. C. Schrader, (emergency)	71 50	
A. C. Schrader, (emergency)	38 50	
A. C. Schrader, (emergency)	35 00	
A. C. Schrader, (emergency)	12 75	
A. C. Schrader, (emergency)	35 25	
A. C. Schrader, (emergency)	15 20	
		$ 401 29

LAW DEPARTMENT.

S. D. Childs & Co. (stationery)	16 34

POLICE DEPARTMENT.

Frank E. Michaud, (repairing Sag building)	333 28
Grand total	$110,011 47

Mr. Kelly, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 1050, Clerical Department, (stationery)	$11.00

Mr. Kelly, seconded by Mr. Russell, moved that Requisition No. 1050, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 1050, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending August 19, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending August 19, 1893, as the same have been reported to me:

Engineering Department	90
Clerical Department	3
Treasury Department	1
Law Department	7
Total employes	101

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

CHANGE IN LEVEES OF SECTIONS E AND F.

The Clerk presented a report from the Chief Engineer, accompanied by an order, rescinding the action of the Board, ordering that the Chief Engineer be authorized and directed to change the location of the levee south of the river diversion on Sections E and F, as provided in the order passed at the meeting held August 16, 1893, (page 1403 of the Proceedings) and authorizing and directing the Chief Engineer to change the location of the levee, as provided in the order, and the report and accompanying order were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file, the recommendations made therein concurred in, the order adopted, and the Chief Engineer authorized and directed in accordance with the same.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the recommendations made therein concurred in, the order adopted, and the Chief Engineer authorized and directed in accordance with the same.

The following is

THE REPORT, WITH ACCOMPANYING ORDER:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I would respectfully ask a modification of your order of August 16, relative to the location of the south levee of the river diversion on Sections E and F, in accordance with the form of order herewith submitted.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

"*Ordered*, In so far as it applies to Section "F," that the action of this Board, at its meeting August 16, 1893, ordering that the Chief Engineer be authorized and directed to change the location of the levee south of the river diversion in Sections E and F of the main drainage channel in such a manner that the location of the levee shall be moved southward about 150 feet, so that the distance between levees north and south of the river diversion shall not be less than 600 feet (page 1403 of the Proceedings), be and the same is hereby rescinded; and be it further

Ordered, That the Chief Engineer be authorized and directed to change the location of the levee south of the river diversion in Section "F" of the main drainage channel in such manner that at its western extremity it shall be a continuation of the tangent, or straight line, forming the line of said levee through the central part of the work."

CONDTION OF WORK ON MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer, transmitting a report from the Superintendent of Construction, showing the condition at that date of the work on all sections of the main channel under contract; and the report and enclosure were read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance, with instructions to report back at the next meeting.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the report of the Superintendent of Construction under date of August 15, showing the conditions prevailing upon each section of the work now under contract. There has been no material change in conditions since that report closed, except upon Section No. 1. For that work the contractor, Alfred Harlev, has secured two steam shovels which have actually been delivered, but owing to delay in delivery of track for dump cars they have not gone to work. This equipment is an evidence of intention on the part of the contractor to make progress and I gladly recognize it to his credit

On the work of river diversion, Section No. 1, there is no change since the 15th inst The contractor declares himself unable to prosecute that work at the price covered by the contract. This morning his Superintendent called upon me to say that they were ready to place 400 men on the river diversion and push it, if the District would pay the labor rolls with 10 per cent. added for use of tools and superintendence.

In the matter of the Agnew Sections, a member of that firm submitted for my inspection copies of certain contracts which the firm has entered into for equipment. This equipment comprises one hydraulic dredge for Section 6 with a guaranteed capacity of 2,500 cubic yards per day. It is dated August 8th, and under its terms the machine is to be in place 90 days from that

date. They do not purchase this machine, and it is to do work on a yardage basis. I do not know where the machinery for this dredge is being built, nor could Mr. Agnew tell me; he said he would send one of the contractors to me with full particulars. The contract is executed by M. H. Alberger, President, and M. Valandingham, Secretary.

For Section No. 7 the contract calls for blank machines, high power derricks, with a capacity for handling 1,000 to 1,200 cubic yards per day of ten hours, for which the party doing the work is to receive 15 cents per cubic yard. Contract dated July 3rd, time 90 days.

For Section No. 9 the contract is drawn (as per No. 7) for machines (number not specified) capacity to be from twelve to fifteen hundred yards per day, but the contract only requires a rate of 40 cubic yards per hour; compensation to be 15 cents per cubic yard, date of contract June 12th, time of delivery 90 days. Both of these contracts are with the McMyler Manufacturing Company.

I heartily concur in the recommendation of the Superintendent of Construction that the Construction Department be clothed with authority to place such forces as may be needed upon the river diversion, in ample time to insure its completion before the winter sets in.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure)

"CHICAGO, August 15, 1893:

Isham Randolph, Esq., Chief Engineer, Sanitary District:

DEAR SIR—Reporting upon the general condition of the work, I will say that with few exceptions there has been a marked improvement since my last general report, and that some contractors have exceeded the requirements of their contracts, of which I beg to submit the following brief summary:

Section "F."

This section is estimated to contain 1,568,500 cubic yards, and work was ordered to be commenced thereon April 1st last. The average monthly amount required to be done on this section is 46,920 cubic yards, allowing the first four months to count as one month, to enable the contractors to make suitable provision for carrying on the work. Up to the 15th inst. there has been 73,953 yards handled, which is 3,573 yards in excess of the requirements. Meanwhile the contractors have provided an extensive plant, consisting of locomotives, cars, two steam shovels (and another ordered), pumps, water tank, buildings, and other necessary adjuncts for the prosecution of the work. They have, also, in addition to the yardage above stated, constructed embankments for their railway, a railroad bridge across the Desplaines River, and made other preliminary arrangements such as at present indicate satisfactory progress on this section.

Section "E."

This section contains about 1,821,200 cubic yards. Work was ordered commenced thereon at the same time and under the same conditions as on the preceeding Section ("F"). It should be stated, however, that high water prevented doing much on either of these sections until June. The average progress required on this section is 55,200 cubic yards per month. Allowing four months at beginning to equal one month, there should have been 82,800 cubic yards excavated up to the 15th inst. Their estimate up to the 10th inst. is about 235,000 cubic yards, or about 152,000 yards more than required. Since my last general report their plant has been increased by the addition of two steam shovels, with the necessary locomotives, cars, tracks, etc., required for their operation, which places this section at this time beyond apprehension as to progress.

Section "D."

This section contains about 1,820 525 cubic yards, of which the contract requires the removal of about 55,160 yds. monthly, or 82,740 yards up to the 15th inst. The estimates to latter date show 58,768 cubic yards excavated, leaving a deficiency of 23,972 yards, or about two weeks behind. I do not, however, regard this as a serious lapse as the contractors are strengthening their plant and rendering the same more efficient, and getting their work opened up in such manner as to be more expeditiously done, which, together with their well known experience

as contractors, justifies the expectation of full progress on this section.

Section "C."

This section embraces 1,965,270 cubic yards, of which 176,900 yards is river diversion, requiring a monthly progress of 59,550, or 89,325 yards by the 15th inst. Their estimate shows but 35,000 yards excavated on that date, owing, partially, to the fact that originally little work could be done on the main channel until the river diversion is completed. Another steam shovel with incline tramway has recently been added to this work which has now so dried off that the greater portion of it may also be worked with teams and scrapers, which the contractors have promised to put on. If this is not done promptly, owing to the exigencies mentioned in my report of the 26th ult., I urgently recommend that immediate steps be taken to place such force thereon as will insure the completion of the river diversion during this exceptionally dry season.

Section "B."

Contains 1,556,671 cubic yards, 203,200 being river diversion. The requirement on this section is 47,170 yards per month, or 70,755 yards to date, of which but 29,822 had been done up to the 15th inst. Of this amount 22,000 yards were excavated within the lost two weeks of the period named, and a large force is now engaged thereon.

Section "A."

On this section are 2,179,190 cubic yards of which 135,800 are river diversion. The monthly progress requirement is about 66,000 yards, or about 99,000 yards to this date (August 15th). Their estimate shows but 26,222 yards, of which amount 20,000 were taken out during the last two weeks, and a strong force is now engaged thereon. This and the preceding section belong to the same contractors, who seem to be making an effort to expedite the river diversion part of their work, which must be completed on both these sections before any work can be done on the main channel. Owing to these conditions I would also recommend that, in case of any doubt of their ability to finish such work this season, the Construction Department be authorized to put on such force as to secure its completion. I am advised that a hydraulic dredge has been engaged for these sections, with an estimated capacity of 100,000 cubic yards per month, and that it is expected to be in operation within the next two weeks.

Section 1.

Work was ordered commenced on this section, containing 2,177,819 cubic yards, on January 1st last, the monthly rate of progress being 54,450 cubic yards, or 245,025 yards to date, at which time the estimate shows but about 50,000 yards excavated—21,000 yards of which was done during the last two weeks. It is well to state, however, that this is an earth section which was thickly timbered and frozen up at the time work was ordered to proceed thereon, and that subsequent high water deterred the commencement of effective operations until well along in June. The river diversion on this section contains 145,841 yards, in which the contractors encountered some very hard material which they abandoned after having excavated about 5,500 yards, and are now confining their operations to the north half of the main channel with a force of teams and men capable of moving about 40,000 to 50,000 yards per month. The contractors informed me that they have ordered and on the way two of the strongest pattern steam shovels for this work, which statement is verified by the agent of the Marion Steam Shovel Co., who took the order. I have, however, no hope of satisfactory progress on this section, for the reason that the opening of the river diversion on its south end discloses a very hard class of material which the contractors declare themselves unable to handle unless the same is classified as solid rock, which cannot be done under our contract specifications. I am of the opinion also that much of this same material will be found in the main channel—especially in the south end of the section, which the contractors say they cannot handle unless classified as above.

Sections 2, 3 and 4.

The condition of these sections is well known.

Section 5.

This section contains 1,212,860 cubic yards, requiring a monthly output of 30,300 yards, or 222,100 yards to date. Of this amount there has been excavated but 66,000 yards—leaving a deficiency of 156,100 yards. This deficiency would have been much

greater but for the recent use of teams that have now moved about all the material that can be taken out in that manner. The "Clam Shell" dredge has been tested for some weeks and proven a failure, as predicted in my report of July 26th, (page 1350 of Proceedings) and the same conditions exist, as therein stated, in an intensified degree. Work was commenced on this section October 15th, 1892, resulting thus far in an output of but 66,000 yards, during one of the finest working seasons known in this country. The contractors have been indulged in testing experimental methods for nearly a year without benefit to themselves or the Sanitary District, and I would recommend that summary measures be adopted to secure the excavation of this section.

Section 6.

On this section, containing 1,125,623 cubic yards, work was commenced October 15th, 1892. The monthly requirement is 28,140 yards, or 196,980 yards to date. Of this there have been taken out but 66,200 yards, leaving a shortage of 130,780 yards. The same condition prevails as stated in my report of July 26th (page 1351 of the Proceedings), and as is given in reference to the preceding section, together with my recommendation therein.

Section 7.

This section contains 1,108,349 cubic yards, calling for the removal of 27,700 yards per month, making 193,900 yards that should have been removed to date. The estimates show 66,140 yards, leaving a deficit of 128,760 yards.

Section 8.

Of the 1,313,112 cubic yards in this section 32,809 yards are required to be moved monthly, amounting to 246,150 yards to date. The estimates give 132,440 (of which about one-third is earth) showing a shortage of 113,710 yards.

Section 9.

This section contains 1,099,788 cubic yards, requiring a monthly average output of 27,500 yds., amounting to 206,250 yds. to date, of which there have been excavated to date 87,460 yards, the deficit being 118,790 yards. This and the two preceeding sections (7, 8 and 9) are nearly all rock with a considerable river diversion comprising material easily excavated, much of which has been done, and the yardage herein given as excavated on these three sections comprise 136,600 yards of earth and 122,650 yards of solid rock. If contractors are so far delinquent in removing this top material, which is so much more easily handled than the harder courses of underlying rock, what can be expected when these lower courses are reached. Much has been said about procuring high power derricks and heavy machinery, and that their delinquency was caused by reason of delay in getting such machinery on the ground; whereas, as stated in a former report, such machinery is not only unnecessary but unprofitable to use until the first cut is removed, which can be done more economically and far more expeditiously with the usual inexpensive appliances so successfully used in similar material on other parts of the work adjacent to these sections.

All this heavy machinery is limited as to capacity and cannot be pushed. The other methods above referred to can be and should have been adopted. I am confident that none of these sections can be brought up to contract requirements by the use of the heavy derricks proposed. I see no indication of any substantial improvement that will warrant further delay in adopting measures that will insure the completion of these sections.

Section 10.

This section contains 1,227,601 cubic yards, of which 30,600 yards are required to be taken out monthly, or 229,500 yards up to this time.

The estimate shows 148,160 yards, leaving a deficiency of 81,340 yards. Although somewhat behind, this section is being provided with the most extensive plant on the line. They are operating now principally with cars and tramways on the first course, following with cantilever derricks on the lower courses. They have one cantilever derrick in operation now and two new ones about finished which will soon be ready for use, which, with their other appliances, seems ample for the completion of this section on time.

Section 11.

This section contains 1,034,120 cubic yards, requiring a monthly rate of progress of 25,850 yards, amounting to 193,875 yards to date. The last estimate shows a total of

165,110 yards excavated, leaving about 28,765 yards short, but as the estimate shows that they are now excavating at the rate of 43,440 yards per month this deficiency will soon be transformed into a surplus.

Section 12.

This section contains 991,371 cubic yards, on which the required rate of progress is 24,784 yards per month, or 186,000 yards to date. According to the last estimate the total yardage moved is 174,800 yards, leaving this section only 11,200 yards behind, which will be overcome during the present month, as their capacity now is about 40,000 yards per month, or nearly double their contract requirements.

Section 13.

Of the 1,032,257 cubic yards in this section the monthly average should be 25,800 yards, or a total of 193,800 yards to this date, at which time their estimate credits them with 239,922 yards, being 46,522 yards in excess of the rate of progress called for by their contract. Their present capacity is nearly double that which is required, the last 30 days' output being 43,400 cubic yards. This and the two preceeding sections (11, 12 and 13) belong to one contracting firm, and all work thus far done thereon has been done with carts, cars, tramways, inclines, etc., all economical and efficient methods and about the only means that can be profitably employed to expedite work on the upper courses of the channel, with which they are well along. They now have in course of erection eight cantilever derricks for these three sections to follow up and take out the lower courses. All their work is being done in a systematic and commendable manner, gratifying alike to all concerned.

Section 14.

This section contains 1,247,789 cubic yards, requiring a monthly progress of 31,200 yards, or 234,000 yards up to the present time. The estimates, however, show but 94,700 yards, leaving a deficit of 139,300 yards. The last current estimate shows an output at the rate of only 22,000 yards per month, which is still about 33⅓ per cent less than the rate of progress called for, to say nothing of overcoming the large deficiency above shown, which should be provided for during this the best part of the working season. From the statements and promises heretofore made by the contractors a much better showing was expected, which they excuse by reason of delay in getting engines and hoisting machinery. However this may be, it is clear that nothing but an actual showing of a satisfactory output should be tolerated on this section, and notice given accordingly.

Respectfully submitted,

(Signed) URI W. WESTON,
Supt. of Construction."

COMPLAINTS TO SUPERINTENDENT OF CONSTRUCTION.

The Clerk presented a report from the Chief Engineer, transmitting a report from the Superintendent of Construction, with reference to complaints lodged with him; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be ordered printed, and, with enclosure, referred to the Committee on Judiciary.

The motion prevailed unanimously, and the report was ordered printed, and, with enclosure, so referred.

The following is

THE REPORT:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I enclose herewith report of Superintendent of Construction relative to complaints lodged with him by one Peter Maday, of Lemont. He investigated these cases at my request, and I submit them for your information.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(One (1) enclosure).

APPOINTMENT OF SPECIAL COMMITTEE ON LABOR QUESTION.

The President then announced that he had appointed a Special Committee of five, as directed, consisting of Messrs. Kelly, Eckhart, Cooley, Altpeter and Prendergast, to meet and become a part of a Committee of citizens to devise ways and means of aiding the unemployed of Cook County, and to take up the question of the employment of additional men on the work of the main channel, as recommended in the message of the President.

PURCHASE OF "OGDEN" AND "LAFLIN LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from the estate of William B. Ogden, deceased, and Matthew Laflin, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the voucher of the Attorney as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of William B. Ogden, deceased, and Matthew Laflin, on the voucher of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of William B. Ogden, deceased, and Matthew Laflin, on the voucher of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Marianna A. Ogden, William O. Wheeler and Andrew H. Green, surviving executors and trustees under the last will and testament of William B. Ogden, late of the City and State of New York, deceased, for the purchase from them for the corporate purposes of this District, of the lands hereinafter described, for the sum of forty-six thousand seven hundred and fifty ($46,750.00) dollars.

From James S. Norton, Caroline Ogden Jones and Mahlon Ogden Jones, as trustees for the said Mahlon Ogden Jones, for the purchase from them for the corporate purposes of this District of the lands hereinafter described for the sum of sixteen thousand four hundred and fifty ($16,450.00) dollars.

From James S. Norton, Caroline Ogden Jones and Louis Butler McCagg, as trustees for the said Louis Butler McCagg, for the purchase from them for the corporate purposes of this District of the land hereinafter described for the sum of two thousand three hundred ($2,300.00) dollars.

From Frances Ogden Jones, for the purchase from her for the corporate purposes of this District of the lands hereinafter described for the sum of twenty-five thousand and fifty ($25,050.00) dollars.

From Caroline Ogden Jones, for the purchase from her for the corporate purposes of this District of the lands hereinafter described for the sum of eight thousand ($8,000.00) dollars.

From William A. Burnham, successor in trust to John A. Burnham, deceased, for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of twelve thousand nine hundred and fifty ($12,950.00) dollars.

All of which said parties aforesaid are represented in Chicago by Ogden, Sheldon & Co., as agents.

From Matthew Laflin, for the purchase from him for the corporate purposes of this District of the lands hereinafter described for the sum of sixty-five thousand ($65,000.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said Marianna A. Ogden, William O. Wheeler and Andrew H. Green, surviving executors and trustees under the last will and testament of William B. Ogden, late of the City and State of New York, deceased, the sum of forty-six thousand seven hundred and fifty ($46,750.00) dollars in full payment for the following described lands, to-wit:

That part of the northeast (N. E.) fractional quarter (¼) of Section twelve (12), Township thirty-eight (38) North, Range twelve (12), East of the Third Principal Meridian, commencing at the northeast (N. E.) corner of said section and running

thence west (W.) along the north line of said section, sixteen hundred (1,600) feet; thence south (S.) to the northerly margin of the Desplaines River; thence southwesterly at right angles to the general course of said river there, to the center thread of the current of said river; thence southeasterly and southwesterly following the curve of said river down said center thread to its intersection with a line drawn from the point of contact of the west line of the east half (E. ½) of said northeast (N. E.) fractional quarter (¼) with the southerly margin of the said river, and at right angles to the general course of said river there; thence southeasterly along said line to said southerly margin; thence south (S.) along said west line to the south line of said northeast (N. E.) fractional quarter (¼); thence in a northeasterly direction to a point in the east line of said northeast (N. E.) fractional quarter (¼), five hundred (500) feet north (N.) of the southeast (S. E.) corner of said northeast (N. E.) fractional quarter (¼); thence north (N.) on the east line of said section to the point of beginning, excepting therefrom that part thereof lying north (N.) of the southerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company. Also,

That part of the west half (W. ½) of the east half (E. ½) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company and south (S.) of a line drawn from a point in the west line of said northeast quarter (N. E. ¼), one thousand and seventeen (1017) feet north (N.) of the southwest (S. W.) corner of said northeast quarter (N. E. ¼) to a point in the east line of said section, four hundred and ninety-six and ninety-five one-hundredths (496.95) feet south (S.) of the northeast (N. E.) corner of said section. Also,

That part of the south half (S. ½) of the northwest quarter (N. W. ¼) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of the east half (E. ½) of the southwest quarter (S. W. ¼) of said section, thirty-nine and sixty-six one-hundredths (39.66) feet north (N.) of the southwest (S. W.) corner of said east half (E. ½) to a point in the east line of the southeast quarter (S. E. ¼) of said section, one thousand and twenty-five and sixty one-hundredths (1025.60) feet south (S.) of the northeast (N. E.) corner of said southeast quarter (S. E. ¼).

To James S. Norton, Caroline Ogden Jones and Mahlon Ogden Jones, as trustees for the said Mahlon Ogden Jones, the sum of sixteen thousand four hundred and fifty ($16,450.00) dollars, in full payment for the following described lands, to-wit:

The south (S.) five (5) acres of the east half (E. ½) of the northeast quarter (N. E. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian. Also,

That part of the west half (W. ½) of the east half (E. ½) of the southeast quarter (S. E. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company. Also,

The south (S.) five (5) acres of the south (S.) ten (10) acres of the west half (W. ½) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian.

To James S. Norton, Caroline Ogden Jones and Louis Butler McCagg, as trustees for the said Louis Butler McCagg, the sum of two thousand three hundred dollars ($2,300.00), in full payment for the following described land, to-wit:

That part of the east half (E. ½) of the east half (E. ½) of the southeast quarter (S. E. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company.

To Frances Ogden Jones the sum of twenty-five thousand and fifty ($25,050.00)

dollars, in full payment for the following described lands, to wit:

That part of the north (N.) five (5) acres of the south (S.) ten (10) acres of the east half (E. ½) of the northeast quarter (N. E. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of said northeast quarter (N. E. ¼), one thousand and seventeen (1,017) feet north (N.) of the southwest (S. W.) corner of said northeast quarter (N. E. ¼) to a point in the east line of said section, four hundred and ninety-six and ninety-five one-hundredths (496.95) feet south (S.) of the northeast (N. E.) corner of said section. Also,

That part of the east half (E. ½) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company, and south (S.) of a line drawn from a point in the west line of the east half (E. ½) of the southwest quarter (S. W. ¼) of said section, thirty-nine and sixty-six one-hundredths (39.66) feet north (N.) of the southwest (S. W.) corner of said east half (E. ½) to a point in the east line of the southeast quarter (S. E. ¼) of said section, one thousand and twenty-five and sixty one hundredths (1025.60) feet south (S.) of the northeast (N. E.) corner of said southeast quarter (S. E. ¼).

To Caroline Ogden Jones the sum of eight thousand ($8,000 00) dollars, in full payment for the following described lands, to-wit:

That part of the south (S.) five (5) acres of the north (N.) ten (10) acres of the east half (E. ½) of the northeast quarter (N. E. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of said northeast quarter (N. E. ¼) one thousand and seventeen (1017) feet north (N.) of the southwest (S. W.) corner of said northeast quarter (N. E. ¼) to a point in the east line of said section, four hundred and ninety-six and ninety-five one-hundredths (496.95) feet south (S.) of the northeast (N. E.) corner of said section. Also,

That part of the north (N.) five (5) acres of the south (S.) ten (10) acres of the west half (W. ½) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of the east half (E. ½) of the southwest quarter (S. W. ¼) of said Section thirty-four (34), thirty-nine and sixty-six one hundredths (39.66) feet north (N.) of the southwest (S. W.) corner of said east half (E. ½) to a point in the east line of the southeast quarter (S. E. ¼) of said section, one thousand and twenty-five and sixty one-hundredths (1,025.60) feet south (S.) of the northeast (N. E.) corner of said southeast quarter (S. E. ¼).

To William A. Burnham, successor in trust to John A. Burnham, deceased, the sum of twelve thousand nine hundred and fifty ($12,950.00) dollars, in full payment for the following described lands, to-wit:

That part of the east half (E. ½) of the southwest quarter (S. W. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying east (E.) of the easterly boundary line of the right of way of the Chicago & Western Indiana Belt Railway Company, and south (S.) of a line drawn from a point in the south line of said section, twelve hundred and twenty-six and three one-hundredths (1226.03) feet east (E.) of the southwest (S. W.) corner thereof, to a point in the east line of said section, ten hundred and twenty-five and sixty one-hundredths (1025.60) feet south (S.) of the east (E) quarter corner thereof.

To Matthew Laflin the sum of sixty-five thousand ($65,000.00) dollars, in full payment for the following described lands, to-wit:

All that part of the east half (E. ½) of the northwest quarter (N. W. ¼) of Section eight (8), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying northwest (N. W.) of the northwesterly reserve line of the Illinois and Michigan Canal. Also,

All that part of the east half (E. ½) of the southwest quarter (S. W. ¼) of Section five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying northwest (N. W.) of the northwesterly reserve line of the Illinois and Michigan Canal, and south (S.) of a line drawn from a point on the east line of said quarter section, one thousand and seventy-eight and eight one-hundredths (1078.08) feet south (S.) of the center of said section to a point on the west line of said east half (E. ½) of said southwest quarter (S. W. ¼), one thousand and sixty-two and eighty-eight one-hundredths (1062.88) feet north (N.) of the south line of said section, excepting therefrom the right of way of the Chicago, Santa Fe & California Railway Company. Also,

All that part of the southeast quarter (S. E. ¼) of Section five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the right of way of the Chicago, Santa Fe & California Railway Company, and south (S.) of a line drawn from a point on the east line of said section, thirty five and ninety eight one hundredths (35.98) feet south (S.) of the northeast (N. E.) corner of said quarter section, to a point on the west line of said quarter section, one thousand and seventy-eight and eight one-hundredths (1088.08) feet south (S.) of the center of said section.

All of said lands lying and being situate in the County of Cook, State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
L. E. COOLEY,
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Finance and Engineering."

PURCHASE OF "WENTWORTH LAND."

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the pu chase from Moses J. Wentworth in his own right and as trustee under the will of John Wentworth, deceased, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Moses J. Wentworth, in his own right and as trustee under the will of John Wentworth, deceased, on the voucher of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Moses J. Wentworth, in his own right and as trustee under the will of John Wentworth, deceased, on the voucher of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, August 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Moses J. Wentworth in his own right and as Trustee under the will of John Wentworth, deceased, for the purchase from him for the corporate purposes of this District of the lands hereinafter described for the sum of one hundred twenty-two thousand two hundred and thirty-seven and fifty one-hundredths ($122,237.50) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to the said Moses J. Wentworth in his own right and as Trustee, the sum of one hundred twenty-two thousand two hundred and thirty-seven and fifty one-hundredths ($122,237.50), dollars in full payment for the following described lands, to-wit:

That part of Section seven (7), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the north-

westerly reserve line of the Illinois and Michigan Canal. Also,

That part of the west half (W. ½) of the northwest quarter (N. W. ¼) of Section eight (8), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northwesterly reserve line of the Illinois and Michigan Canal.

All said premises lying and being situate in the County of Cook, in the State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
L. E. COOLEY.
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Finance and Engineering."

CONDITION OF WORK BETWEEN SUMMIT AND LOCKPORT.

Mr. Cooley, Chairman, presented a verbal report from the Joint Committee on Engineering and Finance, stating that the Committee would report at the next meeting on the condition of all the work between Summit and Lockport, and also on other matters referred to that Committee which were not already disposed of.

COMMUNICATION FROM LEMONT STATE BANK.

The Clerk presented a communication addressed to the Board by the Lemont State Bank, of Lemont, Illinois, with reference to time checks given by contractors for labor on the channel.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the communication be referred to the Committee on Judiciary, without being read.

The motion prevailed unanimously, and the communication was so referred.

OFFICES TO BE CLOSED AUGUST 24.

Mr. Russell presented an order directing the closing of the offices of the District on August 24, 1893, the same being "Illinois Day" at the World's Columbian Exposition; and the order was read.

Mr. Russell, seconded by Mr. Altpeter, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the offices of the District ordered closed on August 24, 1893.

The following is

THE ORDER:

"*Ordered*, That the offices of the Sanitary District of Chicago be and they are hereby ordered closed on Thursday, August 24, 1893, the same being 'Illinois Day' at the World's Columbian Exposition, in accordance with the proclamation of the Governor of Illinois."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES.

—OF THE—

SANITARY DISTRICT OF CHICAGO.

AUGUST 30, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, August 30, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8), and subsequently Mr. Prendergast, making a total of nine (9) members, were present.

MINUTES.

The minutes of the regular meeting, held August 23, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Richey & Coates, (lumber, Sag ridge).....	$238 00

CLERICAL DEPARTMENT.

H. Schultz & Co., (paper boxes).....	13 13

POLICE DEPARTMENT.

S. D. Childs & Co. (stationery).....	$ 5 91
Cameron, Amberg & Co. (stationery).....	19 20
John Morris Co. (stationery).....	11 77
The Tobey Furniture Co., (desk and chair)	52 00

The Kauffman Buggy Co., (wagon harness, etc.)	$266 00	
Hibbard, Spencer, Bartlett & Co. (hardware)	208 50	
		$ 563 38

GENERAL ACCOUNT.

Chicago Edison Co. (electric lighting)	$ 13 59	
Marshall Field & Co., (window shades)	2 93	
		16 52
Grand total		$ 831 03

Mr. Eckhart, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 460, Law Department, (stationery)	$36 40
No. 1051, Clerical Department, (postage stamps)	20 00
Total	$56 40

Mr. Kelly, seconded by Mr. Boldenweck, moved that Requisitions Nos. 460, for the Law Department, and, 1051, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 460, for the Law Department, and 1051, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending August 26, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, August 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending August 26, 1893, as the same have been reported to me:

Engineering Department	91
Clerical Department	3
Treasury Department	1
Law Department	7
Police Department	36
Total employes	138

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

TEST OF PUMPS ON SECTIONS 2, 3 AND 4.

The Clerk presented a report from the Chief Engineer, recommending that a test be made of the erosive power of pumps upon the material found in excavation on Sections 2, 3 and 4, of the Main Channel; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file, the recommendations made therein concurred in, and the Chief Engineer authorized and directed to make the test, as provided in the report, at an expense not to exceed fifteen hundred ($1,500) dollars.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the recommendations made therein concurred in, and the Chief Engineer authorized and directed to make the test, as provided in the report, at an expense not to exceed fifteen hundred ($1,500) dollars.

The following is

THE REPORT:

"CHICAGO, August 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of experi-

mentation upon the difficult material on the McArthur Brothers' Sections, I would recommend that a test of the erosive power of pumps working under high pressure be made upon this material If it can be removed by hydaulic erosion, as I believe it can, it will make an economical method of handling the material I have made some investigation of the expense which would be attendant upon the experiments We should have to hire two high power pumps and purchase several hundred feet of pipe, and hire two tugs for steaming purposes, which together with the amounts for labor and the freight foots up $1,000 To make the estimate of cost liberal I have added $500 to this. This is the proposition which was discussed before certain members of the Board by Mr Cutter, of the Chicago Hydraulic Dredge Company A successful test would have a marked effect on the question of letting this work at reasonable prices, and therefore I feel justified in making this recommendation.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

AGREEMENT WITH CANAL COMMISSIONERS ON IMPROVEMENT OF TOW-PATH.

Mr. Kelly presented an order, accompanied by an agreement with the Commissioners of the Illinois and Michigan Canal, with reference to the widening and improvement of the tow-path along the Canal, and authorizing and directing the President and Clerk to execute said agreement, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the order be adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement as provided in the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement, as provided in the order.

The following is

THE ORDER, WITH ACCOMPANYING AGREEMENT:

"*Ordered*, That the President and Clerk be authorized and directed to execute on the part of this District the agreement between the Board of Canal Commissioners and the Sanitary District of Chicago with reference to the widening and improvement of the tow-path between Summit and Lemont, which is hereto attached."

AGREEMENT:

"Agreement between Board of Canal Commissioners and Board of Trustees of the Sanitary District:

Memorandum of agreement made and entered into this 19th day of August, A. D. 1893, between the Board of Canal Commissioners of the State of Illinois, of the first part, and the Board of Trustees of the Sanitary District of Chicago, of the City of Chicago, County of Cook, and State of Illinois, party of the second part.

The said party of the first part hereby grants permission to the party of the second part, to widen and put in good condition the tow-path along the Illinois and Michigan Canal, from Summit, Cook County, Illinois, to Lemont, in said County and State, from the 19th day of August A. D. 1893, until the 1st day of May A. D. 1896, the same being for the purpose of enabling the said Trustees of the Sanitary District to transport such material along said tow-path as will from time to time be necessary; and to aid the contractors as their needs may demand in the proper and speedy prosecution of certain work they have under contract with said Trustees for the building of the new drainage channel, along that adjacent portion of the Illinois and Michigan Canal. Subject to the following conditions and restrictions, to-wit:

First—The said party of the second part is to widen and maintain said tow-path, and keep it in good repair at no expense whatever to the party of the first part, and the work thereon of widening and maintaining, as aforesaid shall be under the direction and subject to the approval of the General Superintendent of the Canal, who shall decide all questions that may arise, so far as the said widening and maintaining are concerned relative to the navigation of the canal.

Second—The said party of the second part shall not, in the work of widening and maintaining of said tow-path, nor during

the time hereinbefore mentioned, it is permitted the occupation and use thereof, at any time or in any manner, obstruct the navigation of the Canal or the tow-path thereof, and if at any time during the work of widening and maintaining of said tow-path or during the time for which said second party is permitted to use said tow-path that such widening, maintaining and use shall become an obstruction to navigation, the said party of the second part agrees to be responsible for and pay all damages arising from the detention of boats, or from any other cause whatever.

It is further agreed, that the party of the second part shall erect no buildings, wharves, or other structures on said tow-path without the written consent of the party of the first part herein.

Third—The Canal Commissioners reserve the right at any time in the future, to compel the party of the second part herein to stop the work of widening and maintaining of said tow-path; to quit the occupation and use thereof and require said party of the second part to remove all machinery and other personal property off of said tow-path, if in their judgment the interests of the State shall seem to require it. And in the event the Commissioners shall desire the party of the second part to stop the work of widening and maintaining of said tow-path and disallow the occupation and use thereof as aforesaid, and require said party of the second part to remove all personal property off of said tow-path, the party of the second part agrees to do so at once, at its own expense without litigation or unnecessary delay on its part.

Fourth—It is further agreed that all permanent improvements made by said party of the second part, in the work of widening and maintaining of the tow-path as aforesaid, shall not be removed or disturbed at any time before or after the expiration of this contract, but shall remain the property of the State.

Fifth—All the covenants, agreements and conditions of this contract shall be binding on and extend to the successors, the assigns and legal representatives of the parties hereto.

Witness the signatures of the President of Canal Commissioners, and the seal of the same this 19th day of August, A. D. 1893.

....., *President.*

....., *Secretary.*

And also the signatures of the President of the said Board of Trustees of the Sanitary District of Chicago and of the Clerk of said District and the seal of the same, the day and year above written.

.....

Attest: *President.*

....., *Clerk.*"

PURCHASE OF "NORRIS," "SMYTH," AND "SMYTH, WALKER AND CHEW" LANDS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from the estate of George H. Norris, deceased; Charles H. Smyth, and Charles H. Smyth, Henry H. Walker and Louisa F. Chew, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of George H. Norris, deceased; Charles H. Smyth, and Charles H. Smyth, Henry H. Walker and Louisa F. Chew, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said estate of George H. Norris, deceased; Charles H. Smyth, and Charles H. Smyth, Henry H. Walker and Louisa F. Chew, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, August 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with the Illinois Trust and Savings Bank, as executor of and trustee under the last will and testament of George H. Norris, deceased, for the purchase from it for the corporate purposes of this District of the lands hereinafter described for the sum of eleven thousand six hundred and sixty-four ($11,664.00) dollars.

From Charles H. Smyth, represented in Chicago by Henry H. Walker, agent, for the purchase from him for the corporate purposes of this District of the lands hereinafter described for the sum of four thousand two hundred and twenty ($4,220.00) dollars.

From Charles H. Smyth, Henry H. Walker, and Louisa F. Chew, represented in Chicago by Henry H. Walker, agent, for the purchase from them for the corporate purposes of this District of the land hereinafter described for the sum of eighteen thousand seven hundred and eighty ($18,780.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said Illinois Trust and Savings Bank, as executor of and trustee under the last will and testament of George H. Norris, deceased, the sum of eleven thousand six hundred and sixty-four ($11,664.00) dollars, in full payment for the following described lands, to-wit:

That part of the south half (S. ½) of the west quarter (W. ¼) of the southwest quarter (S. W. ¼) of Section five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the right of way of the Chicago, Santa Fe & California Railway Company, and south (S.) of a line drawn from a point in the west line of said section, five hundred and forty-one (541) feet north (N.) of the southwest (S. W.) corner of said section, to a point in the east line of said southwest quarter (S. W. ¼) of said section, one thousand and seventy-eight and eight one-hundredths (1078.08) feet south (S.) of the northeast (N. E.) corner of said southwest quarter (S. W. ¼); said premises lying and being situate in the County of Cook, State of Illinois. Also,

That part of the southeast quarter (S. E. ¼) of the southwest quarter (S. W. ¼) of the southwest quarter (S. W. ¼) of Section five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company; said premises lying and being situate in the County of Cook, State of Illinois.

To Charles H. Smyth the sum of four thousand two hundred and twenty ($4,220.00) dollars, in full payment for the following described land, to-wit:

That part of the east half (E. ½) of the southwest quarter (S. W. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company; said premises lying and being situate in County of Cook, State of Illinois.

To Charles H. Smyth, Henry S. Walker, and Louisa H. Chew, the sum of eighteen thousand seven hundred and eighty ($18,780.00) dollars, in full payment for the following described land, to-wit:

That part of the west half (W. ½) of the northeast quarter (N. E. ¼) of the northwest quarter (N. W. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridan, lying south (S.) of a line drawn from a point in the west line of said section, one thousand and ninety and ten one-hundredths (1000.10) feet north (N.) of the west quarter (W. ¼) corner of said section to a point in the north (N.) line of said section, one thousand three hundred and six and fifty-one one-hundredths (1306.51) feet west (W.) of the northeast (N. E.) corner of said section; said prem-

ises lying and being situate in the County of Cook, State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

CONDITION OF WORK BETWEEN SUMMIT AND LOCKPORT.

Mr. Cooley, Chairman, presented a verbal report from the Joint Committee on Engineering and Finance, stating that the Committee were not able to report on the condition of all the work between Summit and Lockport, as promised at the meeting held August 23, 1893, (page 1419 of the Proceedings) but that the Committee would report at the next meeting.

CONDITION OF WORK ON HARLEV SECTION.

The Clerk presented a report from the Chief Engineer, with reference to the condition of the river diversion portion of the work on Section 1, for which Alfred Harlev is contractor: and the report was read.

In connection with the report, Mr. Kellv presented an order, directing the Clerk to notify Alfred Harlev to discontinue all work on the river diversion portion of Section 1, under his contract with the District, and that the District will proceed to have said work completed, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed and placed on file, the order adopted, and the Clerk directed to notify Alfred Harlev, as provided in the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the order adopted, and the Clerk directed to notify Alfred Harlev, as provided in the order.

The following is

THE REPORT, WITH ACCOMPANYING ORDER:

"CHICAGO, August 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby certify that I am of the opinion that the work agreed to be performed by Mr. Alfred Harley upon the river diversion portion of his contract with the Sanitary District of Chicago is being unnecessarily and unreasonably delayed, and that the said contractor has willfully and persistently violated the conditions and covenants of his said contract, in so far as it relates to river diversion in regard to the amount of work to be done by him from month to month upon said river diversion.

This certificate is made under and in pursuance of a provision therefor contained in his said contract.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

The following is

THE ORDER:

"The Chief Engineer of the Sanitary District of Chicago having certified to this Board that the work agreed to be performed by Alfred Harlev upon the river diversion portion of his contract with the Sanitary District of Chicago is unnecessarily and unreasonably delayed and that said contractor is willfully and persistently violating the conditions and covenants of his said contract in regard to the quantity of work done thereunder from month to month upon said river diversion, it is therefore,

Ordered, That the Clerk of the Sanitary District of Chicago notify said Alfred Harlev to discontinue all work upon the river diversion portion of his contract with the Sanitary District of Chicago, and that the District will proceed to have said work completed, as provided in said contract, and charge the cost thereof to said Alfred Harlev in accordance with the provisions of his said contract: and,

Ordered, further, That the said Clerk also deliver to said Alfred Harlev a certified copy of this order and a copy of the certificate filed with this Board by the Chief Engineer of the District in relation to the work being done by said Alfred Harlev upon the river diversion portion of his said contract."

CONTRACT FOR ADDITIONAL WILL COUNTY ABSTRACTS OF TITLE.

The Clerk presented a report from the Attorney, transmitting a proposition from William C. Barber, of Joliet, to furnish abstracts of title to certain lands in Will County, and also a communication from John O'Connor, of Joliet, declining to bid on the work; and the report, with enclosures, was read.

In connection with the report, Mr. Kelly presented an order, accepting the proposition of William C. Barber, and directing the Attorney to contract with said William C. Barber, for abstracts of title to certain lands in Will County, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report, with enclosures, be ordered printed and placed on file, the order adopted, and the Attorney directed to contract in accordance with same.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report and enclosures ordered printed and placed on file, the order adopted, and the Attorney directed in accordance with same.

The following is

THE REPORT, WITH ENCLOSURES AND ACCOMPANYING ORDER:

"CHICAGO, August 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I enclose you herewith propositions from William C. Barber with reference to furnishing abstracts of title to certain lands in Will County, near Lockport, called for by the recommendation of the Joint Committee on Finance and Engineering. (Approved by this Board April 12th, 1892.)

While the combining of two or more adjacent tracts in the same abstract, as suggested by the second proposition submitted by Mr. Barber, will render the work of the attorneys in investigating the title more difficult than if the abstracts were prepared under his first proposition, our attorneys, in view of the difference in the expense, are willing to undergo this extra labor, and I would therefore recommend the acceptance by the Board of said second proposition to furnish said abstracts for the sum of six hundred ($600) dollars.

Mr. John O'Connor, the other abstractor at Joliet, declines, as you will see from his letter, to bid for this work. Both Haley & O'Donnell and myself have been trying for months without success to get a bid from him, as we wished to have competition for this work.

Respectfully submitted,

(Signed) ORRIN N. CARTER,

Attorney."

(Enclosures.)

"JOLIET, July 1, 1893.

Mr. Orrin N. Carter, Attorney for Board of Trustees of the Sanitary District of Chicago:

DEAR SIR—I shall be pleased to furnish to your Board of Trustees complete certified abstracts of title to all the tracts of land mentioned and described in the schedule entitled, "Right of way descriptions near Lockport, May, 1892," (said schedule consisting of twenty-two folio pages and a cover,—said tracts being designated by the following numbers: 31a, 31b, 32, 33, 34, 35, 36, 37, 38, 39, 39a, 40, 42, 43, 44, 48, 49, 50, 55, 54, 61 and 59,—compiling separate abstracts for each tract as described in said schedule, for the sum of one thousand and twenty-five ($1,025.00) dollars, or, being privileged to make captions for said abstracts combining two or more adjacent tracts, for the sum of six hundred ($600) dollars; *provided*, that said Board will furnish to me, for revamping, all of the abstracts of title compiled and delivered under my contract of October 10, 1891, which affect said tracts.

Respectfully submitted,

(Signed) WILLIAM C. BARBER."

"JOLIET, Ills., August 21, 1893.

Messrs. Haley & O'Donnell, City:

GENTLEMEN—Referring to your request made two months, or more, ago, for an estimate of the cost of abstracts of title to the property included in the contemplated right of way of the Sanitary District of Chicago through Sections 14, 15, 22, 23, 27 and 28, in Town 36, Range 10, I desire to inform you

that I decline, at this time, to make such estimate or furnish a bid for making the abstracts of title to said property. My reasons for declining to bid being, that after spending considerable time examining the different tracts, I find the work more extensive than I supposed it would be, and am of the opinion that if I should get the order and the work was required to be finished on short notice it would interfere with the regular business of my office at this time.

Respectfully,

(Signed) JOHN O'CONNOR.

M."

The following is

THE ORDER:

"*Ordered*, That the proposition of William C. Barber, to furnish abstracts for the tracts of land described in the schedule entitled "Right of way descriptions near Lockport, May, 1892," the captions for said abstracts to combine two or more adjacent tracts, for the sum of six hundred ($600.00) dollars, as specified in his bid just presented by the Attorney, be accepted, and that the Attorney be and he is hereby directed to contract with said William C. Barber for the same."

AGREEMENT WITH M'ARTHUR BROTHERS CO. FOR RIVER DIVERSION WORK ON SECTIONS 2, 3, AND 4.

Mr. Kelly presented an order, accompanied by an agreement with McArthur Brothers Company, with reference to work on the river diversion on Sections 2, 3 and 4 of the Main Channel, and authorizing and directing the President and Clerk to execute said agreement, as provided in the order; and the order with accompanying agreement was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the order be adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement, as provided in the order.

On roll-call the vote stood: Yeas—Messrs Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, the order adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement, as provided in the order.

The following is

THE ORDER, WITH ACCOMPANYING AGREEMENT:

"*Ordered*, That the President and Clerk be authorized and directed to execute on the part of this Disirict the agreement between McArthur Brothers Company and the Sanitary District of Chicago, for the prosecution of the work of river diversion and the building of levees upon contract Sections two (2), three (3) and four (4) of this District, which said agreement is hereto attached."

AGREEMENT:

"*This agreement*, made and entered into this ..... day of ..... A. D., 1893, by and between the Sanitary District of Chicago, party of the first part, and McArthur Brothers Company, a corporation, party of the second part, witnesseth:

That the said party of the second part, in consideration of the mutual promises herein made, hereby covenants, contracts and agrees with the said party of the first part, to act as the agent of the said first party for the performance of certain work hereinafter described, subject to all the conditions herein made.

Said second party will at once organize and set at work a force for the prosecution of the work of river diversion, and the building of levees on contract Sections two (2), three (3) and four (4) of the main drainage channel for the Sanitary District of Chicago, and will employ as many men for executing said work as the Chief Engineer of first party shall direct, not less in number than shall be sufficient to finish said work by November 1, 1893, said work to be done according to the plans and under the directions of the said Chief Engineer.

The said second party shall furnish, at its own cost and expense, all the tools, cars and machinery necessary for the proper and economical execution of the work herein described, the charge for which is to be paid in the percentage hereinafter agreed upon. But the party of the first part shall pay for all fuel, oil, waste and materials of all kinds necessary to operate the cars and

machinery, and pay for the ordinary current repairs upon tools, cars and machinery during the progress of the work, and also pay for all explosives and all material necessary for the proper execution of the work. The said second party is to superintend and conduct the work as the agent for the said first party in the usual manner, in consideration of which services and the furnishing of the tools for the prosecution of said work, the said party of the first part will pay the said party of the second part semi-monthly fifteen per cent. upon the actual cost of doing said work, which percentage so received shall be accepted by said second party as full and sole compensation for its services and for the use of its tools in the prosecution of said work.

Said first party shall have the right to exercise such supervision of the accounts of said second party as to enable the Chief Engineer to certify to the accuracy and justice of all bills rendered therefor, and payment shall be made semi-monthly upon the certificate of the Chief Engineer which shall be rendered upon the 10th and 25th days of each month.

It is further agreed that said party of the second part will make provision for the housing and boarding of such men employed upon its said work as may need food and lodging upon or near the work, to the extent of the present camp capacity of said second party, and that the provision so made shall equal the general requirements of said first party in its contracts, and the charges made therefor shall be reasonable and just and the board and supplies furnished laborers shall be made a first charge against and be deducted from their wages, but the above provision as to housing and boarding men shall not be construed to limit the number of men employed on said work to said present camp capacity, nor as requiring second party to furnish more than the present camp capacity.

It is further agreed that the making and performance of this agreement shall in no way whatsoever interfere with or prejudice the rights of either party in reference to an existing controversy between first party and McArthur Brothers in reference to certain contracts for work upon said contract Sections two (2), three (3) and four (4).

It is also agreed that second party will quit work under this contract at any time after completion of the river diversion and levees when so ordered and paid off by said party of the first part.

In witness whereof, the said parties have caused their names to be signed and their corporate seals to be attached hereto by their officers duly authorized so to do, the day and year above mentioned.

SANITARY DISTRICT OF CHICAGO,

By .....

President.

Attest:

.....

Clerk.

MCARTHUR BROS. CO.,

By.....

President.

.....

Secretary."

Mr. W. P. Rend then addressed the Board on the subject of the employment of additional men on the works of the District.

SUB-COMMITTEE TO BE APPOINTED FROM GENERAL COMMITTEE ON EMPLOYMENT.

Mr. Prendergast presented a resolution, requesting that the Committee on Employment, appointed by the Mayor of Chicago, appoint a sub-committee of five, to meet and confer with the members of the Board or with the Special Committee on Employment, heretofore appointed by the President of the Board at the meeting held August 23, 1893, (page 1414 of the Proceedings), said sub-committee to report to the Committee on Employment and to the public as to the means and opportunity of employment of men on the works of the District; and the resolution was read.

Mr. Prendergast, seconded by Mr. Kelly, moved the adoption of the resolution.

The motion prevailed unanimously, and the President declared the resolution adopted.

The following is

THE RESOLUTION:

"*Resolved*, That the Committee on Employment, appointed by the Mayor of

Chicago, be and it is hereby requested to appoint a sub-committee of five, of which Mr. W. P. Rend shall be a member, to meet and confer with the members of this Board, or with the Special Committee on Employment, heretofore appointed by the President of this Board at the meeting held August 23, 1893, (page 1414 of the Proceedings); the said sub-committee to report to the Committee on Employment and to the public as to the means and opportunity of employment of men on the works of this District."

MEETING TO BE HELD AT OFFICES OF THE DISTRICT.

Mr. Russell, seconded by Mr. Kelly, then moved that the sub-committee, mentioned in the resolution just adopted, be invited to name a time when it will meet the Board or its Committee at the offices of the District, Rialto Building.

The motion prevailed unanimously and it was so ordered.

NOTICE TO DISCONTINUE WORK SERVED ON ALFRED HARLEV.

The Clerk then announced that, as directed by order of the Board passed this day, he had served notice on Alfred Harlev to discontinue all work on the river diversion portion of his contract with the District.

AGREEMENT WITH ALFRED HARLEV FOR RIVER DIVERSION WORK ON SECTION 1.

Mr. Kelly presented an order, accompanied by an agreement with Alfred Harlev, with reference to the work on Section 1 of the main channel, and authorizing and directing the President and Clerk to execute said agreement, as provided in the order; and the order, with accompanying agreement, was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the order be adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement, as provided in the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—Mr. Boldenweck—one (1).

Upon which result the President declared the motion carried, the order adopted, and, with accompanying agreement, ordered printed and placed on file, and the President and Clerk authorized and directed to execute said agreement, as provided in the order.

The following is

THE ORDER, WITH ACCOMPANYING AGREEMENT:

"*Ordered*, That the President and Clerk be authorized and directed to execute on the part of this District the agreement between Alfred Harlev and the Sanitary District of Chicago, for the prosecution of the work of river diversion and the building of levees upon contract Section one (1) of this District, which said agreement is hereto attached."

AGREEMENT:

"*This agreement*, made and entered into this ..... day of ....., A. D. 1893, by and between the Sanitary District of Chicago, party of the first part, and Alfred Harlev, party of the second part, witnesseth:

That the said party of the second part, in consideration of the mutual promises herein made, hereby covenants, contracts and agrees with the said party of the first part, to act as the agent of the said first party for the performance of certain work hereinafter described, subject to all the conditions herein made.

Said second party will at once organize and set at work a force for the prosecution of the work of river diversion and the building of levees on contract Section one (1) of the main drainage channel for the Sanitary District of Chicago, and will employ as many men for executing said work as the Chief Engineer of first party shall direct, not less in number than shall be sufficient to finish said work by November 1st, 1893, said work to be done according to the plans and under the directions of the said Chief Engineer.

The said second party shall furnish, at his own cost and expense, all the tools, cars and machinery necessary for the proper and economical execution of the work herein described, the charge for which is to be paid in the percentage hereinafter agreed upon. But the party of the first part shall pay for all fuel, oil, waste and materials of all kinds necessary to operate the cars and machinery, and pay for the ordinary current repairs upon tools, cars and machinery during the progress of the work, and also pay for all explosives and all material necessary for the proper execution of the work. The said second party

is to superintend and conduct the work as the agent for the said first party in the usual manner, in consideration of which services and the furnishing of the tools for the prosecution of said work, the said party of the first part will pay the said party of the second part, semi-monthly fifteen per cent upon the actual cost of doing said work, which percentage so received shall be accepted by said second party as full and sole compensation for his services and for the use of his tools in the prosecution of said work.

Said first party shall have the right to exercise such supervision of the accounts of said second party as to enable the Chief Engineer to certify to the accuracy and justice of all bills rendered therefor, and payment shall be made semi-monthly upon the certificates of the Chief Engineer, which shall be rendered upon the 10th and 25th days of each month.

It is further agreed that said party of the second part will make provision for the housing and boarding of such men employed upon his said work as may need food and lodging upon or near the work, to the extent of the present camp capacity of said second party, and that the provision so made shall equal the general requirements of said first party in his contracts, and the charges made therefor shall be reasonable and just and the board and supplies furnished laborers shall be made a first charge against and be deducted from their wages, but the above provision as to housing and boarding men shall not be construed to limit the number of men employed on said work to said present camp capacity, nor as requiring second party to furnish more than the present camp capacity.

It is further agreed that the making and performance of this agreement shall in no way whatsoever intertere with or prejudice the rights of either party in reference to an existing controversy between first party and Alfred Harlev in reference to a certain contract for work upon said contract Section one (1).

It is also agreed that second party will quit work under this contract at any time after completion of the river diversion and levees when so ordered and paid off by said party of the first part.

In witness whereof, the said party of the second part has hereunto set his hand and seal, and said first party has caused its name to be signed and its corporate seal to be attached hereto by its officers duly authorized so to do, the day and year above mentioned.

SANITARY DISTRICT OF CHICAGO,

By .....

President.

Attest:

.....

Clerk.

.....

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 6, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, September 6, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell, and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held August 30, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Altpeter.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, August, 1893	$ 3,226 67	
Eng. Dept., Div. No. 1, (half month, ending August 31, 1893)	2,316 05	
Eng. Dept., Div. No. 2, (half month, ending August 31, 1893)	670 80	
Eng. Dept., Div. No. 3, (half month, ending August 31, 1893)	633 75	
Eng. Dept., Div. No. 4, (half month, ending August 31, 1893)	107 50	
		6,954 77
Clerical Dept., Clerk's roll, (August, 1893)	$ 566 66	

Clerical Dept., office roll, (half month, ending August 31, 1893)	$ 87 50	
		$ 654 16
Treasury Dept., Treasurer's roll, (August, 1893)		166 67
Law Dept., Attorney's roll, (August, 1893)	$1,191 66	
Law Dept., Joliet roll, (August, 1893)	338 34	
Law Dept., office roll, (half month, ending August 31, 1893)	97 50	
		1,622 50
Police Dept., Marshal's roll, (August, 1893)	$ 250 00	
Police Dept., field roll, (half month, ending August 31, 1893)	713 54	
		963 54
General Account, Sanitary Inspector's roll, (August, 1893)	$ 200 00	
General Account, Trustee's roll, (August, 1893)	2,333 33	
		2,533 33
Total		$12,894 97

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (Sec. 1, August 31, '93)	$ 6,165 41	
Agnew & Co. (Sec. 5, August 31, '93)	4,795 88	
Agnew & Co. (Sec. 6, August 31, '93)	1,157 63	
Agnew & Co. (Sec. 7, August 31, '93)	13,042 71	
Agnew & Co. (Sec. 8, August 31, '93)	7,430 15	
Agnew & Co. (Sec. 9, August 31, '93)	4,158 36	
E. D. Smith & Co. (Sec. 10, August 31, '93)	11,683 00	
Mason, Hoge & Co. (Sec. 11, Aug. 31, '93)	13,847 94	
Mason, Hoge & Co. (Sec. 12, Aug. 31, '93)	13,036 63	
Mason, Hoge & Co. (Sec. 13, Aug. 31, '93)	16,809 41	
McCormick Const. Co. (Sec. 14, Aug. 31, '93)	6,614 12	
L. D Conner & Co. (Sec. A, Aug. 31, '93)	3,878 04	
L. D. Conner & Co. (Sec. B, Aug. 31, '93)	6,268 66	
Western Dredging and Impt. Co. (Sec. C, August 31, '93)	4,804 43	
E. D. Smith & Co. (Sec. D, August 31, '93)	5,621 27	
Streeter & Kenefick, (Sec. E, Aug. 31, '93)	18,081 28	
Ricker, Lee & Co. (Sec. F, Aug. 31, '93)	8,122 98	
		$145,517 90

ENGINEERING DEPARTMENT.

R. W. Goodwillie Box Co, (test boxes)	$ 6 00	
Marshall Field & Co., (window shades)	$ 11 69	
Chicago Toilet Supply Co. (toweling)	5 40	
Robt. H. Cowdrey, (postage stamps)	20 00	
Mrs. A. M. Munson, (rent, Mt. Forest)	20 00	
O. W. Moon, (rent, Lockport)	20 00	
D. C. Dunlap, (horse and buggy)	45 00	
Thos. T. Johnston, (traveling)	35 66	
D. C. Dunlap, (traveling)	46 05	
E. R. Shnable, (traveling)	7 28	
Hiram A. Miller, (traveling)	13 56	
Chas. L. Harrison, (traveling)	12 60	
A. C. Schrader, (traveling)	15 09	
J. B. Rohrer, (traveling)	21 65	
		$ 279 98

CLERICAL DEPARTMENT.

Carl F. W. Junge, (postage stamps)	$20 00	
Warner's Towel Supply (toweling)	1 50	
Waukesha Hygeia Mineral Springs Co. (water)	3 75	
		$ 25 25

LAW DEPARTMENT.

Joseph Donnersberger, (expert—right of way services)	$ 450 00	
Chicago Daily Law Bulletin, (legal notices)	149 10	
N. E. Matter, (legal notices)	5 00	
Western Union Telegraph Co., (telegraph service)	2 60	
Warner's Towel Supply, (toweling)	2 70	
		$ 609 40

POLICE DEPARTMENT.

Jacobs, Coles & Co. (stationery)	$ 17 31	
H. J. Armstrong & Co., (printing)	6 00	
Keogh & Schroeder Co. (printing)	14 00	
James Kirk, (feed for horses)	25 05	
Marshall Field & Co., (station furnishings)	94 95	
Timothy Carroll, (filling and roadway, Sag Station)	48 50	
Edward Williams, (expense)	43 04	
Frank E. Michaud, (building stations)	2 000 00	
		$ 2,248 85

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings)	$ 186 57	
John Morris Co. (binding 1892 proceedings)	100 00	
H. J. Armstrong & Co., (printing)	7 00	
Keogh & Schroeder Co., (printing)	15 00	
Thos. F. Judge, (expense)	9 47	
		$ 318 04
Grand total		$161,894 39

Mr. Kelly, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 365, Engineering Department, (scythes)	$ 5 28
No. 366, Engineering Department, (stationery)	4 88
No. 367, Engineering Department, (stationery)	20 00
No. 461, Law Department, (stationery)	7 50
No. 912, Police Department, (saddle horse and equipment)	232 50
Total	$ 270 11

Mr. Kelly, seconded by Mr. Russell, moved that Requisitions Nos. 365, 366 and 367, for the Engineering Department, No. 461, for the Law Department, and No. 912, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8) Nays—None.

Upon which result the President declared the motion carried, and Requisitions Nos. 365, 366 and 367, for the Engineering Department, No 461, for the Law Department, and No. 912, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending September 2, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending September 2, 1893, as the same have been reported to me:

Engineering Department	94
Clerical Department	3
Treasury Department	1
Law Department	7
Police Department	35
Total employes	140

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

MONTHLY REPORT FROM SANITARY INSPECTOR

The Clerk presented a report from the Sanitary Inspector for the month of August, 1893; and the same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, September 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since submitting my last report for the month of July, there has been no unfavorable change in the unusually healthy condition that prevailed at that time. Most of the camps have increased their working force and have been able to provide for them without overcrowding, with the exceptions of Sections 11, 12 and 13. On these three sections, a number of houses are overcrowded, but I inspected them yesterday in company with Mr. Mason, and pointed out the deficiency that exists, and he assures me that it will be remedied with-

out delay. I have addressed a communication to Marshal Williams, of our Police Force, requesting him to have his men instructed to report any sanitary negligence in the various camps; this will be of great assistance to me in the prosecution of this work of inspection.

Most respectfully submitted,

(Signed) WILLIAM MARTIN, M. D.
Sanitary Inspector."

AGREEMENT WITH LEMONT HIGHWAY COMMISSIONERS CONCERNING STEPHENS STREET BRIDGE.

The Clerk presented a report from the Chief Engineer, transmitting an agreement with the Highway Commissioners of the Town of Lemont, entered into by the Superintendent of Construction on behalf of the District, covering the proposed bridge at Stephens street, Lemont; and the report and accompanying agreement were read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report and accompanying agreement be approved, ordered printed, and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report and accompanying agreement approved, ordered printed and placed on file.

The following is

THE REPORT, WITH ACCOMPANYING AGREEMENT:

"CHICAGO, Sept. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the orders of the Highway Commissioners of the Town of Lemont covering the proposed bridge across the river diversion channel at Stephens street, with the stipulations entered into by the Commissioner of Highways of said Town of Lemont and accepted by the Sanitary District of Chicago, per U. W. Weston, Superintendent of Construction. The provisions therein contained covering details of construction are made a part of our specifications for the bridge.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

AGREEMENT:

"At a meeting of the Highway Commissioners of the Town of Lemont, held Tuesday, Sept. 5th, 1893.

Present: Daniel B. Murphy and Nail Harkins, Commissioners, and Matthew J. New, Town Clerk.

The following proceedings were had:

On motion of Nail Harkins, seconded by Daniel B. Murphy.

Ordered, That the Sanitary District of Chicago be and it hereby is authorized and permitted to construct and maintain a new river channel for the Desplaines River, over, through, upon and across the highway extending northwest from the Village of Lemont, through Section 20, Township 37 North, Range 11, East of the Third Principal Meridian, in said Town of Lemont, Cook County, Illinois; provided, that said new river channel shall be constructed in such a manner as will not interfere with the public use of said highway any more than is actually necessary for the proper construction of said new channel, and provided, further, that said Sanitary District of Chicago will construct a suitable and proper bridge in accordance with the plans herewith submitted at the point where said new river channel shall intersect said highway, and build a suitable embankment or approach of easy grade, on either side of said bridge; said bridge to be approved by said Commissioners.

Ordered, further, That upon the completion of said proposed bridge over said new river channel said Sanitary District of Chicago shall have the right to close up the bridge now extending across the Desplaines River at its intersection with said highway, provided that the entire cost of said changes herein above mentioned, including the entire cost of said bridge shall be borne by the Sanitary District of Chicago; and provided, further, that the Sanitary District shall plank the new river bridge with three (3) inch oak plank, to be thoroughly spiked with six-inch spikes not less than six (6) inches apart in each floor timber and all joints in timbers to be thoroughly painted when bridge is put together. The bridge when completed to be painted with two coats of fire-proof paint and well sanded. The river where the present bridge crosses same to be filled to a uniform grade of not

less than 30 feet wide on top, the whole grade to the county line to be of same width on top, viz.: 30 feet, and to be covered with not less than 18 inches of gravel in the center of said road, and slope uniformly to the outside.

The grade to the new canal bridge, and also to the river diversion bridge shall be easy and such as shall have been approved by the Commissioners of Highways of the Town of Lemont. After the bridge herein provided for shall have been completed in accordance with the foregoing provisions, then the expense of maintaining and keeping same in repair thereafter shall be borne by the Town of Lemont.

(Signed) D. B. MURPHY,
NAIL HARKINS,
Commissioners of Highways.

The Sanitary District of Chicago hereby accepts of the terms and conditions of the foregoing order.

(Signed) U. W. WESTON,
Superintendent of Construction for the Sanitary District of Chicago."

"STATE OF ILLINOIS, } ss.
COUNTY OF COOK. }

I, Matthew J. New, Town Clerk of the Town of Lemont, County and State aforesaid, do hereby certify that the foregoing is a true and correct copy of an order duly passed by the Highway Commissioners of said Lemont Township, as shown by the records of my office.

Witness my hand this 5th day of September, A. D. 1893.

(Signed) MATTHEW J. NEW, [Seal]
Clerk, Lemont Township, Cook County, Illinois."

ADVERTISEMENT OF CONDITIONS OF SPECIAL RIVER DIVERSION CONTRACT ON SECTIONS 2, 3 AND 4.

The Clerk presented a report from the Chief Engineer, recommending that a statement, setting forth the arrangement with McArthur Brothers Company under the special contract for river diversion work on Sections 2, 3 and 4, be published; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be ordered printed, and referred to the Committee on Finance, with power to act.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the report ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, Sept. 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—An impression has gone abroad, which is strengthened by statements appearing in the daily press, that the entire work on Sections 2, 3 and 4 is to be performed by McArthur Bros. upon the percentage basis. I therefore recommend that an explicit statement, setting forth the fact that the arrangement made with McArthur Bros. applies solely to river diversion and that the re-letting will take place as advertised, be published in the papers in which the advertisement has appeared. If this is not done many contractors may refrain from bidding.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

RAILWAY CHANGES AND EMBANKMENTS ON SECTION 14.

The Clerk presented a report from the Chief Engineer, with reference to the interpretation of the contract concerning certain railway changes and the construction of embankments on Section 14, for which the McCormick Construction Company are contractors; and the report was read.

Mr. Kelly, seconded by Mr. Russell, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, Sept. 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN—Having heard that McCor-

mick, of the McCormick Construction Company, demurred to instructions from Assistant Engineer Harrison to build an embankment on Section No. 14, parallel with the channel and 800 feet therefrom, as recommended in a report of the Engineering and Finance Committee (see page 607 of the Proceedings, clause No. 3) and ordered by the Board June 29th, 1892, I took the question up with Mr. McCormick on August 31st. He then stated that unless the clause of the contract covering railway changes, (see page 21, Section 10) can be so construed as to compel him to do this work he is under no obligations to perform it. His contention is that the clause in question can not be properly construed to cover the point. We should settle this question at once and take such steps as will insure the construction of the embankment in controversy with material about to be removed from the gravel mound on this Section (14). I therefore ask that a Committee be appointed by your Honorable Board with power to investigate the case and make arrangemets for the prompt adjustment of the questions at issue so that the work may not be delayed and thereby greater expense be incurred in executing the work which forms a part of the plan adopted by you.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

CONDITION OF WORK ON AGNEW & COMPANY SECTIONS.

The Clerk presented a report from the Chief Engineer with reference to the condition of work on Sections 5, 6, 7 and 9, for which Agnew & Company are contractors; and the same was read.

Mr. Kelly, seconded by Mr. Cooley, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report was ordered printed, and so referred.

The following is

THE REPORT:

"CHICAGO, Sept. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby certify that I am of the opinion that the work agreed to be performed by Messrs. Agnew & Co. under each of their contracts with the Sanitary District of Chicago for Sections 5, 6, 7 and 9, is unnecessarily and unreasonably delayed, and that the said contractors have heretofore and are now willfully and persistently violating the conditions and covenants of each of their said contracts in regard to the amount of work to be done by them from month to month under each of said contracts.

This certificate is made under and in pursuance of a provision therefor contained in each of said contracts.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

PURCHASE OF "TOWNE," "HINCKLEY" AND "RUTTER" LANDS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from Charles E. Towne, Francis E. Hinckley and Thomas Rutter, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Charles E. Towne, Francis E. Hinckley and Thomas Rutter, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Charles E. Towne, Francis E. Hinckley and Thomas Rutter, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on

Finance and Engineering has reached an agreement with Charles E. Towne for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of one thousand two hundred and ninety ($1,290.00) dollars.

From Francis E. Hinckley for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of seven hundred and seventy ($770.00) dollars.

From Thomas Rutter for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of nineteen thousand five hundred and thirty ($19,530.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said Charles E. Towne the sum of one thousand two hundred and ninety ($1,290.00) dollars, in full payment for the following described land, to wit:

That part of the south ten (S. 10) acres of the southwest quarter (S. W. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company.

To Francis E. Hinckley the sum of seven hundred and seventy ($770.00) dollars, in full payment for the following described land, to-wit:

That part lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company, of the east half (E. ½) (in area) of that part of the northwest quarter (N. W. ¼) of the northeast quarter (N. E. ¼) of Section three (3), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly reserve line of the Illinois and Michigan Canal, containing seventy-seven one-hundredths (0.77) of an acre, more or less.

To Thomas Rutter the sum of nineteen thousand five hundred and thirty ($19,530.00) dollars, in full payment for the following described land, to wit:

That part of the southeast quarter (S. E. ¼) of the northwest quarter (N. W. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Atchison, Topeka and Santa Fe Railroad Company in Chicago, and west (W.) of a line parallel with and three hundred and sixty-two (362) feet west (W.) of the east line of said northwest quarter (N. W. ¼); excepting therefrom the north (N.) one hundred (100) feet thereof.

All of said land lying and being situated in the County of Cook, in the State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
JOHN J. ALTPETER,
THOMAS KELLY,
Joint Committee on Finance and Engineering."

CHANGE OF GRADE IN MAIN CHANNEL.

Mr. Cooley, Chairman, presented a report and order from the Joint Committee on Engineering and Finance, with reference to and accompanied by the report of the Chief Engineer, concerning the proposed change of grade in the main channel, presented and referred to that Committee at the meeting held August 2, 1893 (page 1360 of the Proceedings); and the report and order were read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed, and with enclosure, placed on file, and the accompanying order adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosure, placed on file, and the accompanying order adopted.

The following is

THE REPORT, WITH ACCOMPANYING ORDER:

"CHICAGO, Sept. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee has

considered the recommendation of the Chief Engineer, referred to the Committee on August 2nd, (page 1360) and reports back as follows:

It appears that the proposed change of grade will diminish the total fall in the water service by two feet and will increase the depth of water in the channel by a like amount. The practical results to be accomplished are:

1. Easier construction and operation of regulating works for the control of the waters in the channel.

2. The problem of extending the works over the reach between Lockport and Joliet is simplified.

3. The capacity of the channel when frozen or covered with ice will be increased.

4. The suitability of the channel for navigation will be much improved.

The extra cost for the channel when completed throughout will be some $200,000 this side of Lockport, which will be largely off-set by the saving in regulating works and in the extension of work below.

Your Committee therefore recommend that the change of grade be authorized substantially as recommended by the Chief Engineer, and that the prism in the earth conform thereto; provided, that the part of the channel to be now constructed this side of Summit be specified for a width of 110 feet at bottom as heretofore determined.

An order covering the proposed change of grade is submitted herewith as part of this report.

The report of the Chief Engineer is hereby returned.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
JOHN J. ALTPETER,
W. H. RUSSELL,
B. A. ECKHART,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

(Enclosure.)

The following is

THE ORDER:

"WHEREAS, A change of grade in the main channel for the reasons set forth in the report of the Chief Engineer of August 2nd, and in the accompanying documents is desirable; therefore, be it

Ordered, That the grade of the bottom of the main channel be established as follows:

Starting at Station 1480 in Section 14 of Lockport Township, Will County, at an elevation of 29.9 feet below Chicago datum, and rising thence at the rate of one foot in 20,000 to the Willow Springs road through what is known as the rock sections; thence from said road rising at the rate of one foot in forty thousand through what is known as the earth sections to a point at or near Bridgeport."

EMPLOYMENT OF ADDITIONAL MEN ON RIVER DIVERSION WORK

Mr. Kelly, Chairman, presented a verbal report from the Special Committee on the Labor Question, stating that over three hundred men, selected by the Committee on Employment, appointed by the Mayor of Chicago, had on that day been placed at work on the river diversion and that they would be followed by others, and that the Committee would so continue to place men as fast as selections were made and accommodations could be provided.

COMPLETION OF RIVER DIVERSION WORK.

Mr. Cooley, Chairman, presented an order, directing the Chief Engineer to cause river diversion and levees and other works to be completed at the dates as specified in the order; and the order was read.

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order.

The motion prevailed unanimously, upon which the President declared the order adopted, and the Chief Engineer instructed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, It is of vital importance that the river diversion and the guard bank between the same and the main channel be completed at the earliest practicable date between the Santa Fe Railway crossing near Summit and the Romeo road, and that said guard bank be of ample strength and sufficient in every respect for a levee against flood waters; therefore, be it

Ordered, That the Chief Engineer is hereby instructed to cause said river diversion and levees and other works to be com-

pleted at dates not later than the following:

That all river diversion on Sections 9 to 12, inclusive, be completed on or before October 10th, 1893.

That all river diversion on Sections 6, 7 and 8 be completed on or before October 15th, 1893.

That all river diversion on Sections A to F, inclusive, be completed on or before November 1st, 1893.

That all river diversion and levee building on Sections 1 to 5, inclusive, be completed on or before November 15th, 1893, and that all levees and guard banks, on the south and east of said Desplaines River, and the diversion thereof and all bridges crossing the same, and the approaches thereto, and all collateral works necessary to enable the water to be turned in said river diversion, be completed throughout between said Santa Fe crossing and the Romeo road on or before November 15th, 1893, or as much sooner as may be practicable; and

Provided, That the fixing of said dates for the final completion of all of said works, shall not be construed in any manner as authorizing any delay whatever in any part or the whole of said work, wherever and in whatever particular it may be feasible to complete the same at an earlier date. And, be it further

Ordered, That the Chief Engineer is instructed to forthwith report wherever he is unable to secure prompt compliance with his requirement ins any particular."

ADJOURNMENT TO SPECIAL TIME.

Mr. Kelly, seconded by Mr. Prendergast, moved that when the Board adjourn, it do adjourn to meet Monday, September 11, 1893, at 1 o'clock P. M.

The motion prevailed unanimously and it was so ordered.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Gilmore, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 11, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

ADJOURNED MEETING.

The adjourned session of the one hundred and eighty-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Monday, September 11, 1893, at 1 o'clock P. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call, Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7) members, were present.

RECESS.

Mr. Eckhart, seconded by Mr. Kelly, moved that the Board take a recess until 2:30 o'clock P. M. the same day.

The motion prevailed unanimously, and it was so ordered.

On re-assembling at the close of the recess at 2:30 o'clock P. M., on roll-call, Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast and Wenter—seven (7), and subsequently Mr. Russell, making a total of eight (8) members, were present.

LAUNDRY ON RIGHT OF WAY.

The Clerk presented a communication from Peter Ceder, asking permission to occupy building on the right of way for laundry purposes; and the communication was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the Committee on Finance.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"CHICAGO, September 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby respectfully apply to your Honorable Body for a permit to locate and operate a laundry on the ground controlled by your Board, namely, immediately near Wm. Harley & Son's camp at Willow Springs. I further wish to inquire whether I could obtain a permit to occupy or rent a certain house, now used by Dr. Re as a boarding house; the said house will, I understand, be vacated by him on the 14th instant.

I have spoken to the different contractors, and have been assured that a laundry is a necessity.

Very respectfully,

(Signed) PETER CEDER."

PURCHASE OF "WRIGHT" AND "WESTERN STONE COMPANY" LAND.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from Nathaniel T. Wright and the Western Stone Company of Chicago, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Nathaniel T. Wright and the Western Stone Company of Chicago, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay Nathaniel T. Wright and the Western Stone Company of Chicago, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Nathaniel T. Wright for the purchase from him for the corporate purposes of this District of the lands hereinafter described for the sum of twenty-one thousand dollars ($21,000.00);

From the Western Stone Company of Chicago, a corporation, for the purchase from it for the corporate purposes of this District, of the lands hereinafter described, for the sum of four thousand dollars ($4,000.00).

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said Nathaniel T. Wright the sum of twenty-one thousand dollars ($21,000.00), in full payment for the following described land, to-wit:

That part of the east half (E. ½) of the southeast quarter (S. E. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, of Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company. Also,

That part of the northeast quarter (N. E. ¼) of the southeast quarter (S. E. ¼) of said Section thirty-four (34) lying south (S.) of a line drawn from a point in the west (W.) line of the southeast quarter (S. E. ¼) of the southeast quarter (S. E. ¼) of said section, two hundred and twenty-nine and thirty-nine one-hundredths (229.39) feet south (S.) of the northwest (N. W.) corner of said southeast quarter (S. E. ¼) of said southeast quarter (S. E. ¼), to a point in the east (E.) line of the southeast quarter (S. E. ¼) of said Section thirty-four (34), one thousand and twenty-five and sixty one-hundredths (1,025.60) feet south (S.) of the northeast (N. E.) corner of said southeast quarter (S. E. ¼) of said Section.

To Western Stone Company of Chicago, the sum of four thousand dollars ($4,000.00), in full payment for the following described lands, to-wit:

That part of the northeast quarter (N. E. ¼) of the northwest quarter (N. W. ¼) of Section twenty (20), Township thirty-seven (37) North, Range eleven (11), East of the Third Principal Meridian, lying southeasterly of a line drawn from the southwest corner of said northeast quarter (N. E. ¼) of said northwest quarter (N. W. ¼) of said Section, to a point in the east line of said northeast quarter (N. E. ¼) of said northwest quarter (N. E. ¼) five hundred and seventy-four and forty-three one-hundredths (574.43) feet south (S.) of the north quarter corner of said section, excepting therefrom that portion thereof owned by the Chicago, Santa Fe and California Railway Company, subject to an easement in the public of a right of way over that portion thereof known as Stephens street, for a public highway. Also,

That part of the northeast quarter (N. E. ¼) of said Section twenty (20), lying northerly of the northerly boundary line of the right of way of the Sanitary District of Chicago, excepting therefrom such portions thereof as are owned by the Chicago, Santa Fe and California Railway Company.

All of said lands lying and being situate in the County of Cook, in the State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

COMPLETION OF RIVER DIVERSION OF SECTION 8.

Mr. Eckhart presented an order, directing the Chief Engineer to notify Agnew & Company to employ not less than four hundred (400) men on the river diversion work on Section 8, on or before Saturday, September 16, 1893, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer directed to notify Agnew & Co. in accordance with the same.

The following is

THE ORDER:

"WHEREAS, The completion of the River Diversion Channel on Section 8 at the earliest date possible is imperatively necessary, and the Board has already instructed the Chief Engineer to procure the completion of all of the said work on or before October 15, 1893; and

WHEREAS, In the opinion of the Chief Engineer and Superintendent of Construction, a force of at least four hundred (400) men, with the necessary machinery and tools, is required in order to have completed the work of excavation on the River Diversion Channel on said Section 8 by said October 15, 1893; therefore, be it

Ordered, That the Chief Engineer be instructed to notify Agnew & Company, contractors for said Section 8, to have at work, and properly equipped with tools and machinery a force of not less than four hundred men on or before Saturday, September 16, 1893."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 13, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, September 13, 1893, at 1:30 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held September 6, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

J. R. Davis & Son (test pits estimate)	$236 10
F. Mayer & Co., (blue prints, etc)	108 93
Seelig & Kandler, (instrument repairs)	1 50
Rand, McNally & Co., (map mounting)	1 50
Wagner Bros., (livery)	5 00
H. S. Norton, (rent, Lemont, Aug. 1893)	18 00
Wm. Kirkham, (gauge reading, Aug., 1893)	10 00
P. McGinnis, (gauge reading, Aug., 1893)	10 00
E. Hastings, (gauge reading, Aug., 1893)	10 00
Mary Rusk, (gauge reading, Aug., 1893)	10 00

Geo. Brainard, (gauge reading, Aug., 1893)	$ 10 00	
R. H. Cowdrey, (emergency, sundry expenses)	23 07	
Alex. E. Kastl, (expense)	15 67	
W. T. Keating, (expense)	54 37	
		$ 514 14

CLERICAL DEPARTMENT.

E. G. Christoph Lith. Co. (lithographed letter heads and envelopes)	$ 24 95	
Trevor Spring Water Co. (ice, Aug., 1893)	3 00	
		$ 27 95

LAW DEPARTMENT.

Barnard & Gunthorp printing briefs, etc)	$ 38 00	
E. G. Christoph Lith. Co. (lithographed letter heads)	10 50	
Orrin N. Carter, (expense)	59 50	
Orrin N. Carter, (traveling)	14 50	
		$122 50

POLICE DEPARTMENT.

E. G. Christoph Lith. Co. (lithographed letter heads and envelopes)	37 55
Grand total	$762 14

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 368, Engineering Department, (postage stamps)	$20 00
No. 913, Police Department, (window shades)	36 00
Total	$ 56 00

Mr. Kelly, seconded by Mr. Boldenweck, moved that Requisitions Nos. 368, for the Engineering Department, and No. 913, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 368, for the Engineering Department, and No. 913, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending September 9, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending September 9, 1893, as the same have been reported to me:

Engineering Department	100
Clerical Department	3
Treasury Department	1
Law Department	7
Police Department	35
Total employes	146

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of August, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to here-

with report that the total amount expended on account of and charged to the Clerical Department during the month of August, 1893, was $785.20, divided as follows:

Salaries	$ 752.17
Stationery	15 40
General expenses	17.63
Total	$785.20

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $800.

The total amount expended and charged to the General Account during the month of August, 1893, was $3,160.21, divided as follows:

Salaries	$2,533 34
Engineers' Inspection Trip	422.00
Printing and Stationery	108.35
Janitor Service	80.00
General expenses	16.52
Total	$3,160 21

There are outstanding liabilities against the General Account to the amount of about $300, for advertising, and the expenses for the present month will be about $5,500.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

SPOILING ON LOW GROUND ON SECTIONS C AND F.

The Clerk presented a report from the Chief Engineer, with reference to arrangements with the contractors on Sections C and F, for the spoiling of material on the low ground on said sections; and the report was read.

In connection with the report, Mr. Cooley presented an order, directing the Chief Engineer to permit the contractors on said sections to waste the material as proposed in the report of the Chief Engineer and as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be ordered printed and placed on file, the recommendations made therein concurred in, and the order adopted.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed and placed on file, the recommendations made therein concurred in, the order adopted, and the Chief Engineer directed to permit the contractors on Sections C and F to waste the material as proposed in his report and as provided in the order.

The following is

THE REPORT AND ACCOMPANYING ORDER:

"CHICAGO, August 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On Section C the work upon the Main Channel could be facilitated and the property of the Sanitary District improved by allowing the contractor to waste material in certain low grounds on each side of the Main Channel. I have said to the contractors that they could make arrangements to begin this work, as I believe from conversations had with members of the Board my doing so would be approved by your Honorable Body, and therefore ask an order permitting wasting to be done, under direction of this department, on Section C, and also upon Section F, where somewhat similar conditions obtain.

Very respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

The following is

THE ORDER:

"WHEREAS, The Chief Engineer has recommended that on Sections C and F, certain low lying lands adjacent to the Main Channel be filled with material taken from the said Channel, and has shown to this Board that the interests of this District can thereby be advanced; therefore, be it

Ordered, That the contractors on said Sections C and F be permitted, under the direction of the Chief Engineer of this District, to waste material upon such low lying lands adjacent to the said Channel as he may designate; provided, that no extra expense shall accrue to this District by reason of the granting of the privilege herein provided for."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the

Engineering Department for the month of August, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of August, including table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of August were as follows:

Contractors estimates	$197,499.33
Pay rolls	10,523.05
Material, etc	2,293.48
Total	$210,315.86

I estimate the expenses for September will be $285,000, including contractor's estimates.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.

(Enclosing classified statement.)

"CHICAGO, Sept. 6, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR — I herewith submit the following report for the month of August:

Pay rolls	$ 5,891.72
Contractor's estimates	197,499.33
Total	$203,391.05

AMOUNT OF WORK DONE TO SEPTEMBER 1, 1893:

SECTION.	MAIN CHANNEL.		RIVER DIVERSION.		RIVER LEVEE.
	Glacial Dritt. Cu. Yds.	Solid Rock. Cu. Yds.	Glacial Dritt. Cu. Yds.	Solid Rock. Cu. Yds.	Cu. Yds.
Section A	.....	.....	40.694	.....	.....
Section B	.....	.....	66,356	.....	.....
Section C	2,689	.....	55.676	.....	.....
Section D	83,068	.....	19,377	.....	.....
Section E	275,153	.....	.....	.....	.....
Section F	20.003	.....	.....	.....	93,038
Section 1	75 619	.....	5,876	.....	.....
Section 2	27,600	.....	29,500	.....	.....
Section 3	66,800	.....	.....	.....	.....
Section 4	44,200	.....	.....	.....	.....
Section 5	86,300	.....	.....	.....	.....
Section 6	71,100	.....	.....	.....	.....
Section 7	21.000	21,310	35 500	20,600	.....
Section 8	7,500	52,080	48,900	55,320	.....
Section 9	11,000	40.250	37,700	4,690	.....
Section 10	20,800	78 410	27.400	38,240	.....
Section 11	38,600	139,070	2,600	4,810	.....
Section 12	23 900	169.700	.....	.....	.....
Section 13	132.822	232.800	.....	.....	.....
Section 14	40,300	70.200	.....	.....	.....
Totals	948.454	783.820	359 579	123 660	93,038

Main Channel, glacial drift	948,454	Cubic Yards
Main Channel, solid rock	783,820	"
River Diversion, glacial drift	359,579	"
River Diversion, solid rock	123 660	"
River Levee, glacial drift	93,038	"

Total amount of estimates paid previous to September 1, 1893.. $790,557.99

CONDITION OF WORK, SEPTEMBER 1, 1893.

SEC.	CONTRACTOR.	Total amount done Sept. 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done Sept. 1, 1893.	Amount behind as per contract Sept. 1, 1893.	Amo'nt ahead as per contract, Sept. 1, 1893.
A.....	L. D. Conner & Co.....	$ 12,463	$ 20,971	$ 41,942	$ 29,479	.....
B.....	L. D. Conner & Co.....	15,216	12,736	25,472	10,256	.....
C.....	Western Dredg. & Imp Co	13,716	13,995	27,990	14,274	.....
D.....	E. D. Smith & Co.....	21,961	14,585	29,170	7,209	.....
E.....	Streeter & Kenefick.....	80,996	15,287	30,574	.....	50,422
F.....	Ricker, Lee & Co.....	26,847	12,671	24,742	.....	2,105
1.....	Alfred Harlev.....	22,004	20,867	119,985	97,981	.....
2.....	McArthur Bros.....	15,988	15,611	109,278	93,290	.....
3.....	McArthur Bros.....	18,036	18,983	170,847	152,811	.....
4.....	McArthur Bros.....	11,934	15,780	126,242	114,308	.....
5.....	Agnew & Co.....	23,301	12,476	93,570	70,269	.....
6.....	Agnew & Co.....	19,197	14,233	106,749	87,552	.....
7.....	Agnew & Co.....	45,494	17,816	133,621	88,127	.....
8.....	Agnew & Co.....	79,996	22,760	204,841	124,845	.....
9.....	Agnew & Co.....	47,221	19,348	174,132	126,911	.....
10.....	E. D. Smith & Co.....	105,370	23,291	209,621	104,251	.....
11.....	Mason, Hoge & Co.....	126,488	19,305	174,467	47,979	.....
12.....	Mason, Hoge & Co.....	141,717	18,781	169,031	27,314	.....
13.....	Mason, Hoge & Co.....	182,552	18,461	166,151	.....	16,401
14.....	McCormick Constr'n Co.	59,306	19,846	178,616	119,310	.....
	Totals.....	$1,069,803	$ 347,803	$2,317,041	$1,316,166	$68,928

Total amount required to be done September 1, 1893....$2,317,041
Total amount done September 1, 1893..... 1,069,803

Amount short as per contracts September 1, 1893.....$1,247,238

FORCE REPORT—DAILY AVERAGE, AUGUST, 1893.

SECTION.	Men.	Teams.	Steam Shovels.	Steam and Air Pumps.	Steam and Air Drills.	Steam and Air Hoists	Channelers.	Air Compressors.	Cableways.	Steam Scrapers.	Cantilever Derricks.	Locomotives.	Cars.
A.....	147	38	....	....	....	....	....	....	....	....	....	....	....
B.....	81	68	....	....	....	....	....	....	....	....	....	....	....
C.....	70	11	....	....	....	....	....	....	....	....	....	....	....
D.....	110	....	2	2	....	....	....	....	....	....	....	4	33
E.....	103	146	1.5	2	....	....	....	....	....	....	....	1	11
F.....	82	59	1.6	2.5	....	....	....	....	....	....	....	1.5	4
1.....	91	38	....	....	....	....	....	....	....	....	....	....	....
5.....	43	20	2.5	2.4	....	....	....	....	....	....	1	....	....
6.....	28	....	....	.7	....	....	....	....	....	1.7	....	....	....
7.....	287	24	....	1	8	4	1	....	....	....	....	....	....
8.....	177	8	....	.2	4	2.9	1	....	....	....	....	....	....
9.....	160	6	....	.8	4.4	1.8	1.6	....	....	....	....	....	....
10.....	355	4	....	3.9	8.9	5.2	5.4	1.0	....	....	.8	....	....
11.....	367	22	....	4.9	13.	4.0	5.4	1.1	1.9	....	....	....	....
12.....	283	11	....	3.0	10.6	3.0	6.1	1.0	....	....	1.0	....	....
13.....	407	16	....	5.0	10.8	3.0	4.7	1.0	....	....	....	....	....
14.....	157	29	....	2.0	4.8	1.0	3.3	....	....	....	....	....	....
Totals.....	2948	495	7.6	30.4	64.3	24.9	28.5	4.1	1.9	1.7	2.8	6.5	48

Respectfully submitted,

(Signed) D. C. DUNLAP,

Assistant Superintendent of Construction."

"CHICAGO, Sept. 6, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of August was as follows:

Compiled Bridgeport gauge readings to date.

Miscellaneous estimates and calculations were made with reference to river diversion and levees between Summit and Lockport.

Platted Desplaines River hydrographs to date.

The reduction of discharge measurements taken in the I. & M. Canal below pumping works was completed.

Additional topography along route of Main Channel between Summit and Bridgeport was obtained.

Set a low water gauge in Desplaines River at Willow Springs bridge.

Continued the cross sectioning of territory along line of river diversion channel between Lemont and head of Goose Lake. Platting of notes of same was commenced.

Made a survey of C., S. F. & C. R. R. tracks northeast of Lemont.

Made a survey of the Summit and Lyons road from I. & M. Canal northward to 25-foot contour. Platting of same was commenced.

Made a survey of the Calumet Terminal R. R. from a point 1,000 feet south of I. & M. Canal northward to 25-foot contour.

Made surveys for lots for police stations at Summit, Willow Springs, Lemont and Romeo.

Platted notes and established grades of roads.

Connected land corners between the Will County line and Lemont with the triangulation system.

The maintenance and records of water gauges was continued.

Reduction of notes pertaining to Illinois River floods was continued.

The sinking of test pits between Robey street and Summit was practically completed.

The work for September will be a continuation of that of August, with such additional work as may be ordered.

The expense for September will approximate to the expenses for August.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

"CHICAGO, Sept. 6, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I herewith submit the report of Division 3 for the month of August, 1893. The following work was finished:

Three progress profiles of the Main Channel and the River Diversion, from Summit to Lockport; tracings of the Chicago River Survey maps, from Lake to Twenty-second streets; plans, profiles and cross sections of Sections 2, 3, and 4 of the Main Channel near Willow Springs; a map and profile of River Diversion Line No. 2, at Romeo Island; a large scale drawing and tracing of the seal, and various special plats for the right of way

The condensed map and profile of the territory between Chicago and Joliet was nearly finished.

Plans of the Western Stone Co.'s bridge near the Will County line, and the Santa Fe Railroad bridge near Lemont, were made.

Copies of eleven sections near the State line and in the town of Thornton, were made from the County records for the Sanitary District map.

Work on the Sanitary District map was continued during the greater part of the month.

Platting was also done on the large scale topographical map near Romeo.

It is proposed to continue the work on the main topographical maps of the line, and the Sanitary District and watershed maps, during the next month.

Yours respectfully,

(Signed) EDGAR WILLIAMS,

Second Assistant Chief Engineer."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of August, 1893; the same was read, and by unanimous consent was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report		$2,473,215.47
Received from County Treasurer, Tax Account	$ 50,000 00	
Received from County Treasurer, Tax Account	50,000 00	
Received from Engineering Department, (sale of scow)	75 00	
Received from County Treasurer, Tax Account	25,000 00	
Received from National Bank of Illinois, interest for August	993 50	
Received from American Trust and Savings Bank, interest for August	327 50	
Received from Metropolitan National Bank, interest for August	993 01	
Received from Ft. Dearborn National Bank, interest for August	988 99	
Received from Globe National Bank, interest for August	953 07	
Received from Chicago National Bank, interest for August	990 65	
		$ 130,321 72
Total cash received for month		$2,603,537 19
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 777 82	
Treasury Department	166 66	
Engineering Departm't.	12,066 88	
Engineering—Construction—Department	201,788 32	
Law Department	5,373 92	
Law Department—Land Account	67,900 00	
Police Department	683 28	
General Account	3,232 63	
		$291,989 51
Balance this date, in banks as per schedule endorsed hereon		$2,311,547 68

(Signed) MELVILLE E. STONE,
Treasurer

Chicago, September 5, 1893."

SCHEDULE.

National Bank of Illinois	$ 436,962 61
Fort Dearborn National Bank	436,122 08
Chicago National Bank	435,638 08
Metropolitan National Bank	438,859 95
American Trust and Savings Bank	$ 21,003 79
Globe National Bank	542,961 17
Total	$2,311,547 68

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of August, 1893.

The same was read, and by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, September 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I submit herewith the monthly report for August, 1893. The total amount paid out is as follows:

Salaries.

Attorneys	$1,424 99	
Office force	295 00	
		$1,719 99

Expenditures.

Right of way	$ 725 58	
Court costs	89 25	
Legal services	2,550 00	
Stationery	16 84	
Sundries	2 00	
		$3,383 67

Land Account.

Right of way	$67,900 00
Total	$73,003 66

Good progress has been made during the last month in settlements for land included in the right of way of the District. Purchases for several tracts have been closed, and contracts for a number of other tracts entered into. There is a fair prospect of settling for nearly all of the land between Summit and Corwith without going to trial under our condemnation proceedings Since the last report, a new suit, returnable to the October term, 1893, of the Circuit Court of this County, has been started to condemn the remainder of the land within the right of way west of Rockwell street not included in the suits heretofore begun.

Much time has been devoted by this Department during the past month to drawing up contracts for extra work below Willow Springs, on the River Diversion Channel and bridges, and also in arranging and perfecting plans for putting unemployed men to work. It has been necessary to give considerable at-

tention to legal questions connected with the Police Department.

During the present month, this Department will be busied in preparing arguments and briefs for the Supreme Court in the case of the Sanitary District vs. Tedens et al., appealed by the defendants from Du Page County; in writing arguments and briefs in the case of the Sanitary District vs. Burke et al., appealed from this County by the defendants; and also, in the case of Sanitary District vs. Cook, Yore et al., appealed by the District from this County.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

SALE OF "KEIG" HOUSE AND RETURN OF "HENRY" TAXES.

The Clerk presented a report from the Attorney, accompanied by two certificates of deposit ($150.00 and $38.78), being money received from J. J. Keig from the sale of the "Keig house" in Will County, Illinois, and from John L. Henry, for taxes paid for him by the District on certain lands in Cook County purchased from him; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be ordered printed and placed on file, and the Clerk directed to deposit the accompanying certificates of deposit ($150.00 and $38.78) with the Treasurer of the District, to the credit of the District.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Sept. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith enclose two certified checks, one for one hundred and fifty dollars ($150.00), the other for thirty eight and seventy-eight hundredths dollars ($38.78), payable to myself and endorsed by me to the order of the Treasurer of the Sanitary District of Chicago. The one hundred and fifty dollar check is in payment for a frame house obtained by the District in a condemnation suit against J. J. Keig et al., adjoining the Romeo Road, in the Northwest quarter of Section 2, Township 37 North, Range 10 East of the Third principal Meridian, in Will County, Illinois. The District had no use for the building, and on consultation with the majority of the Trustees it was thought advisable to sell it back to Mr. Keig, as he made the best offer that could be obtained for the building

The other check for thirty-eight and seventy-eight one-hundredths dollars, is for money received from John L. Henry for taxes paid for him by the Sanitary District on lands situated in Sections 28 and 22, Township 38 North, Range 12 East of the Third Principal Meridian, Cook County, Illinois. In buying land from Mr. Henry, we only took portions of tracts in these Sections, and the taxes on the whole tracts had to be paid together. We paid the taxes on the entire tracts, and Mr. Henry paid us back our portion. Both of these checks should be deposited to the credit of the land account.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

(Accompanied by two (2) certificates of deposit.)

APPOINTMENT OF ASSISTANT ATTORNEY.

The Clerk presented a report from the Attorney, asking authority to employ Thomas B. Lantry as Assistant Attorney, as provided in the report; and the report was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and placed on file, the recommendation made therein concurred in, and the Attorney authorized to employ Thomas B. Lantry as Assistant Attorney, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendation made therein concurred in, and the Attorney authorized to employ Thomas B. Lantry, as Assistant Attorney, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I respectfully request au-

thority to employ Mr. Thomas B. Lantry as an Assistant Attorney in my Department, at a salary of one hundred and twenty-five dollars ($125.00) per month.

Respectfully submitted,

(Signed) ORRIN N. Carter,
Attorney."

PURCHASE OF "SANBORNE," "LUCAS," "HAYNES," "MINIER," "BUSSE" AND "MITTELSTAEDT" LANDS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from George S. Sanborne, Benjamin D. Lucas, William A. Haynes, Ellen A. Minier, John Busse, Jr., and Fred. Mittelstaedt, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said George S. Sanborne, Benjamin D. Lucas, William A. Haynes, Ellen A. Minier, John Busse, Jr., and Fred. Mittelstaedt, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay the said George S. Sanborne, Benjamin D. Lucas, William A. Haynes, Ellen A. Minier, John Busse, Jr., and Fred. Mettelstaedt, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with George G. Sanborne, Benjamin D. Lucas, William A. Haynes and Ellen A. Minier, for the purchase from them for the corporate purposes of this District, of their respective undivided interests in and to the lands hereinafter described, for the sum of twenty thousand four hundred and forty-five dollars ($20,445.00)

From John Busse, Jr., and Fred Mittelstaedt, for the purchase from them for the corporate purposes of this District, of the land hereinafter described, for the sum of four thousand eight hundred and ninety dollars ($4,890.00).

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said George G. Sanborne ten thousand two hundred and twenty-two and fifty one-hundredths dollars ($10,222.50), in full payment for his undivided eight-sixteenths (8-16) interest in and to the following described lands, to-wit: That part of the west half (W. ½) of the southeast quarter (S. E. ¼) of the southeast quarter (S. E. ¼) of Section thirty-four (34), Township thirty-nine (39) North, Range thirteen (13) East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company, and south (S.) of a line drawn from a point in the west (W.) line of said southeast quarter (S. E. ¼) of said southeast quarter (S. E. ¼), two hundred and twenty-nine and thirty-nine one-hundredths (229 39) feet south (S.) of the northwest (N. W.) corner of said southeast quarter (S. E. ¼) of said southeast quarter (S. E. ¼), to a point in the east (E.) line of the southeast quarter (S. E. ¼) of said Section thirty-four (34), one thousand and twenty-five and sixty one-hundredths (1,025.60) feet south (S.) of the northeast (N. E.) corner of said southeast quarter (S. E. ¼) of said Section. To said Benjamin D. Lucas, one thousand two hundred and seventy-seven and eighty-two one-hundredths dollars ($1,277.82), in full payment for his undivided one-sixteenth (1-16) interest in and to said land. To said William A. Haynes, the sum of one thousand two hundred and seventy-seven and eighty-one one-hundredths dollars ($1,277.81), in full payment for his undivided one-sixteenth (1-16) interest in and to same. And to Ellen A. Minier, the sum of seven thousand six hundred and sixty-six and eighty-seven one-hundredths dollars ($7,666.87), in full payment for her undivided six-sixteenths (6-16) interest therein.

To said John Busse, Jr., and Fred.

Mittelstaedt, the sum of four thousand eight hundred and ninety dollars ($4.890.00), in full payment for the following described land, to-wit:

That part of the east half (½) of the east half (½) of the northwest quarter (¼) of the northwest quarter of (¼) Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13) East of the Third Principal Meridian, lying south of a line drawn from a point in the west line of said Section, one thousand and ninety and ten one-hundredths (1,090.10) feet north of the west quarter corner thereof to a point in the north line of said Section, thirteen hundred and six and fifty-one one hundredths (1,306.51) feet west of the northeast corner thereof.

All of said lands lying and being situate in the County of Cook, in the State of Illinois.

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY.
THOMAS KELLY,
JOHN J. ALTPETER,
WM. BOLDENWECK,

Joint Committee on Finance and Engineering."

BRIDGE OVER RIVER DIVERSION AT SUMMIT.

Mr. Cooley presented an order, accompanied by specifications, authorizing and instructing the Chief Engineer to build a bridge over the River Diversion at Summit, Illinois, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the order be adopted, ordered printed, and with accompanying specifications, placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the order adopted, ordered printed, and, with accompanying specifications, placed on file, and the Chief Engineer authorized and instructed to build a bridge over the River Diversion at Summit, Illinois, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be authorized and instructed to build a bridge with the necessary and suitable approaches thereto over the River Diversion on the Summit-Lyons highway, in Section 11, Township 38 North, Range 12 East of the Third Principal Meridian, in the town of Lyons, Cook County, Illinois, in accordance with the specifications hereto attached marked "Exhibit A, Summit Bridge;" provided that said Engineer shall first secure propositions from responsible and experienced men for the construction of such bridge and its approaches; and that the President and Clerk must first approve one of said propositions before said Engineer proceed to erect said bridge or build said approaches in accordance with the same."

(Accompanied by specifications.)

AGREEMENT FOR USE OF "MARKSTROM LAND."

Mr. Cooley presented an order, authorizing the Attorney to make an agrement with Charles A. Markstrom, of Romeoville, Illinois, with reference to the use of his land, on the conditions as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney authorized to make an agreement with Charles A. Markstrom, of Romeoville, Illinois, with reference to the use of his land on the conditions as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Attorney be and he is hereby authorized to make an agreement with Charles A. Markstrom of Romeoville, Illinois, whereby, in consideration of this District being permitted to deepen the east branch of the DesPlaines River east of Romeo Island in Section three (3), Township thirty-six (36) North, Range ten (10) East of the Third Principal Meridian, to a depth of from one to one and one-half feet with a width of twenty-five (25) feet, and extending from Romeo Road south a distance of six hundred feet, said Sanitary District will place the material removed in making said excavation at such places upon said Markstrom's land adjoining said east

branch of said river, as he shall direct, and in case said District should in the future, for the purpose of other and further improvements, need more of said Markstrom's land than that covered by said proposed channel of twenty five feet, then it will pay said Markstrom for such land, including that covered by said proposed channel, at the rate of one hundred and fifty ($150.00) dollars per acre."

INSURANCE OF DISTRICT EMPLOYES AGAINST PERSONAL INJURY.

Mr. Eckhart presented an order, directing the Committee on Finance, together with the Clerk and Attorney, with power to act, to consider the matter of securing insurance for the District against claims for personal injury of employes on the River Diversion work, now under special contract: and the order was read.

Mr. Eckhart, seconded by Mr. Gilmore, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the matter of securing insurance for the District against claims for personal injury of employes, as provided in the order, referred to the Committee on Finance, together with the Clerk and Attorney, with power to act.

The following is

THE ORDER:

"WHEREAS, It seems desirable to secure the District against claims which may be made against it for personal injuries which may be incurred by employes engaged upon the excavation of the River Diversion, under recent contracts; therefore, be it

Ordered, That the matter of securing insurance for this District against such claims, in some Insurance Company, insuring employers against liabilities growing out of claims for personal injury, be referred to the Committee on Finance, together with the Clerk and Attorney, with power to act."

COMMUNICATION ON MOMENCE DAM.

The Clerk presented a communication from W. J. Brown, of Momence, Illinois, with reference to the Momence dam and the removal of rock in the Kankakee river; and the communication was read.

Mr. Boldenweck, seconded by Mr. Prendergast, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Finance.

Mr. Eckhart, seconded by Mr. Kelly, moved as a substitute that the communication be ordered printed and referred to the Committee on Federal Relations.

On roll-call on the substitute, the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart and Kelly—four (4). Nays—Messrs. Boldenweck, Gilmore, Prendergast and Wenter—four (4).

Upon which result the President declared the motion lost.

On roll-call on the original motion of Mr. Boldenweck, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Gilmore, Kelly, Prendergast and Wenter—six (6). Nays—Messrs. Cooley and Eckhart—two (2).

Upon which result the President declared the motion carried, and the communication ordered printed and referred to the Joint Committee on Engineering and Finance.

The following is

THE COMMUNICATION:

"MOMENCE, KANKAKEE CO., ILL., Sept. 7, 1893.

To the Chicago Drainage Commissioners, Rialto Building, Chicago, Ill:

GENTLEMEN—The Indiana people are now putting in a dam in the river here, preparing to take out the rock ledge which is the obstruction to the sand going down the river and so filling up the Channel, and finally filling up the channel of the Illinois River, which channel you are interested in, and I now write this to let you know, that you may take action to stop the trespassing of the people of Indiana. It can be stopped now, but delay in the case will be fatal to you and the people of Illinois. I wrote to the Commission two or three years ago, when the project was first started, and also to Mr. Cooley. I have been to your office at times when in Chicago, but failed to learn anything as to whether you have abandoned your opposition to the removal of the rock here. I now will leave you to act as you may think fit.

I have written to Governor Altgeld about the case, and called on him to use

his power to stop any meddling with the rock ledge here.

I will now close this, remaining,

Respectfully,

(Signed) WM. J. BROWN."

TRUSTEES' ILLINOIS VALLEY TRIP.

The Clerk presented a communication from J. L. Kenner, Jr., City Clerk of Chillicothe, Illinois, urging that the Trustees of the District make a trip by boat down the Illinois Valley; and the communication was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the communication be ordered printed and placed on file, and the Clerk directed to notify City Clerk Kenner of the previous action of the Board in regard to the same matter. (page 1341 of the proceedings).

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHILLICOTHE, ILL., Sept. 6, 1893.

Clerk of Sanitary District, Chicago:

DEAR SIR—At a meeting of the City Council of the City of Chillicothe, August 3, 1893,

Mayor Kinloch offered the following resolution:

WHEREAS, The people of the State of Illinois through their Legislature have twice placed themselves on record as opposed to the continuance of the lock and dam system for navigation on the alluvial portion of the Illinois River, and have twice memoralized Congress to cease work on the goverment locks and dams at LaGrange and Kampsville, and to apply all available funds to the improvement of the lower Illinois by dredging and wing dams and in such a manner to develop progressively so great a depth as practicable in conjunction with a large supply of water from Lake Michigan, and

WHEREAS, This State has passed the necessary laws requiring the removal of the State dams at Henry and Copperas Creek before water from Lake Michigan is turned into the Illinois River; but the general government has not yet signified its intention to complete the great waterway from Joliet to Grafton, and

WHEREAS, The Sanitary District of Chicago has already entered upon the construction of a waterway from Lake Michigan to the DesPlaines River, through which a large amount of water will be turned into this valley, and

WHEREAS, In order to awaken Congressional action in this important matter, it seems necessary that the people directly interested in the project shall again unite in an urgent request that the general government shall at an early day begin work on the Illinois River in line with the Joint Resolution on this subject passed by our Legislature;

THEREFORE, With the object of consulting as to the ways and means of best bringing about the ends sought and for the further purpose of gaining that thorough knowledge of localities and requirements which can only be obtained by personal contact with our people and valley, be it

Resolved, By the City Council of the City of Chillicothe that the Trustees of the Sanitary District of Chicago be and they hereby are invited and urged to make a trip down the Illinois Valley at an early date;

Resolved, That the City Clerk be instructed to forward a copy of these resolutions to the Clerk of said Sanitary District of Chicago.

Then, on motion of Ald. Mead, the resolution was adopted. Unanimous.

(Signed) J. L. KENNER, JR.,

City Clerk."

STONE FROM BOTTOM OF ROCK CHANNEL ON SECTION 10.

President Wenter announced that he had received from Messrs. E. D. Smith & Co., contractors for Section 10, a piece of stone taken, on September 6, 1893, from the bottom of the Main Channel, at grade, on that section, about thirty-four (34) feet below the surface of the ground.

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 19, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

SPECIAL MEETING.

A special meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Tuesday, September 19, 1893, at 2 o'clock P. M., pursuant to call.

President Wenter called the Board to order.

On roll-call, Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) members were present.

CALL FOR MEETING.

The Clerk then read the call for the special meeting:

"CHICAGO, Sept. 18, 1893.

Thos. F. Judge, Esq., Clerk Sanitary District of Chicago:

DEAR SIR—Please issue call for a Special Meeting of the Board of Trustees of the Sanitary District of Chicago, to be held in their rooms, Rialto Building, Tuesday, September 19, 1893, at 2 o'clock P. M., said special meeting being called to consider and act in the matter of the payment of laborers and employes on the River Diversion and levees on Sections 1, 2, 3 and 4 of the Main Channel, and transact such other business as may come before the meeting.

Yours truly,

(Signed) FRANK WENTER,
President."

EMERGENCY FUND FOR PAYMENT OF RIVER DIVERSION EMPLOYES.

Mr. Eckhart presented an order, au-

thorizing and directing the Clerk to draw a warrant, as emergency fund, in the sum of sixteen thou-and ($16,000) dollars, in favor of the Clerk, for the payment of laborers and employes on the River Diversion and levees on Sections 1, 2, 3 and 4 of the Main Channel, said money to be paid on approved pay-rolls, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Gilmore, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to draw a warrant, as emergency fund, in the sum of sixteen thousand ($16,000) dollars, in favor of the Clerk, for the payment of laborers and employes on the River Diversion and levees on Sections 1, 2, 3 and 4 of the Main Channel, said money to be paid on approved pay-rolls, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby directed to draw a warrant for sixteen thousand ($16,000.00) dollars on the Treasurer, in favor of himself, the same to be used in paying laborers and employes working on contract Sections one (1), two (2), three (3) and four (4), on the river diversion and levees on said sections—said money to be paid to the employes on Section one (1) on the pay-roll of employes working under the direction of Alfred Harlev, Agent of this District, and to the employes on Sections two (2) three (3) and four (4), on the pay-roll of employes working under the direction of McArthur Brothers Company, Agent of this District, and that when said respective pay-rolls have been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall cause said employes to be paid through said agents the amounts found respectively due them."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 20, 1893.

OFFICIAL RECORD

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-eig'th regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, September 20, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Eckhart, Gilmore, Russell and Wenter—six (6), and subsequently Messrs. Cooley and Kelly—two (2), making a total of eight (8) members, were present.

MINUTES.

The minutes of the adjourned session of the regular meeting of September 6, 1893, held September 11, 1893, and of the regular meeting held September 13, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS

Eng. Dept., Div. No. 1, (half month, ending Sept. 15, 1893).....	$2 449 15
Eng. Dept., Div. No. 2, (half month, ending Sept. 15, 1893).....	670 80
Eng. Dept., Div. No. 3. (half month, ending Sept 15, 1893).....	679 25
Eng. Dept., Div. No. 4. (half month, ending Sept. 15, 1893	107 50
Eng Dept., River Division Time keepers, (half month, end-	

ing Sept. 15, 1893)....	$95 98	
		$ 4,002 68
Clerical Dept., office roll, (half month, ending Sept. 15, 1893)....		87 50
Law Dept., office roll, (half month, ending Sept. 15, 1893).....		97 50
Police Dept., field roll, (half month, ending Sept. 15, 1893).....		1,336 64
Total.....		$ 5,524 32

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (Sec. 1, Sept. 16, '93).....	$ 2,889 34	
Agnew & Co. (Sec. 5, Sept. 16, '93).....	4,583 25	
Agnew & Co. (Sec. 6, Sept. 16, '93).....	5,481 00	
Agnew & Co. (Sec. 7, Sept. 16, '93).....	10,507 13	
Agnew & Co. (Sec. 8, Sept. 16, '93).....	5,559 53	
Agnew & Co. (Sec. 9, Sept. 16, '93).....	7,613 76	
E. D. Smith & Co. (Sec. 10, Sept. 16, '93).....	13,755 00	
Mason, Hoge & Co. (Sec. 11, Sept. 16, '93)	14,543 25	
Mason, Hoge & Co. (Sec. 12, Sept. 16, '93)	13,711 03	
Mason, Hoge & Co. (Sec. 13, Sept. 16, '93)	14,847 21	
McCormick Const. Co. (Sec. 14, Sept. 16, '93)	5,985 00	
L. D. Conner & Co. (Sec. A, Sept. 16, '93)	5,948 91	
L. D. Conner & Co. (Sec. B, Sept. 16, '93)	9,662 62	
Western Dredging and Impt. Co. (Sec. C, Sept. 16, '93).....	7,376 39	
E. D. Smith & Co. (Sec. D, Sept. 16, '93).....	3,240 91	
Streeter & Kenefick, (Sec. E, Sept. 16, '93)	9,167 58	
Ricker, Lee & Co. (Sec. F, Sept. 16, '93).	6,709 63	
		$141,581 54

ENGINEERING DEPARTMENT.

J. R. Davis & Son (test pits estimate).....		$ 236 98

LAW DEPARTMENT.

Western Union Telegraph Co. (telegraph service).....	$ 3 25	
Cameron, Amberg & Co. (stationery)....	17 53	
S. D. Childs & Co. (stationery).....	2 00	
W. W. Wheelock, (legal services.....	89 02	
Haley & O'Donnell, (transcript).....	4 50	
Orrin N. Carter, (expense).....	31 10	
		$ 147 40

LAW DEPARTMENT.

Land Account—

Orrin N. Carter, (taxes, acquired land).....		$ 87 79

POLICE DEPARTMENT.

Frank E. Michaud, erecting police stations).....		$ 1,297 24
Grand total.....		$148,875 27

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 462, Law Department, (postage stamps).....	$10 00

Mr. Eckhart, seconded by Mr. Russell, moved that Requisition No. 462, for the Law Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 462, for the Law Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending September 16, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report here-

with the number of employes in each department for the week ending September 16, 1893, as the same have been reported to me:

Engineering Department	103
Engineering Department, Time-keepers, River Diversion	5
	—108
Clerical Department	3
Treasury Department	1
Law Department	7
Police Department	35
Total employes	154

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

ADDITIONAL CLERK FOR CLERICAL DEPARTMENT.

The Clerk presented a report, making requisition for authority to employ one additional general clerk for the Clerical Department, as provided in the report; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and placed on file, the requisition made therein allowed, and the Clerk authorized to employ one additional general clerk for the Clerical Department, as provided in the report.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the requisition made therein allowed, and the Clerk authorized to employ one additional general clerk for the Clerical Department, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I hereby make requisition for authority to employ one (1) additional general clerk for the Clerical Department, at a salary not to exceed one hundred ($100) dollars per month.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

EMPLOYMENT OF MEN ON RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committee on Labor, stating that about 1500 men had left that morning on the special trains for work on the river diversion on Sections 1, 2, 3 and 4, and that an equal number, to which others could be added daily, would continue on the work until its completion.

COMPLETION OF RIVER DIVERSION ON SECTIONS A AND B.

Mr. Cooley presented an order, directing the Chief Engineer to notify L. D. Conner & Company, contractors on Sections A and B, as provided in the order, to put additional men and machinery at work on the river diversion on said sections, and finish the said river diversion in accordance with the contracts; and the order was read.

Mr. Cooley seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer directed to notify L. D. Conner & Co., contractors on Sections A and B, as provided in the order, to put additional men and machinery at work on the river diversion on said sections, and finish the said river diversion in accordance with the contracts.

The following is

THE ORDER:

"WHEREAS, The completion of the river diversion channel on contract Sections A and B, at the earliest date possible is imperatively necessary; and

WHEREAS, It is reported that the work being done thereon is not properly finished to grade as the work progresses; therefore, be it

Ordered, That the Chief Engineer be instructed to notify L. D. Connor & Company, contractors for said Sections A and B, to put at work at once upon said river diversion sections a force of men, fully equipped with the necessary tools, machinery and appliances sufficient to complete the work on said river diversion in every respect in accordance with the specifications and requirements of their contracts, and that

said work be finished to grade as same progresses."

RE-CONSTRUCTION OF DESPLAINES RIVER BRIDGE AT WILLOW SPRINGS.

Mr. Cooley presented an order, accompanied by specifications and tracing, authorizing and instructing the Chief Engineer to re-construct the bridge over the Desplaines River at Willow Springs, in accordance with the specifications and tracing and as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Altpeter, moved that the order, with accompanying specifications and tracing, be referred to the Joint Committee on Engineering and Finance, with directions to report back at the next meeting.

The motion prevailed unanimously, and the order, with accompanying specifications and tracing, was so referred.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be authorized and instructed to reconstruct the bridge, with the necessary and suitable approaches thereto, over the Desplaines River at Willow Springs, Illinois, in accordance with the specifications hereto attached, marked "Exhibit A," provided, that said Engineer shall first secure propositions from responsible and experienced men for the construction of such bridge and its approaches; and that the President and the Clerk must first approve one of said propositions before said Engineer proceed to erect said bridge or build said approaches in accordance with the same."

(Accompanied by specifications and tracing).

BORINGS AND SURVEYS FOR SPILLWAY AT SUMMIT.

Mr. Cooley presented an order, authorizing and directing the Chief Engineer to have the necessary borings and surveys made for determining the location and construction of a spillway near the Santa Fe Railroad bridge at Summit, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the order be referred to the Joint Committee on Engineering and Finance.

Mr. Cooley seconded by Mr. Altpeter, moved as a substitute, that the order be adopted.

On roll-call on the substitute, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Russell and Wenter—six (6). Nays—Messrs. Eckhart and Kelly—two (2).

Upon which result the President declared the substitute carried, the order adopted, and the Chief Engineer authorized and directed to have the necessary borings and surveys made for determining the location and construction of a spillway near the Santa Fe Railroad bridge at Summit, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be authorized and directed to have made on the right of way of the Sanitary District, north of the Santa Fe Railroad bridge over the Desplaines River, near Summit, the borings, and surveys necessary to determine the location and construction of a spill way to control the amount of Desplaines River flood waters which shall in the future flow either toward Lake Michigan or toward the Illinois River."

EMPLOYMENT OF MEN AT JOLIET END.

The Clerk presented a communication, directed to President Wenter by Fred Bennitt, of Joliet, Illinois, with reference to the practicability of instituting work on the Main Channel at or near Joliet, for the employment of men in that vicinity; and the communication was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the communication be ordered printed and referred to the Special Committee on Labor.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"JOLIET, ILL., Sept. 13, 1893.

Hon. Frank Wenter, President Chicago Sanitary Board:

DEAR SIR—At the solicitation of a committee appointed at a meeting of the unemployed of the District in the vicinity of Joliet, Hon. H. H. Stassen, Mayor of

Joliet, appointed a committee, consisting of Messrs. George H. Munroe, John Kirk, H. G. DuBien, L. C. Shumacher, and Aldermen Harris, Walker, and myself as Chairman, to confer with the Trustees of the Chicago Sanitary District, touching the practicability of instituting work at or near Joliet, for the employment of men in this vicinity. I write this letter to ascertain what time it would be convenient for the Board to hear members of our committee upon this subject. I will be thankful for an early reply.

Very respectfully,

(Signed) FRED BENNITT."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

SEPTEMBER 27, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and eighty-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, September 27, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6) members, were present.

MINUTES.

The minutes of the special meeting held September 19, 1893, and of the regular meeting held September 20, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Eckhart,

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harley, (River Diversion, Sec. 1, Sept. 15, 1893).....	$10,444 66	
McArthur Bros. Co. (River Diversion, Sec. 2, Sept. 15, 1893).....	5,701 80	
McArthur Bros. Co. (River Diversion, Sec. 4, Sept. 15, 1893).....	2,903 45	
		$19,049 91

ENGINEERING DEPARTMENT.

U. W. Weston, (expense).....	51 85

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery)		$ 1 44

LAW DEPARTMENT.

Jacobs, Coles & Co. (stationery)	$ 9 95	
S. A. Moffett Co. (livery)	13 50	
Orrin N. Carter, (postage stamps)	10 00	
Thos. B. Lantry, (traveling)	8 00	
		$ 41 45

POLICE DEPARTMENT.

Martin Emerich Outfitting Co. (station furnishings)	$ 497 62	
Martin Emerich Outfitting Co. (window shades)	10 00	
Martin Emerich Outfitting Co. (desk and chair)	29 53	
R. Chester Frost Co. (police stars)	50 00	
A. F. Risser & Co. (saddle, etc.)	23 50	
		$ 610 65

GENERAL ACCOUNT.

The Chicago Deposit Vault Co. (janitor services, Aug., 1893)	$ 80 00	
Chicago Edison Co. (electric lighting)	13 06	
The Chicago Herald Co. (advertising Secs. 2, 3 and 4 of Main Channel)	27 00	
The Tribune Co. (advertising Secs. 2, 3 and 4 of Main Caannel)	26 70	
The Inter Ocean, (advertising Secs. 2, 3 and 4 of Main Channel)	13 50	
The Chicago Record, (advertising Secs. 2, 3 and 4 of Main Channel)	18 00	
The Chicago Daily Globe, (advertising Sec. 2, 3 and 4 of Main Channel)	13 50	
The Chicago Daily News Co. (advertising Secs. 2, 3 and 4 of Main Channel)	27 00	
The Chicago Evening Post Co. (advertising Secs. 2, 3 and 4 of Main Channel)	18 00	
John R. Wilson, Pub. *Chicago Evening Journal*, (advertising Secs. 2, 3 and 4 of Main Channel)	7 20	
The Chicago Dispatch, (advertising Secs. 2, 3 and 4 of Main Channel)	$18 00	
The Mail, (advertising Secs. 2, 3 and 4 of Main Channel)	23 00	
Illinois Staats Zeitung Co. (advertising Secs. 2, 3 and 4 of Main Channel)	9 00	
The Abendpost Co. (advertising Secs. 2, 3 and 4 of Main Channel)	9 00	
German American Pub. Co. (advertising Secs. 2, 3 and 4 of Main Channel)	41 25	
August Geringer, Pub. *Svornost*, (advertising Secs. 2, 3 and 4 of Main Channel)	9 00	
		$ 323 21
Grand total		$ 20,078 51

Accompanying the vouchers, the Clerk presented the following

REPORTS:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith bills of Alfred Harley for labor and material furnished on River Diversion. The total pay roll rendered foots up $8.896.93—of this amount I have held back $248.33 until I can investigate the propriety of the charge to the River Diversion account, and a further sum of $60 00 on account of the rate of wages to foremen which is charged up at $3.50 per day or $91.50 per month, whereas the adjacent sections pay only $75.00 per month. These items foot up $308.33, leaving a balance of $8,588.60 approved,

The bills for supplies and material foot up $1.061.30, but the items for gang plank and fitting up tool boxes amounting to $567.58 are not proper and I have deducted them, leaving a balance of $493.-72. The bills as approved are therefore:

Labor rolls	$ 8,588 60
Material and repairs	493 72
	$ 9,082 32
15 per cent added	1,362 34
Total	$10,444 66

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the labor rolls and bills for material consumed on the River Diversion, on Sections 2 and 4 in accordance with the contract dated August 30th, between the Sanitary District and McArthur Bros. Company:

The labor on Section No. 2 foots up	$4,762 21
The labor on Section No. 4 foots up	2,381 10
Material on Section No. 2 foots up	195 88
Material on Section No. 4 foots up	143 64
Total for both sections	$7,482 83
15 per cent. for use of tools, Superintendence, etc	1,122 42
Total	$8,605 25

I consider that under this contract the contractor should supply gang plank and therefore did not approve a bill rendered covering that item.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

Mr. Eckhart, seconded by Mr. Kelly, moved that the reports of the Chief Engineer just presented be ordered printed and placed on file, and the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Boldenweck (except as to Construction Account vouchers), Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the reports of the Chief Engineer just presented ordered printed and placed on file, and the vouchers, as read and shown above, approved and ordered paid

REQUISITIONS.

The Clerk presented the following requisitions:

No. 360, Engineering Department, (sundry supplies)	$417 35
No. 361, Engineering Department, (sundry supplies)	292 98
No. 369, Engineering Department, (time books)	30 00
No. 370, Engineering Department, (time sheets)	$ 24 00
No. 371, Engineering Department, (pay roll blanks)	36 00
Total	$800 33

Mr. Eckhart, seconded by Mr. Boldenweck, moved that Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, as read and shown above, be referred to the Joint Committe on Engineering and Finance, with directions to report back at the next meeting.

The motion prevailed unanimously, and Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, as read and shown above, were so referred.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending September 23, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending September 23, 1893, as the same have been reported to me:

Engineering Department	108
Engineering Department, Timekeepers	5
	—108
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	35
Total employes	156

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

SPECIAL CONTRACT FOR STEPHENS STREET BRIDGE AND SANTA FE CROSSING NEAR LEMONT.

The Clerk presented a joint report from the President, Chief Engineer and Clerk, accompanied by a form of agree-

ment with Messrs. E. D. Smith & Co. and two specifications, for the construction of bridges over the river diversion at Stephens street and for the Santa Fe crossing near Lemont, (ordered at the meeting held August 16, 1893, page 1400 of the Proceedings), recommending that the President and Clerk be authorized and directed to execute said agreement with Messrs. E. D. Smith & Co., and that the parts of orders inconsistent with said report be repealed; and the report and accompanying agreement were read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, with accompanying agreement ordered printed, and with specifications placed on file, the recommendations made therein concurred in, the President and Clerk authorized and directed to execute said agreement with Messrs. E. D. Smith & Co., and that the parts of such orders as are inconsistent with said report be repealed.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, with accompanying agreement ordered printed, and with specifications placed on file, the recommendations made therein concurred in, the President and Clerk authorized and directed to execute said agreement with Messrs. E. D. Smith & Co., and the parts of such orders as are inconsistent with said report repealed.

The following is

THE REPORT, WITH ACCOMPANYING AGREEMENT:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—By the adoption of the report of the Joint Committee on Engineering and Finance with accompanying orders August 16, 1893, the Engineer was instructed to build a bridge with the necessary and suitable approaches thereto over the new river diversion on Stephens street, and also to reconstruct the railroad embankment, track and bridge on the main line of the Atchison, Topeka & Santa Fe Railroad, over and across the new river diversion in Section twenty (20) of Lemont Township, more particularly described in said orders, after first having secured propositions from responsible and experienced men for the construction of same and that the President and Clerk should first approve of one of the propositions for each of said structures before the Engineer proceeded to erect the same.

After having duly considered the propositions received pursuant to said orders and comparing them with the estimates made by the Engineer, and also with estimates of the probable cost of said constructions if undertaken by the District itself under the superintendence of experienced contractors who should furnish tools, machinery and appliances and should take charge of said work as agents of the District, we have reached the conclusion that the latter method of building said highway bridge and reconstructing said railroad embankment, track and bridge will be preferable in point, both of economy and expedition. We have received a proposition from E. D. Smith & Co., contractors on Section ten (10), to act as the agents of the District in superintending the work of said constructions under the direction of the Engineer, said proposition being embodied in the form of an agreement, a copy of which is hereto attached.

We respectfully recommend that the District build said bridges under the superintendence of said E. D. Smith & Co. as its agents under the terms and conditions set forth in said agreement; that the President and Clerk be authorized and directed to execute said agreement on the part of the District, and that such parts of said orders of August 16, 1893, as are inconsistent herewith be repealed.

Respectfully submitted.

(Signed) FRANK WENTER,
President.
ISHAM RANDOLPH,
Chief Engineer.
THOS. F. JUDGE,
Clerk."

AGREEMENT:

"*This Agreement*, made and entered into this.....day of..... A. D. 1893, by and between the Sanitary District of Chicago, party of the first part, and E. D. Smith & Co., a co-partnership composed of Erskine D. Smith, E. Eldridge Smith, and Jones M. Jackson, party of the second part.

Witnesseth, That the said party of the second part, in consideration of the mutual promises herein made, hereby

covenants, contracts, and agrees with the said party of the first part to act as its agent in superintending the building of a bridge with the necessary and suitable approaches and abutments thereto over the new river diversion on Stephens street, in Section twenty (20), Township Thirty-seven (37) north, Range Eleven (11), East of the Third Principal Meridian, in the Town of Lemont, Cook County, Illinois, in accordance with the specifications hereto attached marked "Exhibit A, Stephens Street Bridge," and also the building and reconstructing of the railroad embankment, track, and bridge with necessary abutments on the main line of the Atchison, Topeka & Santa Fe Railroad over and across the new river diversion in said Section Twenty (20) and in Section Seventeen (17), Township Thirty-seven (37) north, Range Eleven (11), East of the Third Principal Meridian, in Du Page County, Illinois, in accordance with the specifications hereto attached marked "Exhibit B. Santa Fe Railroad"

Said second party will at once organize such a force as shall be sufficient to secure the completion of said work in the shortest time possible consistent with economy and shall furnish, at their own cost and expense, all tools, cars, machinery and appliances necessary for the proper and economical execution of said work. First party shall pay for the labor engaged upon said work, and for all materials entering into the construction of said bridges as hereinafter provided, including also powder, blasting supplies, coal, etc

Second party, as such agent of first party, agrees to purchase all the material of every kind necessary for the construction of said bridges and the laying of said track at the lowest prices obtainable, and all such bills shall be submitted to the Chief Engineer of first party for his approval, and payments therefor shall be made semi-monthly when same shall have been certified by said Chief Engineer to be correct. Pay-rolls of all workmen employed upon said work shall be submitted to the Chief Engineer for his approval, and after same shall have been so approved shall be paid by first party upon the tenth (10th) and twenty-fifth (25th) days of each month. All men actually engaged upon the ground, either as workmen, foremen or otherwise; shall be considered employes of first party, and the term superintendent, as applied to said second party as first party's agent, shall include the members of said firm and any person employed by them in their office for their own convenience in so superintending said work.

Said second party shall superintend and conduct said work as agent for the said first party in the usual manner, in consideration of which services and the furnishing of the tools, machinery and appliances aforesaid for the construction and prosecution of said work and the keeping of the same in repair, the said party of the first part will pay said second party upon the conclusion of said work ten (10) per cent. upon the actual total cost of building said bridges in accordance with said specifications, said cost to include amounts paid for wages and for all material purchased as aforesaid and entering into the construction of said bridges, which percentage so received shall be accepted by said second party as full and sole compensation for their services and for the use of their tools in the prosecution of said work and the keeping of same in repair.

It is further agreed that said party of the second part will make provision for the housing and boarding of such men employed upon said work as may need food and lodging upon or near the work, and that the provision so made shall equal the general requirements of said first party in its contracts, and the charges made therefor shall be reasonable and just, and the board and supplies furnished shall be made a first charge against and be deducted from their wages.

In Witness Whereof, On the day and year first above written, said Sanitary District of Chicago has caused this agreement to be signed by its President and attested by its Clerk, and its corporate seal to be hereto affixed, and said second party have hereunto set their hands and seals.

THE SANITARY DISTRICT OF CHICAGO.

By.....*President.*

Attest:.....*Clerk.*

.....[SEAL]

.....[SEAL]

.....[SEAL]"

(Specifications attached.)

EXTRA WORK ON SECTION 11 DUE TO CHANGE IN LINE.

The Clerk presented a joint report from the Chief Engineer and Attorney, recommending that new work on Section 11, caused by change in line,—subject matter of which was referred to them at the meeting held November 2, 1892 (page 849

of the Proceedings),—be done by Mason, Hoge & Co., contractors on said Section, as "extra work" under their contract; and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Boldenweck (except as to payment of percentage), Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried; the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—By a resolution of your Honorable Board, passed November 2, 1892, we were directed to consider and report what might seem equitable and proper action on the part of the Board with respect to the change of location of the division line between contract Sections ten (10) and eleven (11), from that shown on the maps and plans at the time bids were made for work on said sections, whereby the easterly termination of Section eleven (11) was thrown about eight hundred and fifty (850) feet eastwardly of its former location as fixed on said maps and plans, thus adding to said Section eleven (11), let to Mason, Hoge & Co., a little over nine hundred (900) feet of low ground and river not theretofore included therein. This work was extremely undesirable on account of back water from Goose Lake, which has been recently drawn down by cuts opposite and above Romeo Island.

The matter was not taken up immediately, as at that time the work of excavation was being carried on upon other portions of said section and other business was pressing, but now the necessity of an early completion of the river diversion on said section being apparent, after duly considering the claims made by Mason, Hoge & Co., we respectfully report that we are of the opinion that it would be just and equitable and without detriment to the District to pay for excavating the easterly eight hundred and fifty (850) feet of the river diversion on said Section eleven (11) as extra work, under paragraph 19 of Section D of the "Contract and Specifications" providing for extra work; that said contractors be required to keep an accurate account of all the items of expense necessarily entering into the actual cost of said work, executed in the most economical manner; and that the Sanitary District, upon said account having been certified correct by the Chief Engineer, pay them, as full compensation for the completion of said portion of said river diversion, the actual cost and fifteen per cent. of said cost in addition thereto as provided in the specifications.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.
ORRIN N. CARTER,
Attorney."

ADVERTISEMENT, SPECIFICATIONS, BOND AND PROPOSALS FOR SECTIONS G TO M, INCLUSIVE—SUMMIT TO CORWITH.

The Clerk presented a report from the Chief Engineer transmitting a form of advertisement, specifications, bond and proposals, accompanied by profile and two tracings, for the letting of Sections G, H, I, K, L and M of the Main Channel, between Summit and Corwith; and the report and enclosures were read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report and enclosures be ordered printed, and with profile and tracings, placed on file, and the Clerk authorized and directed to advertise at once for proposals under the said specifications, as provided for the previous letting, (Page 1367 of the Proceedings.)

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report and enclosures adopted, ordered printed, and with profile and tracings, placed on file, and the Clerk authorized and directed to advertise at once for proposals under the said specifications, as provided for the previous letting, (Page 1367 of the Proceedings.)

The following is

THE REPORT, WITH ACCOMPANYING SPECIFICATIONS, ETC.:

"CHICAGO, Sept 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith submit specifi-

cations for the construction of the main channel between the east line of Range No. 12 and Corwith, together with map of the line marked No. 1, profile or longitudinal section showing test pits marked No. 2, and cross-section marked No. 3.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer"

(Accompanied by advertisement, specification, bond proposal, one (1) profile and two (2) tracings).

The following is the form of

ADVERTISEMENT:

"THE SANITARY DISTRICT OF CHICAGO.

To Contractors:

Sealed proposals addressed to the Board of Trustees of the Sanitary District of Chicago, and indorsed:

"Proposal for excavating a portion of the main drainage channel" will be received by the Clerk of the said Sanitary District at Room H, Rialto Building, Chicago, Ill., until 12 M. (standard time) of Wednesday, the 29th day of November, 1893, and will be publicly opened by the said Board of Trustees at the regular meeting held that day, or at a special meeting called for that purpose.

The work for which the said tenders are invited is the excavation of that portion of the main drainage channel for the said Sanitary District between the east line of Range No. 12, East of the Third Principal Meridian and Corwith Ill., know as contract Sections G, H, I, K, L and M, and consists in all of about 6,534 000 cubic yards of earth.

Each of said sections will be treated as a separate contract in canvassing the proposals and making awards. As all awards will be made by individual sections, each bidder must make prices for each section separate and distinct from every other.

Each proposal must be accompanied by a certified check or cash to an amount equal to $5,000 multiplied by the number of sections bid upon.

All certified checks must be drawn on some responsible bank doing business in the City of Chicago and be made payable to the order of the Clerk of the Sanitary District of Chicago. Said amount of $5,000 for each section will be held by the Sanitary District until all of said proposals have been canvassed and contracts awarded and signed, the return of said check or cash being conditioned upon any bidder, to whom an award of any portion of said work may be made, appearing within ten days after notice of such award being given, with bondsmen, and executing a contract with the Sanitary District for the section or sections of said work so awarded, and giving a bond satisfactory to the said Board of Trustees for the fulfillment of the same in the amount of $75,000 for each section of work awarded him.

All proposals must be made upon blank forms furnished by the Sanitary District and must give the price for each separate item of work.

The bids will be compared on the basis of the Engineer's approximate estimate of quantities, which will be furnished with copies of the specifications.

No proposal will be considered unless the party making it shall furnish evidence satisfactory to the Board of Trustees of his ability to do the work, and that he has the necessary pecuniary resources to fulfill the conditions of the contract, provided such contract shall be awarded him.

Bidders are required to state in their proposals their individual names and places of residence in full.

Specifications and plans may be seen at the office of the Chief Engineer, Rialto Building, Chicago, Ill.

The said Board of Trustees reserves the right to reject any and all bids.

THE SANITARY DISTRICT OF CHICAGO,
By FRANK WENTER,
President of its Board of Trustees.

Attest:

THOS. F. JUDGE,
Clerk.

CHICAGO, ILL., September 27, 1893."

The following are

THE SPECIFICATIONS:

"THE SANITARY DISTRICT OF CHICAGO.

Contract and specifications for Sections G, H, I, K, L and M, of the Main Drain-

age Channel, between the east line of Range No. 12, East of 3d P. M. and Corwith, Illinois.

This Agreement, Made and entered into this ..... day of ..... A. D. 189 , by and between the Sanitary District of Chicago, of the first part, and .....
.....
.....
of .....
in .....
of the second part.

A—

WITNESSETH: That the said party of the second part has covenanted, contracted and agreed, and by these presents does covenant, contract and agree with said party of the first part, for the consideration of the payments to be made as provided for herein to the said party of the second part by the said party of the first part, and under a penalty expressed in a bond bearing even date herewith, at his own proper cost and expense, to do all the work and to furnish all material, tools, explosives, labor and all appliances and appurtenances called for by this agreement, in the manner and under the conditions hereinafter stipulated, that are necessary to the complete excavation and entire removal of earth, rock, glacial drift and other material, from that portion of the said main drainage channel, known and distinguished by the specifications herein contained, and the plans accompanying them, as Section .....
.....
together with the building of all collateral works, which by the terms of this contract are included in the same. Said Section to be entirely completed and prepared ready for inspection as provided for in Section 27 of an Act of the Legislature of the State of Illinois, entitled "An Act to create Sanitary Districts and to remove obstructions in the Desplaines and Illinois Rivers," approved May 29, 1889, in force July 1, 1889.

B—

It is further covenanted, contracted and agreed that the work shall be executed under the direction and supervision of the Chief Engineer of the Sanitary District of Chicago, and such assistants, superintendents and inspectors as the Chief Engineer may appoint, by whose measurements and calculations the quantities and amounts of the several kinds of work performed under this contract shall be determined, and on whose inspection all work shall be accepted or condemned. The said Chief Engineer and his assistants and inspectors shall have full power to reject or condemn all materials furnished or work performed under this contract which do not fully conform to its spirit, and to the terms and conditions herein expressed; and the Chief Engineer shall decide every question which may arise between the parties hereto relative to the execution thereof, and his decision shall be final and binding upon both parties.

C—

Whenever the words "Sanitary District" are used in this contract they shall be understood to mean the Sanitary District of Chicago as represented by the Board of Trustees or their duly authorized and accredited agents.

Whenever the word "Engineer" is used herein it shall be understood to mean the Chief Engineer of the Sanitary District of Chicago or his properly authorized agents, limited by the particular duties entrusted to them.

Whenever the word "Contractor" is used herein it shall be understood to mean the person or persons, or copartnership, or corporation entering into the contract as party of the second part.

The maps, plans and profiles hereto attached are made part of this contract, but are subject to such modifications as are herein provided for.

SPECIFICATIONS.

D—

1. *Location*—The work covered by and included in these specifications is the excavation of that part of the Main Drainage Channel and the building of certain collateral works for the Sanitary District of Chicago, lying between the east line of Section 12, Township 38 North, Range 12 East of the Third Principal Meridian and the north and south center line of Section 35, Township 39 North, Range 13 East of the Third Principal Meridian, in Cook County, Illinois. Beginning near the east line of said Section 12, the said part of the said Main Drainage Channel is located approximately 663 feet northwesterly of and parallel to the north reserve line of the Illinois & Michigan Canal, as shown on the accom-

panying plans marked "1," and as it shall be located by the Engineer. The total approximate length of the excavation is 25,780 feet, or about five miles.

2. *Sections*—For the purpose of conveniently designating different sections of the work, and of dividing it into contracts, the said part of the Main Drainage Channel shall be divided into sections, as follows:

Section G. Extending from the station designated 412+33 to the south line of the right of way of the Chicago, Santa Fe and California Railway at the station designated 357+53.

Section H. Extending from the station designated 357+53 to a line 33 feet west of and parallel to the west line of the East half of the Southeast quarter of Section 5, Township 38 North, Range 13 East, at the station designated 312+04.

Section I. Extending from the station designated 312+04 to the north and south center line of Section 4, Township 38 North, Range 13 East, at the station designated 268+60.

Section K. Extending from the station designated 268+60 to the east line of the right of way of the Chicago & Western Indiana Belt Railroad, at the station designated 225+05.

Section L. Extending from the station designated 225+07 to a line 33 feet west of and parallel to the east line of Section 34, Township 39 North, Range 13 East, at the station designated 183+04.

Section M. Extending from the station designated 183+04 to the west line of the right of way of the Atchison, Topeka & Santa Fe Railroad Company in Chicago, at the station designated 154+51.

3. *Grade*—The grade line of the bottom of said main channel at the station designated 412+33 shall be at an elevation of 25 331 feet below the datum established by the Illinois and Michigan Canal Trustees in 1847, and shall slope thence uniformly at the rate of 0.025 of a foot vertical to 1,000 feet horizontal to the end of the excavation at station 154+51, where it shall have an elevation of 24.736 feet below datum.

The Sanitary District reserves the right to change said grade by raising or lowering it, or by increasing or decreasing the slope, thereby increasing or decreasing the amount of excavation, provided, that said change shall in nowise affect the terms of this contract as to price, or entitle the said contractor to any compensation additional to the rate fixed by this contract, or render the Sanitary District liable for any damages whatsoever, direct or indirect. Provided, further, that the said change shall in no place affect the grade by an amount exceeding four feet; and that the Sanitary District shall notify the said contractor of any such change before any portion of said channel shall have been finished in conformity to the grade as hereinbefore specified.

4. *Dimensions of Cross-section*—The width of the channel at bottom shall be one hundred and ten (110) feet, and the sides shall rise at the rate of one (1) foot vertical to two (2) horizontal, as shown on Plan 3.

5. *Clearing and Grubbing*—The contractor will be required to remove all trees, stumps, buildings, fences or other incumbrances within 200 feet of the center line of the channel, or that may be in the way of any collateral or subsidiary work herein specified. All such material of value, except such as the Sanitary District may elect to retain, shall be the property of the contractor, and all worthless material shall be disposed of as directed by the Chief Engineer. The cost of this work shall be included in the prices for excavation as hereinafter stated.

6. *Levee*—The said contractor shall build at his own cost and expense all or any levees which may be necessary to protect the work provided for in this contract during the progress of the same, and said levees shall be built and maintained so as to exclude water from the main channel until such time as said work shall be accepted by the District. Should the character of any levee be insufficient, in the judgment of the Chief Engineer, the same shall be made adequate as the Chief Engineer may direct, but any damage that may occur from flooding either before or after the building of any levee, shall be borne by the said contractor. The levees shown on Plan 1 are to be undertaken immediately and completed as soon as practicable. The main levee is to be continuous throughout Sections G to M inclusive, and is to be

located in the main parallel to the main channel and along or near the northerly boundary of the right of way as shown on plan and as same shall be located by the Engineer. Said levee is to have a height of 20 feet above datum at the west end of Section G and shall descend uniformly to a level of 16 feet above datum at the east end of Section M, and it shall have a width of 15 feet at top and side slopes of two to one, and be water-tight and in every respect so constructed as to make a substantial and durable levee.

7. *Disposition of Material*—The contractor, except as hereinbefore specified, is to dispose of all material to be excavated under the terms of this contract at his own expense and in the most convenient manner, in waste banks on the right of way; provided, that the foot of the inner slope of said banks shall not be nearer to the edge of the main channel than 80 feet, measured at an elevation of 10 feet above datum, and that the slope of the waste banks toward the channel shall not at any time during or after excavation work have an incline steeper than two (2) horizontal to one (1) vertical, and that the slope of the sides away from the channel, or toward any roadway, or in any other direction, shall not at any time have a slope steeper than one and one-half (1½) horizonal to one (1) vertical Provided, that if it should prove at any time after the work has commenced that the sub-stratum or soil on which waste banks are to be placed should not be in a physical condition to sustain the weight of the superincumbent waste banks without being displaced, then the material excavated shall, at the option of the Sanitary District, be deposited at other places, to be determined by the Sanitary District, and the extra cost, if any, of such disposition, to be determined as provided under the head of *extra work*. Provided, however, that if additional right of way be furnished adjacent to the area which shall have proved unable to sustain waste banks without being displaced, then the contractors shall, without additional expense to the Sanitary District, cease disposing material on said waste bank area and dispose it on the additional right of way provided, as directed by the Chief Engineer. The material excavated is to be spoiled in the area for waste banks shown on plan "1" the material first excavated being placed most remotely from the channel and the waste bank to be so constructed that its highest point when completed shall not be nearer to the center line of the channel than 300 feet; *provided*, that this shall not be construed to prevent other disposition of the material with the consent of the Chief Engineer.

8. *Drainage*—The contractor is to provide all pumping machinery and operate the same at his own cost and expense during the time of excavation, and until the whole work is fully completed and inspected, as provided for in other sections of this contract. The contractor shall dispose of any water pumped, in such manner as not to interfere with the operations of other contractors for the Sanitary District.

9. *Classification of Material*—All material excavated under the provisions of this contract is to be classified as "Excavation."

10. *Quantity and Quality of Material*—A longitudinal section of the ground, made approximately on the center line of the main channel is shown on plan "2." This section, though believed to be reasonably correct, does not purport to be absolutely so, and is only presented as an approximation, as is also the schedule of quantities attached as an appendix hereto. The contractor is to take all risk as to the variation of the total quantity of material excavated. Plan 2 shows approximately the position of test pits made by the Sanitary District, together with an abstract of the notes of the inspector of the pits. The full notes of the inspector are on file at the offices of the Sanitary District, and may be examined by bidders, under the supervision of the Chief Engineer. Beyond these exhibits, the Sanitary District has no knowledge of the character of the material to be encountered, and bidders must satisfy themselves by investigations made on their own account. Wherever the standard cross-section shown on plan 3 is enlarged through the displacement of the material of the sides thereof, the same shall be paid for at the prices named herein and to the extent that the finished cross section is actually and necessarily enlarged; *provided*, that said displacement is unavoidable and is such as is due to the nature of the material, and occurred through no fault or dereliction of the contractor.

11. *Highways*—All public roads or streets, now open and in actual use by the public, crossing or lying adjacent to the main channel, shall be kept open and unobstructed during the progress of the work. No interference with any such public road or street will be allowed until a temporary or permanent road or street has been provided, under the direction of the Chief Engineer, which will permit safe and free travel. No interference will be allowed with any railway until such time as other and proper provision for the operation of such railway has been made under the direction of the Chief Engineer.

The Chief Engineer may require the contractor to grade a roadbed at or near the site of any existing roadway, street or railway that crosses the line of the main channel, with material from the main channel, provided, the width shall not exceed 80 feet, and the height 28 feet above datum, and that said grading shall not extend over 500 feet from the center line of the main channel measured along said roadbed. If the Chief Engineer shall require the contractor to grade any additional roadbed for any purpose, it shall be paid for as provided under the head of extra work.

12. *Bridges and Structures*—The Sanitary District reserves the right through its agents or contractors to enter upon the said main channel and right of way at any time and place, after or before the excavation has been completed, for the purpose of erecting or preparing for the erection of any bridge or bridges, or the building of any road, railway, or other structure; provided, that such work of erection or preparation therefor shall not unreasonably or unnecessarily interfere with the contractor in carrying out the provisions of this contract.

To this end the contractor shall make or permit to be made at the expense of the Sanitary District such changes in his plant as, in the opinion of the Chief Engineer, may be necessary. Said contractor shall also, at the option of the District, and under the direction of the Chief Engineer, make any necessary excavation in or adjacent to the main channel, and do any necessary grading that may be required for the building of any structure, the same to be paid for as provided under the head of *extra work*.

13. *Explosives*—The contractor is to furnish all explosive compounds for blasting the material provided to be excavated under this contract; and, whereas, the storing, handling and use of explosive material requires the utmost care and discrimination, it is therefore understood and agreed that the said contractor shall arrange for the storage of all explosive materials at a distance not less than 600 feet from the work, or from any other magazine, or from any dwelling occupied for a habitation, and that not more than 5,000 pounds shall be kept in one place. It is further understood and agreed that said explosive material shall in no case be brought onto the work except when needed for the purpose of charging the blast holes, and then only in such quantity as is needed for the particular work in hand, and that none but skilled and careful men shall be employed in the handling or use of said explosives, and that no liquid explosive shall be used.

It is further understood and agreed that the ground surrounding all magazines shall be kept free of vegetable or combustible material for a radius of one hundred feet, and that their walls shall be made bullet proof, to a height of one foot above the contained explosives, and that in no case shall they be made of brick or stone. It is also understood and agreed that such signals of danger, as may be directed by the engineer shall be given or displayed before the firing of any blast, and that the said contractor shall conform his acts to and obey all rules and regulations relative to the handling of explosives and the firing of blasts, for the protection of life or property, which may be made by the Chief Engineer from time to time.

14. *Measurement*—Measurement for all excavated material will be made in excavation by the cubic yard of twenty-seven cubic feet, based upon the survey and cross-section notes of the engineer.

The prices given herewith are to include all work herein specified, as clearing and grubbing, levees for protection, pumping, roadways for working, and generally all work and material found necessary in prosecuting this contract.

15. *Extra Work*—All claims for extra labor, or material furnished by the contractor, or for damages from any cause whatever, must be reported to the Chief

Engineer at the time such labor or material are furnished or such damages occur, and they must also be presented to him in writing at the end of the month; provided that nothing shall be paid for as extra work that can be classified under any of the heads upon which price is fixed by this contract.

Whenever work is required to be done which is not now contemplated or covered by the price hereinafter given, the Chief Engineer shall fix such prices for the work as he shall consider just and equitable, and the contractor shall abide by such prices; provided he enters upon such work with full knowledge of the prices so fixed by the Chief Engineer, but if the contractor declines executing said work at the prices fixed by the Chief Engineer, then the Sanitary District may enter into contract with any person or persons for its execution, the same as if this contract had never existed; and if extra work, or work not provided for in this contract is performed by the contractor before prices have been fixed for such work, then the Chief Engineer shall estimate the same at such prices as he shall deem just and reasonable, and his decision shall be final, and the said contractor shall accept of said prices in full satisfaction of all demands against the Sanitary District for said extra work; provided, that if the extra work done under this contract is of such a nature, being distinct from other work being done by said contractor, that the actual cost of the same can be determined, then the said contractor shall receive, and the Sanitary District shall pay, in full satisfaction for the same, the actual cost of the work with 10 per cent. added. Provided further, that nothing shall be deemed extra work which can be measured or estimated under the provisions of this contract.

16. *Responsibility of Contractor*—All the work provided for in this contract is to be done under the direction and supervision of the Chief Engineer and his properly authorized agents. He is to be guided by the lines, stakes, marks and grades given by them, and is to carefully preserve the same as far as possible during the progress of the work, and is to furnish all needed facilities, without charge therefor, to enable the Chief Engineer to properly give lines and grades and to measure the work from time to time.

All work will be subject to inspection by the said Chief Engineer and his said agents, and if not in accordance with the requirements of this contract, it is to be made good by the contractor.

The contractor will be responsible for the entire work until completed and accepted by the Sanitary District. The contractor will be required to give his personal attention to the fulfillment of this contract and to the execution of the work. He is to keep the same under his control, and will not be allowed to sub-let all or any part of it, it being distinctly understood and agreed that the sub-letting of the work covered by this contract, or any part thereof, shall work a forfeiture of the contract at the option of the Sanitary District.

The contractor will not be allowed to assign, by power of attorney or otherwise, any portion of the moneys that may become due through the workings of this contract. In case there is a substantial failure on the part of the contractor to comply with the provisions of this contract as to progress and character of the work, the party of the first part may declare this contract forfeited, and in such case the reserve of 12½ per cent. hereinafter provided for shall be forever retained by the said party of the first part as liquidated damages for such failure of second party to so prosecute or complete said work.

17. *Changes in Plan*—In addition to the reservations hereinbefore made, the Sanitary District reserves the right to make alterations in the line, grade, plan, form, dimensions, or material of the work herein provided for, either before or after the beginning of the construction; provided that if alterations are made the general character of the work as a whole is not thereby changed. If such alterations diminish the quantity of work to be done they shall not constitute a claim for damages, or for anticipated profits on the work that may be dispensed with; if they increase the amount of work, such increase shall be paid for according to the quantity of work actually done, and at prices and rates established for such work under this contract. Notice of any change of plan must be given the contractor in writing. And it is expressly agreed that no alterations, or additions, or extra work are to be paid for unless directed in writing.

18. *Tools*—The contractor is to furnish

all the tools of every kind and description, including pumps, cars and track, necessary to the full and complete carrying out of this contract, and on completion of the work is to remove all tools, buildings and material of all kinds from the right of way of the main drainage channel.

19. *Precautions*—Whatever precautions may be necessary to render any portion of the work more secure in any respect, or to decrease the liability of accident from any cause, or to avoid contingencies which are liable to delay the completion of the work, shall be taken by the contractor.

20. *Workmen*—The contractor shall employ competent foremen and laborers, and shall discharge, at the request of the Chief Engineer, any incompetent or unfaithful men in his employ. None but men expert in their respective branches of work shall be employed where special skill is required.

And further, the contractor shall provide and employ, upon the order of the Chief Engineer, men, teams, tools and machinery suited to the work in such number and quantity as may, in the judgment of the said Chief Engineer, be necessary for carrying on and completing the works in conformity with the time limit stated by this contract. And further, it is understood and agreed that the Chief Engineer may order the prosecution of any particular portion of this work which in his judgment needs special expedition, and it shall be so done as directed by him.

E—

Damages—If any damages shall be done by the contractor, or by any person or persons in his employ, to the owner or occupants of lands, or to any property adjoining, or in the vicinity of the work herein contracted to be done, or to a neighboring contractor, for which the contractor herein is legally liable, the engineer shall have the right to estimate the amount of said damage and to cause the Sanitary District to pay the same to the said owner or occupant, and the amount so paid for such damage shall be deducted from the money due said contractor under this contract.

Said contractor covenants and agrees to pay all damages for any personal injury sustained by any person, growing out of any act or doing of himself or his employes, that is in the nature of a legal liability, and he hereby agrees to indemnify and to save the Sanitary District harmless against all suits or actions of every name and description brought against the said Sanitary District for or on account of any injuries or damages received or sustained by any person or persons by or from said contractor, his servants, agents or employes, in the execution of said work; or by or in consequence of any failure or negligence in guarding or protecting the same; or by or on account of any act or omission of said contractor, his agents or employes; and the said contractor further agrees that so much of the money due to him, under and by virtue of this contract, as shall be considered necessary by the Board of Trustees of the Sanitary District, may be retained by the said Sanitary District until such suits or claims for damages, as aforesaid, shall have been settled, and evidence to that effect furnished to the satisfaction of the said Board of Trustees.

F—

Sanitary District Law—The said contractor hereby agrees to carry on all the work provided for in this contract, in strict conformity to the requirements of the law under which the Sanitary District of Chicago is organized, entitled "An act to create Sanitary Districts and to remove obstructions from the Desplaines and Illinois Rivers." Approved May 29, 1889, in force July 1, 1889, which provides in Section 11, among other things, that "No person shall be employed on said work unless he be a citizen of the United States or has in good faith declared his intentions to become such citizen. In all cases where an alien after making his declaration of intention to become a citizen of the United States shall, for the space of three months after he could lawfully do so, fail to take out his final papers and complete his citizenship, such failure shall be *prima facie* evidence that his declaration of intentions was not made in good faith; and that eight hours shall constitute a day's work."

G—

Time—The contractor agrees to begin work within 15 days after notice from the Chief Engineer to so begin. He agrees to carry it on at such points, and in such order of procedure as the Chief Engineer may direct.

All the work provided to be done under this contract shall be completed and ready

for inspection on or before the 31st day of May, of the year 1896.

The work done each month shall not be less than such proportion of the whole work as one month bears to the total number of months agreed upon for the completion of said work, provided that the first four (4) months after notice to begin shall be considered as one month, and the last two months before date of completion, as one month, and, provided further, that this rate shall not be required if at any time the aggregate work done exceeds the total proportion due to the time that has passed since notice to begin work; and always provided that the Sanitary District shall not be obligated to make payment in excess of the above monthly proportion.

H—

Price.—In consideration of the said work being carried on and completed in time and manner as hereinbefore specified the said party of the first part agrees to pay to the said party of the second part, and the said party of the second part agrees to receive and accept as full compensation therefor, including the furnishing by him of all necessary material, tools, labor, machinery and appliances.

For each cubic yard of "Excavation" the sum of.....dollars ($.....).

I—

Time and Manner of Payment.—It is agreed by the party of the first part, that on or before the 10th and 25th days of each month, during the progress of the work, and subject to the provisions hereinbefore specified under the head of "Time," payment will be made to the said party of the second part to the amount of 87½ per cent. of the contract price, of the approximate amount of work done during the previous half month, upon written certificates from the engineer that such approximate amount of work has been done during that period, 12½ per cent being reserved until the completion and acceptance of the whole work.

J—

Grading of Prices.—Since the nature of the material to be excavated under the provisions of this contract is such that the portion lying nearest the surface can be more cheaply excavated than that lying near the bottom, it is hereby agreed by the said party of the second part that if his manner of conducting the work is such that at the time of making any progress estimate a markedly greater proportion of the top material has been excavated than of the bottom material, then the Chief Engineer shall, in making such estimate, ascertain what amount that has been excavated up to that time of any particular class of material lies above, and what below, a horizontal plane dividing the mass of said class of material into equal parts; and if the upper portion exceeds the lower, then the total amount of material found to have been excavated previous to the time of making the estimate shall be reduced by 10 per cent. of said excess, and estimates or certificates issued on the remainder, with the percentage deductions provided for in the preceding Section I.

K—

Certificate—On all work provided for in this contract being completed in accordance with the contract and to the full satisfaction of the Chief Engineer, and on its being inspected by him and a certificate made by him setting forth the amount of said work, and that the said work has been completed, the said party of the first part agrees to pay to the said party of the second part the amount shown to be due to said second party by the said certificate of the said Chief Engineer, including the 12½ per cent. reserve.

L

Failure to Complete—It is further agreed by the said party of the second part that if the work to be done under this contract shall be abandoned, or if it shall be assigned by him, or if he loses control of the work from any cause, excepting acts of God and the public enemy, or if the rate of progress is not such as to insure its completion within the time specified, or, if at any time the Chief Engineer shall be of the opinion, and shall so certify in writing to the said party of the first part, that said work, or any part thereof, is unnecessarily and unreasonably delayed, or that the contractor is willfully and persistently violating any of the conditions or covenants of this contract, or is not executing said contract in good faith, the said party of the first part shall have the power to notify said contractor to discontinue all work, or any part thereof, as

may be designated by said party of the first part, and the said party of the first part shall thereupon have the power either to complete said work by contract or to employ such men and teams, and to obtain such machinery, implements and tools, and to purchase such material as the said Chief Engineer may deem necessary to complete the work herein described, or any part thereof; and in so doing said Chief Engineer may use such tools, implements and materials as may be found upon the line of said work. The cost of doing such work shall be charged to the said contractor, and any moneys that may then be due or may at any time thereafter become due to said contractor under and by virtue of this contract, shall be applied by first party to the payment of such cost so far as same shall suffice therefor, and the remainder of the cost of so completing said work, if any, shall be paid by said contractor to first party, on demand.

M—

Payment of Laborers—Said contractor shall pay the laborers employed by him promptly at regular intervals, and at least twice each month, and shall not pay said laborers in scrip, checks or other evidences of indebtedness, nor in any manner other than with lawful currency of the United States.

And if at any time during the progress of said work the said contractor shall fail or neglect to pay for labor performed, and in manner aforesaid, or for material furnished upon said work, then the party of the first part shall have power to pay for such labor or such material out of any money or moneys that may be due to said contractor, and said amount so paid shall be retained out of any money due or to become due to said contractor.

In any such case the party of the first part is hereby authorized and empowered by the said party of the second part to ascertain the amount or amounts due or owing from said contractor to any laborer or laborers or to any person for material furnished, in such manner and upon such proof as it may deem sufficient, and without giving any notice of such proceedings to said contractor, and the amount or amounts so found by the said party of the first part to be due and owing to said laborer, or laborers, or to said material men shall be final and conclusive as against said contractor, and may thereafter be paid over by the said first party to such laborer, laborers or material men.

N—

Final Payment—The said party of the second part further agrees that he shall not be entitled to demand or receive final payment for any portion of the aforesaid work or materials except in the manner set forth in this agreement, nor until each and all of the stipulations hereinbefore mentioned are complied with, and the said Chief Engineer shall have given his certificate to that effect; whereupon the said party of the first part will, at the expiration of thirty (30) days after such completion and delivery of such certificate, pay, and it hereby binds itself to pay the said party of the second part, in cash, the whole amount of money accruing to said second party under this contract, excepting such sum or sums of money as may be lawfully retained under any of the provisions of this contract hereinbefore set forth. Provided, that nothing herein contained shall be construed to affect the right hereby reserved of the said party of the first part to reject the whole or any portion of the aforesaid work should the said certificate be found to be inconsistent with the terms of this agreement or otherwise improperly given.

O—

Health Regulations—Said party of the second part agrees to introduce and enforce among ..... employes, such regulations in regard to cleanliness, the care of dwellings and premises and the disposition of garbage and offal, as shall conduce to their health and tend to prevent the inception and spread of contagious and infectious diseases among them, to make provision for an ample supply of suitable drinking water, and to take such means as shall effectually prevent the creation of a nuisance on any part of the right of way of said Sanitary District, or adjacent thereto.

IN WITNESS WHEREOF, on the day and year first above written, the said Sanitary District of Chicago has caused this agreement to be signed by its President and attested by its Clerk, and its corporate seal to be hereto affixed, and the said party of

the second part has hereunto set..... hand... and seal...

THE SANITARY DISTRICT OF CHICAGO,

[SEAL.]

By .....,

President.

Attest: .....,

Clerk.

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]"

The following is the form of

"CONTRACTOR'S BOND.

Know all men by these presents, That we,.....

.....

.....

.....

of.....

are held and firmly bound unto the Sanitary District of Chicago, in the penal sum of.....

.....

dollars, lawful money of the United States, for the payment of which sum of money well and truly to be made, we bind ourselves, our heirs, executors and administrators, jointly and severally, firmly by these presents.

Sealed with our seals and dated this.....

.....day of

.....A. D. 189..,

The condition of the above obligation is such, that whereas, the above bounden.....

.....

.....

ha.... entered into a certain contract with the Sanitary District of Chicago, bearing date the.....day of

.....A. D. 189.., for excavating Section.....of the Main Drainage Channel of the Sanitary District of Chicago, and building certain collateral works in connection therewith between the east line of Range No. 12, east of the Third Principal Meridian and Corwith, Illinois, as set forth in said contract.....

.....

.....

.....

Now, if the said.....

.....

shall in all respects, well and truly keep and perform the said contract, on..... part, in accordance with the terms thereof, and the plans and specifications therein contained and referred to, and in the time and manner therein prescribed, and further shall indemnify, keep and save harmless the Sanitary District of Chicago against all liabilities, judgments, costs, damages and expenses, which may in anywise come against said Sanitary District, in consequence of the granting of such contract, or which may in anywise result from the carelessness or neglect of said.....

.....

agents, employes or workmen in any respect whatever, or which may result on account of any infringement of any patent by reason of the materials, machinery, device or apparatus used in the performance of said contract, and moreover, shall pay to said Sanitary District any sum or sums of money determined by the Chief Engineer to be due said Sanitary District, by reason of any failure or neglect in the performance of the requirements of said contract, and shall pay all claims and demands whatsoever, which may accrue to each and every person, who shall be employed by.....

.....

in or about the peformance of said contract then this obligation to be null and void, otherwise to remain in full force and effect.

And it is hereby expressly understood and agreed, and made a condition hereof, that any judgment rendered against said Sanitary District of Chicago, as aforesaid, in any suit for damages occasioned by the carelessness or neglect of said.....

.....

or.....agents, employes or workmen, in the premises, when notice of the pendency of such suit shall have been given said.....

.....

shall be conclusive against each and all parties to this obligation, as to amount, liability, and all other things pertaining thereto.

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]

.....[SEAL.]

Approved..... .....189..

.....

Clerk."

The following is the form of

PROPOSAL:

"*To the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—The undersigned hereby certify that.....have examined the plans on file in the office of the Chief Engineer of the Sanitary District of Chicago, the annexed specifications and forms of contract for the excavation of Sections G, H, I, K, L and M, a portion of the main drainage channel of said Sanitary District as therein described, and propose to do all the work and to furnish all material, tools, explosives, labor and all appliances and appurtenances necessary to the full completion of the same, at the rates and prices for the several sections of said work, as follows, to-wit:

Contractor is to furnish and operate pumping plant and to provide all other appliances for doing the work, and to dispose of all material in spoil banks as shown on the plans and as provided in the specifications.

NUMBER OF SECTION.	EXCAVATION. Price per cubic yard. CENTS.
G.....	.....
H.....	.....
I.....	.....
K.....	.....
L.....	.....
M.....	.....

The above proposals are based upon the conditions and stipulations made in the advertisements inviting proposals for said work, and in accordance with the contract, specifications and plans for the same on file in the office of the Chief Engineer of the said Sanitary District, and should the said Board of Trustees award any of said sections of said work to the undersigned, then we agree to enter into contract for the same and to do the work as specified.

In accordance with the requirements of said advertisement there is deposited herewith the sum of.....dollars, which, under the terms of the advertisement, entitle us to bid on.....sections of said work, the same to be refunded to us upon the faithful performance of all the conditions stipulated in the said advertisement for proposals.

It is further agreed that should the within proposal for excavating certain sections of said main drainage channel be awarded to us, and we should fail or neglect to enter into contract with the said Sanitary District in the time and in the manner required by the said advertisement for proposals, and to furnish bonds as therein required to the satisfaction of the said Board of Trustees, then the said sum of.....dollars, deposited herewith, shall become forfeited to the Sanitary District as liquidated damages.

Name.....
Address.....
Name.....
Address.....
Name.....
Address.....
Name.....
Address.....

NOTE—Companies or firms bidding must give the individual names and addresses of the persons comprising such firms.

Received from the Sanitary District of Chicago the sum deposited with the above proposal, the same being.....dollars

.....

.....

CHICAGO,.....189.."

APPROXIMATE QUANTITIES OF WORK.

Sections.	Excavation Cu. Yds.
G.....	1,330,000
H.....	1,100,000
I.....	1,136,000
K.....	1,157,000
L.....	1,092,000
M.....	719,000
Totals.....	6,534,000

CANCELLATION OF SUPPLEMENTAL BOND OF TREASURER.

The Clerk presented a report from the Treasurer, requesting the cancellation of

his last supplemental bond, in view of the fact that the District funds were at present reduced to below $2,000,000; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and referred to the Committee on Finance, with directions to report back at the next meeting.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Sept. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since the funds of the District have now been depleted to less than two millions of dollars, may I ask that you will cancel and return to me the last supplemental bond for one million dollars which I gave you, and oblige,

Yours truly,

(Signed) MELVILLE E. STONE,

Treasurer, Sanitary District of Chicago."

INSURANCE OF DISTRICT EMPLOYES AGAINST PERSONAL INJURY.

Mr. Eckhart, Chairman, presented a joint report from the Committee on Finance, the Clerk and Attorney, with reference to the matter of securing the District against claims for personal injury of employes on the river diversion work now under special contract, and recommending that the Clerk be authorized and directed to pay for said insurance, as provided in the report; (said report being made in response to an order passed at the meeting held September 13, 1893, (page 1456 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay for said insurance as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay for said insurance, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Committee on Finance to whom, together with the Clerk and Attorney, your Honorable Body, at its meeting of September 13, 1893, referred with power to act, the matter of securing insurance for this District against claims for personal injuries which might be made by employes engaged upon the excavation of the river diversion under recent contracts, after considering the propositions of various insurance companies, finally took out a policy in the American Casualty Insurance and Security Company of Baltimore City, insuring the Sanitary District of Chicago to the amount of $125,000 against all liability for damages on account of the personal injury or death of its employes, resulting from any and every accident happening to them while in its service. The term "employes" is limited to the help or men employed by the District on the actual construction work of its main drainage channel and the necessary adjuncts thereto, including work on river diversions, levees, roads, bridges, etc. The term of the policy is from September 20 to December 20, 1893. The premium paid was $750, with the provision that should the pay roll for the three months exceed $125,000, the amount of premium shall be increased pro rata, but should it fall below $125,000, then a proportionate rebate will be allowed the District.

We recommend that the Clerk be authorized and directed to pay, on his own voucher, said premium of $750, and charge same to general account as paid on premium for insurance against claims by employes for personal injuries.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
THOMAS KELLY,
Committee on Finance.
ORRIN N. CARTER,
Attorney.
THOS. F. JUDGE,
Clerk."

RE-CONSTRUCTION OF DESPLAINES RIVER BRIDGE AT WILLOW SPRINGS.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by the order, with specifications and tracing, authorizing and instructing the Chief Engineer to reconstruct the bridge over the Desplaines River at Willow Springs, presented and referred to that Committee at the meeting held September 20, 1893, (page 1463 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with enclosures placed on file, the recommendations made therein concurred in, and the order passed.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and with enclosures placed on file, the recommendations made therein concurred in, the order passed, and the Chief Engineer authorized and instructed in accordance with the same.

The following is

THE REPORT:

"CHICAGO, Sept. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the order, with specifications and plan for certain changes in the bridge at Willow Springs, and the construction of an additional span, referred to the Joint Committee on Engineering and Finance at the meeting held September 20, 1893, (page 1463 of the proceedings), the Committee reports back as follows:

The subject matter has been considered, and the Committee recommends that the order be passed.

The order, with accompanying specification and plan, are herewith returned.

Very respectfully submitted,

(Signed) L. E. COOLEY, *Chairman.*
B. A. ECKHART,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

CONDITION OF WORK ON DELINQUENT SECTIONS.

Mr. Cooley, Chairman, presented a progress report from the Joint Committee on Engineering and Finance, on the reports and communications referred to that Committee at various times, with reference to the delinquent sections on the main channel and river diversion; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted; ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE REPORT:

"CHICAGO, September 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to several reports and communications referred to the Joint Committee on Engineering and Finance, the committee reports progress as follows:

All the delinquences and delays, both on the main channel and river diversion, have been under advisement from week to week, and the committee has had repeated interviews with the contractors on backward work. Particular attention has been given the river diversion, on account of the very great importance of completing the same this season. This work is now being so expedited as to make its completion all but certain. To this end all remaining details and collateral work are being matured by the Engineering Department, and the work is being energetically pushed by the contractors, through direct employment of labor and by agents.

The committee has from time to time taken all necessary steps to push the work on the main channel where the same is unnecessarily and unreasonably delayed. No agreement has yet been made as to the final action that should be taken, as it has been felt that every recourse should be exhausted before entering upon an arbitrary course. At a later date the committee will be prepared to

recommend a final disposition of all contracts about which there may be any question of progress or completion of work on time.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

EMPLOYMENT OF MEN ON SPECIAL RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committe on Labor, stating that a report from the Chief Engineer showed that about 2,100 men were now employed each day on the river diversion work.

EMERGENCY FUND FOR MEN LEAVING THE RIVER DIVERSION WORK.

Mr. Kelly presented an order, authorizing and directing the Clerk to draw a warrant, as emergency fund, in the sum of one thousand ($1,000) dollars, in favor of the Clerk for the payment of employes and laborers on the river diversion and levees on Sections 1, 2, 3 and 4 of the main channel, who are compelled to leave the work; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, The employment of men by the District on the river diversion and levees on contract Sections one (1), two (2), three (3) and four (4), near Willow Springs, has given rise to some difficulty in paying certain of these men who have been compelled to quit work on account of sickness or other causes and who could not be present on the work on regular pay-day; therefore, be it

Ordered, That the Clerk be instructed to draw a warrant in favor of himself for the sum of one thousand dollars ($1,000), which sum shall be used by him to pay such men as in the judgment of said Clerk ought to be paid without requiring such men to be present and receive their money on regular pay-day on the work."

PHOTOGRAPHS OF WORK ON MAIN CHANNEL.

Mr. Kelly presented an order authorizing and directing the Chief Engineer to have photographs taken of the various Sections of the Main Channel, as provided in the order, and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer authorized and directed in accordance with the same.

The following is

THE ORDER:

"*Ordered,* That the Chief Engineer be and he is hereby authorized and instructed to have photographs taken of the various sections of the main channel and river diversion of this District, now under construction, at an expense of not to exceed the sum of two hundred ($200) dollars."

JOINT COMMITTEE ON ENGINEERING AND FINANCE TO CONSIDER CHANGES ON SECTIONS D., E. AND F.

Mr. Eckhart presented an order directing the Joint Committee on Engineering and Finance to take under advisement and report on certain proposed changes on Sections D., E. and F. of the Main Channel, and the order was read.

Mr. Eckart. seconded by Mr. Kelly, moved the adoption of the order.

The motion prevailed unanimously, and it was so ordered.

The following is

THE ORDER:

"WHEREAS, certain changes in Sections D, E and F have been suggested for the purpose of facilitating work and avoid-

ing expense in connection with bridges, therefore be it

Ordered, That the Joint Committee on Engineering and Finance be instructed to take said changes under advisement and report thereon to the Board as soon as practicable."

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

OCTOBER 4, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninetieth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, October 4, 1893, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter —six (6), and subsequently Mr. Gilmore, making a total of seven (7) members, were present.

MINUTES.

The minutes of the regular meeting held September 27, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, (September, 1893)	$ 3,226 66
Eng. Dept., Div. No. 1, (half month, ending Sept. 30, 1893)	2,622 61
Eng. Dept., Div. No. 1, tow-path, (half month ending Sept. 30, 1893)	710 50
Eng. Dept., Div. No. 1, trainmen, (half month, ending Sept. 30, 1893)	114 00
Eng. Dept., Div. No. 2, (half month, ending Sept. 30, 1893)	670 80
Eng. Dept., Div. No. 3,	

(half month, ending Sept. 30, 1893).....	$ 679 25	
Eng. Dept., Div. No. 4, (half month, ending Sept. 30, 1893).....	107 50	
Eng. Dept., discharged men's roll, (September, 1893).....	70 37	
		$ 8,201 69
Clerical Dept., Clerk's roll, (Sept., 1893)....	$ 566 67	
Clerical Dept., office roll, (half month, ending Sept. 30, 1893)....	117 50	
		$ 684 17
Treasury Dept., Treasurer's roll, (Sept., 1893).....		166 67
Law Dept., Attorney's roll, (Sept., 1893)....	$ 1,254 17	
Law Dept., Joliet roll, (Sept., 1893).....	333 33	
Law Dept., office roll, (half month, ending Sept. 30, 1893).....	97 50	
		$ 1,685 00
Police Dept., Marshal's roll, (Sept., 1893).....	$ 250 00	
Police Dept., field roll, (half month, ending Sept. 30, 1893).....	1,361 64	
		$ 1,611 64
General Account, Sanitary Inspector's roll, (Sept., 1893).....	$ 200 00	
General Account, Trustee's roll, (Sept., 1893).....	2.333 33	
		$ 2,533 33
Total.....		$ 14,882 50

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, Sept. 30, '93).....	$ 789 08
Agnew & Co. (Sec. 5, Oct. 2, '93).....	4,701 37
Agnew & Co. (Sec. 6, Oct. 2, '93).....	11,694 37
Agnew & Co. (Sec. 7, Oct. 2, '93).....	17,838 63
Agnew & Co. (Sec. 8, Oct. 2, '93).....	10,792 03
Agnew & Co. (Sec. 9, Oct. 2, '93).....	6,679 14
E. D. Smith & Co. (Sec. 10, Oct. 2, '93).....	22,758 75
Mason, Hoge & Co. (Sec. 11, Oct. 2, '93)..	20,629 00
Mason, Hoge & Co. (Sec. 12, Oct. 2, '93)..	16,339 75
Mason, Hoge & Co. (Sec. 13, Oct. 2, '93)..	16,286 16
McCormick Const. Co. (Sec. 14, Oct. 2, '93)..	4,343 50
L. D. Conner & Co. (Sec. A, Sept. 30, '93)	3,083 25
L. D. Conner & Co. (Sec. B, Sept. 30, '93)	8,910 64
Western Dredging and Impt. Co. (Sec. C, Oct. 2, '93).....	12,831 21
E. D. Smith & Co. (Sec. D, Oct. 2, '93).....	$ 6,771 67
Streeter & Kenefick, (Sec. E, Oct. 2, '93)..	14,944 49
Ricker, Lee & Co. (Sec. F, Oct. 2, '93)..	12,311 64
	$191,704 68

ENGINEERING DEPARTMENT.

Benezette Williams, (hydraulic test, Secs. 2, 3 and 4).....	$ 327 76	
A. C. Schrader, (emergency).....	50 70	
		$ 378 46

CLERICAL DEPARTMENT.

Trevor Spring Water Co. (ice, Sept., 1893)	$ 3 00	
Warner's Towel Supply, (toweling).....	1 50	
		$ 4 50

LAW DEPARTMENT.

Joseph Donnersberger, (expert services, September, 1893).....	$ 300 00	
M. B. Jones, (stenographer).....	13 75	
Chas. L. Harrison, (livery).....	3 00	
		$ 316 75

POLICE DEPARTMENT.

H. R. Eagle & Co. (station supplies).....	$ 16 52	
Mrs. John Sherwood, (rent and stove).....	23 00	
Wagner Bros., (livery)	11 00	
Chas. G. Sachse, (stenographer).....	5 00	
		$ 55 52

GENERAL ACCOUNT.

The Railway Review, (advertising Sections 2, 3 and 4).....	$ 133 28	
The Railway Age, (advertising Sections 2, 3 and 4).....	108 00	
Engineering News Publishing Co. (advertising Sections 2, 3 and 4).....	145 96	
		$ 387 24
Grand total.....		$207,729 65

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President de-

cleared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 372, Engineering Department, (lumber)	$220 44
No. 464, Law Department, (stationery)	55 00
No. 914, Police Department, (stoves and coal)	275 00
Total	$550 44

Mr. Kelly, seconded by Mr. Cooley, moved that Requisitions No. 372, for the Engineering Department, No. 464, for the Law Department, and No. 914, for Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 372, for the Engineering Department, No. 464, for the Law Department, and No. 914, for the Police Department, as read and shown above, allowed

MESSAGE OF PRESIDENT ON "CHICAGO DAY."

The President presented a message, with reference to the observance by the District, and by the contractors on the main channel, of "Chicago Day" at the World's Columbian Exposition; and the message was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the message of the President be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the message of the President adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE MESSAGE:

"CHICAGO, October 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The City of Chicago having adopted October 9th as its special day at the World's Columbian Exposition, the date so selected must be apparent to every man and woman of this city as the anniversary of that particular day in 1871, which, while a great calamity to Chicago, yet marked the opening of a new era in its wonderful progress and growth.

As Trustees of the Sanitary District, we are greatly interested in assisting and helping to make that anniversary a memorable one in the history of the Exposition, and a credit to the City of Chicago. The money collected to carry on and complete the great work which is intrusted to us, comes almost entirely from the tax-payers of this city, who are very deeply interested in the success of the Exposition.

It is, therefore, not asking too much if I may be permitted to recommend to your Honorable Body that not only the offices of the District be closed, and the men in charge of this great work, in the offices as well as in the field, be given a holiday on that date, but also that the numerous contractors, to whom money of the District is promptly paid on their estimates, be urged to relieve their men from work on that day, and give them an opportunity to attend the Exposition, now coming to a glorious close, and to otherwise assist them in the most liberal spirit, and secure for them, if possible, free transportation to the city over the two great railway lines running parallel with the channel.

At the present time the Sanitary District has in its employ, directly or indirectly, 8,700 persons, and I urge that every opportunity should be afforded them of attending the Exposition on "Chicago Day," and that your Honorable Body at once take action to bring about this desirable end.

Respectfully submitted,

(Signed) FRANK WENTER,
President."

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending September 30, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, October 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending September 30, 1893, as the same have been reported to me:

Engineering Department		103
Engineering Department, Trainmen		4
Engineering Department, Timekeepers		9
Engineering Department, Towpath		53
		—169
Clerical Department		4
Treasury Department		1
Law Department		8
Police Department		36
Total employes		218

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM SANITARY INSPECTOR

The Clerk presented a report from the Sanitary Inspector for the month of September, 1893; and the same was read.

Mr. Kelly, seconded by Mr. Altpeter, moved that the report be ordered printed and referred to the Committee on Health and Public Order, with instructions to report back to the Board.

The motion prevailed unanimously, and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, Oct. 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The sanitary condition of the various camps along the drainage channel for the month of September has been unusually good. Although the working force has been increased, and some over-crowding necessarily took place, the health of the men has not suffered in consequence up to the present. This over-crowding will only be temporary, lasting until the emergency work on the river diversion is completed. On Sections E., F., C, A., B., 1 and 7, quite a number of the men have been sheltered in tents; on all of these sections there are some tents that are old, worn and leaky, affording very poor protection from cold and rain; there are others that are very good, and can be made comfortable for some time to come, if necessity requires their use by boarding the floors and planking the ground line of the tent. This I would recommend the contractors to do, as it will add very much to the comfort and health of the men. If the contractors would give a little personal attention to this matter, they could very easily remedy it. As it is, the men occupying cold, leaky, uncomfortable tents are very much dissatisfied, and they have good grounds of complaint. Paying $4 a week for board and shelter should insure a good quality of both.

Most respectfully submitted,

(Signed) WM. MARTIN, M. D.
Sanitary Inspector."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of September, 1893; and the same was read.

Mr. Eckhart seconded by Mr. Kelly, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"Balance on hand at date of last report		$2,311,547.68
Received from County Treasurer, Tax Account	$ 50,000 00	
Received from Land Account (for "Keig house")	150 00	
Received from Land Account (taxes repaid by J. L. Henry)	38 78	
Received from Ft. Dearborn National Bank, int. for September	843 05	
Received from Globe National Bank, interest for September	781 55	
Received from National Bank of Illinois, interest for September	846 44	
Received from Metropolitan National Bank, int. for September	840 75	
Received from American Trust and Savings		

Bank, interest for September	$ 43 14	
Received from Chicago National Bank, interest for August	815 27	$ 54,358 98
Total cash received for month		$2,365,906 66
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 810 99	
Treasury Department	166 67	
Engineering Departm't.	12,595 42	
Engineering—Construction—Department	303,099 44	
Law Department	2,528 62	
Law Department—Land Account	339,644 29	
General Account	4,047 89	
Police Department	6,447 20	$669,340 52
Balance this date, in banks as per schedule endorsed hereon		$1,696,566 14

(Signed) MELVILLE E. STONE,
Treasurer."

Chicago, October 3, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 346,122 08
National Bank of Illinois	346,962 61
Chicago National Bank	345,638 08
Metropolitan National Bank	348,859 95
American Trust and Savings Bank.	21,003 79
Globe National Bank	287,979 63
Total	$1,696,566 14

COMPLETION OF RIVER DIVERSION ON SECTION A.

The Clerk presented a report from the Chief Engineer with reference to the construction of a levee for the river diversion on Section A of the main channel; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously; and the report was ordered printed and so referred.

The following is

THE REPORT:

"CHICAGO, Oct. 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I desire to direct your attention to a condition which must be met and disposed of promptly. The construction of the levees for river diversion on Section A will be attended with difficulties and a corresponding cost greater than will be met in any other section of this work. This is due to the unstable character of the soil along the river, which is unfit for levee construction. After a careful examination of the situation I am of the opinion that to build this levee we must erect a trestle and make the levee therefrom by dumping suitable material, hauled in by train from adjacent sections. This trestle will be nearly a mile in length and will cost about nine thousand dollars if built with pine piles and hemlock lumber. About 275,000 cubic yards of material will be required to build the levee. These figures are only approximated from the very meagre data now in my possession; but I have ordered soundings to be made throughout the stretch to be covered by the levee, and when I get these I will submit a more definite statement of what must be done.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

REPORT ON HYDRAULIC TEST ON SECTIONS 2, 3 AND 4.

The Clerk presented a report from the Chief Engineer, accompanied by a supplemental report from the First Assistant Chief Engineer, with reference to the test of the erosive power of pumps upon "conglomerate" material encountered in excavation on Sections 2, 3 and 4 of the main channel; and the report and enclosure were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report and enclosure be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, Oct. 3, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the test made by the Chicago Hydraulic Dredging Co, of the erosive power of pumps, working under high pressure, upon the hard material overlying the bed rock on Sections 2, 3 and 4 as provided in your order of August 30th, I have to report as follows:

The first trial of this method was upon Friday, September 22nd, which was abortive owing to the bursting of the hose under 95 pounds pressure. The next test was made on Tuesday, September 26th. Owing to the pressure of other duties, I was unable to be present at this last test, but I was represented there by Mr. T. T. Johnston, First Assistant Engineer, and I submit herewith his report of observations made then. That this material can be eroded by the water jet seems certain, but the test under consideration did not demonstrate that the material so moved can be carried off by the induction process. That it can be removed by that process, however, has been demonstrated by a hydraulic dredge, which has been in operation in the Calumet River; which same dredge is now about to begin operations upon Section A of our Channel. The most extensive operations have been carried on with this type of machine on the Pacific Coast

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

(One (1) enclosure.)

"CHICAGO, October 3, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—In accordance with your request I was present at the test of the erosive action of water on the hard "glacial drift" in Section 3, Main Drainage Channel, made Tuesday, September 26, in accordance with the action of the Board, August 30, 1893, page 1421 of Proceedings.

Approximately 1,000 gallons of water per minute, under a nozzle pressure of about 110 pounds was pumped through a two (2) inch nozzle. The jet, thus formed, was directed against a vertical face of the indurated blue boulder clay four feet high, and which was overlaid with a partially cemented yellowish layer of boulders about six feet thick. At the end of fifteen minutes the jet had eroded a hole in the blue material having a cubature of perhaps two cubic yards. During the next ten minutes the erosion was much more rapid. The jet was, of course, continuously directed against the blue material. As the erosion progressed the overlaying boulder layer, being undermined, fell in such manner as to cover the face of blue material with the result that at the end of about half an hour from time of commencing the test the jet was unable to reach the blue material, and its energy was consumed in rolling the boulders around.

This condition of things having been reached, an exhibition of the induction pump feature of the "hydraulic dredge" was made, with the result that a stream of water was pumped through the five or six inch pipe forming the delivery of the pump. No material was moved by the pump, for the reason that the large boulders prevented access to material of size sufficiently small to be handled by the pump.

The "hydraulic dredge" apparatus was not arranged in such manner as to directly determine its capacity to excavate the material in which it was applied. Not'ng further was demonstrated than that the erosive action of water, in volume and at pressure easily attainable, would break up the material into small parts.

The experiment, as far as it goes, suggests the feasibility of some adaptation of "jet erosion" and "induction pumping" that will successfully excavate the "glacial drift" of Sections 2, 3 and 4, at a greater or less cost. It does not seem to me, however, that anything was developed to warrant any formal opinion that this method of excavation is any better or worse than some other method.

Yours truly,

(Signed) THOS. T. JOHNSTON,

First Asst. Chief Engineer."

FORCE EMPLOYED ON MAIN CHANNEL.

The Clerk presented a report from the Chief Engineer, transmitting a tabular report from the Assistant Superintendent of Construction, showing the forces employed on all branches of the work of construcing the main channel, on September 29, 1893; and the report and enclosure were read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report and enclosure be ordered printed and placed on file.

The motion prevailed unanimously: and it was so ordered.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, Oct. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith a report from the Assistant Superintenden

of Construction, Mr. D. C. Dunlap, dated October 3rd, showing the forces employed in all branches of the work of constructing the Sanitary Channel This report shows a total of 8,788 men.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer"

(One (1) Enclosure.)

"CHICAGO, Ill., Oct. 3, 1893.

Mr. U. W. Weston, Superintendent of Construction:

DEAR SIR—I submit herewith a statement of the forces at work, connected with the Sanitary District of Chicago, for September 29, 1893.

SECTIONS.	Men.	Contractors, Clerks, General Office and Camp Forces.	Teams.
F.....	96	22	80
E.....	138	26	147
D.....	92	10	.....
C.....	126	19	79
B.....	114	10	108
A.....	194	12	5
1.....	1,574	38	130
2.....	602	9	28
3.....	.....	.....	.....
4.....	453	7	20
5.....	107	6	20
6.....	256	5	7
7.....	520	14	18
8.....	522	10	58
9.....	354	12	38
10.....	572	16	27
11.....	575	25	57
12	421	56	22
13.....	454	50	13
14.....	178	30	6
Totals..	7,321	377	863

SUMMARY OF MEN.

"Men".....	7,321
Contractors' men, (special).....	377
Sanitary District employes.....	227
Men with teams.....	863
Total number men.....	8,788

NOTE—One man included with each team.

Respectfully submitted,

(Signed) D C. DUNLAP,
Asst. Supt. of Construction."

WELLS AT POLICE STATIONS.

The Clerk presented a report from the Marshal, accompanied by three (3) propositions, with reference to the sinking of wells at Police Stations along the line; and the report was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the report be ordered printed, and with enclosed propositions, referred to the Joint Committee on Finance and Health and Public Order, with instructions to report back to the Board.

The motion prevailed unanimously, and the report was ordered printed, and, with enclosed propositions, was so referred.

The following is

THE REPORT:

"CENTRAL STATION, SAG, }
September 30, 1893. }

Hon. Frank Wenter, President of the Board of Trustees of the Sanitary District of Chicago:

DEAR SIR—I have made careful investigation of the well question. It seems certain that at Lemont and Romeo good water can be had at a depth of 40 feet. At Sag, the probable necessary depth would be 75 feet. At Willow Springs and Summit the necessary depth is a matter of much uncertainty; water is sometimes obtained at 50 feet, while in other cases they have to go down 90 feet; a fair, and as I believe, safe estimate is 60 feet.

Attached hereto please find bids for the work. From what I have been able to learn Mathews is the most reliable of the three, but I believe a good way would be for you or the Finance Committee to fix a price and let them bid to it.

Respectfully submitted,

(Signed) E. WILLIAMS,
Marshal."

(Three (3) enclosures).

CLAIM AGAINST WILLIAM HARLEV & SON.

The Clerk presented a communication from the Corey Car and Manufacturing Company, with reference to money claimed to be due that company from William Harlev & Son.

Mr. Eckhart seconded by Mr. Kelly, moved that the communication be ordered placed on file without reading.

The motion prevailed unanimously, and it was so ordered.

"CONGLOMERATE ROCK" ON SECTION B.

The Clerk presented a communication from Messrs. L. D. Conner & Co., contractors for Sections A and B, with reference to a "conglomerate rock" claimed to have been encountered in excavation on the river diversion on Section B, and asking that the same be classified and paid for as rock; and the communication was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Finance.

On roll-call the vote stood: Yeas—Messrs Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the communication ordered printed and so referred.

The following is

THE COMMUNICATION:

"CHICAGO, Oct. 2, 1893.

To the Honorable, the Board of Drainage Trustees:

GENTLEMEN—We desire to notify you that upon Section B., from Station 627 to Station 639 on river diversion, we have encountered a hard conglomerate of the estimated quantity of about eleven thousand five hundred cubic yards, and that we shall insist that this hard conglomerate is not glacial drift within the meaning of those words as used for classification in our contract with you, but that it should be classified as rock and we be paid according to rock rate for our excavation of the same.

We shall proceed with our work on the river diversion, as we realize the importance to you and to the public that the work should not be delayed, but we shall claim and expect from you compensation for the removal of this conglomerate upon the basis that its correct classification is that of rock.

Very truly yours,

L. D. CONNER & CO.,

(Signed) Per ERNST HELDMAIER."

INSPECTION OF MAIN CHANNEL BY "CONGRESS ON PUBLIC HEALTH."

The Clerk presented a communication from Dr. F. W. Brewer, representing the International Congress, of Public Health, suggesting an inspection of the main channel by the visiting delegates attending that Congress; and the communication was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the Committee on Health and Public Order.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"CHICAGO, Ill., U. S. A., October 3, 1893.

The Board of Trustees of the Sanitary District of Chicago, Rialto Building, Chicago:

DEAR SIRS—In accordance with the conversation I had the pleasure of holding with your Chairman yesterday, I beg officially to inform you that the International Congress of the Public Health will assemble here on Tuesday, the 10th inst., and this congress will also be the annual meeting of the American Public Health Association. These two bodies form a very important conjunction of the Sanitarians. We expect to have the presence of many of the Foreign Commissioners to the Columbian Exposition and special delegates from foreign countries.

The American Public Health Association, as you are probably aware, is composed of the Presidents, Secretaries and members of the various State Boards of Health throughout this country, Canada and Mexico, and wherever the Association has held its meetings, it has always been very cordially received and all courtesy extended to it. On the present occasion there will be a very large delegation of sanitarians and physicians from Mexico, and the Organizing Committee desire me to say that they will esteem it a favor if your Board will ask the members of the congress to visit your drainage canal works and other points of interest in connection with the sanitation of your city.

Last year the American Public Health Association visited Mexico and received a most cordial welcome from the governmental and municipal authorities, and I feel certain that the representatives of this great city will not desire to be behind the City of Mexico.

Hoping for your favorable consideration and awaiting the favor of your reply, I am,

Yours respectfully,

(Signed) F. W. BREWER, M. D."

REPORT ON REQUISITIONS NOS. 360, 361, 369, 370 AND 371.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, presented and referred to that Committee at the meeting held September 27, 1893, (page 1468 of the Proceedings) recommending that the same be allowed; and the report was read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, allowed.

The following is

THE REPORT:

"CHICAGO, Oct. 2, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance, to whom were referred Requisitions Nos. 360, 361, 369, 370 and 371, for the Engineering Department, (amounting to $800.33) at the meeting held September 27, 1893 (page 1468 of the Proceedings), respectfully report that they have considered the same, and recommend that they be allowed.

The requisitions mentioned are returned herewith.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
THOMAS KELLY,
B. A. ECKHART,
JOHN J. ALTPETER,
Joint Committee on Engineering and Finance."

(Enclosing five (5) requisitions.)

EMPLOYMENT OF MEN ON RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committee on Labor, stating that at the present time there were about 2,300 men employed each day on the special river diversion work on Sections 1 to 4 inclusive.

WASTE OF MATERIAL ON LOW LANDS ON SECTION E.

Mr. Cooley presented an order, permitting the contractors on Section E, under the direction of the Chief Engineer, as provided in the order, to waste material on the low lands on said section; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the contractors on Section E, under the direction of the Chief Engineer, as provided in the order, permitted to waste material on the low lands on said section.

The following is

THE ORDER:

"WHEREAS, The Chief Engineer has recommended that on Section E certain low lying lands adjacent to the main channel be filled with material taken from the said channel and that said filling will be advantageous to the District, therefore be it

Ordered, That the contractors for said Section E be permitted, under the direction of the Chief Engineer, to waste material upon such adjacent low lying lands as he may designate, provided that no extra expense is thereby entailed on the District."

LAND TO BE CONDEMNED AND ESTIMATES MADE FOR CHANNEL FROM LOCKPORT TO JOLIET.

Mr. Kelly presented an order directing the Attorney to begin condemnation proceedings for portion of the lands necessary for the right of way of the main channel from Lockport to Joliet, and directing the Chief Engineer to furnish estimates of the cost of the main channel between the same points, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Gilmore, Kelly and Wenter—six (6). Excused and not voting—Mr. Cooley—one (1). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Attorney and Chief Engineer directed in accordance with same.

The following is

THE ORDER:

"WHEREAS, The Sanitary District has now obtained abstracts of title to the lands included within that part of the right of way embraced under propositions one (1) and three (3) which lie south of Contract Section 14, and north of the east and west center line of Section twenty-eight (28), Township thirty-six (36) North, Range ten (10), East of the Third Principal Meridian, and

WHEREAS, It seems expedient to obtain estimates of the cost of lands included in the respective rights of way laid out under said propositions one (1) and three (3), relative to the extention of the main channel below the end of Contract Section 14, and the waste works therefor as same were outlined in the report of the Chief Engineer to the Board of Trustees and referred by it to the Joint Committee on Engineering and Finance March 1, 1893, with the modification thereof submitted to said Committee by the Chief Engineer April 3, 1893, which propositions as so modified were adopted by the Board on the report of said Committee April 12, 1893, and also that estimates of the cost of the main channel and waste works under each of said propositions as modified be made, therefor be it

Ordered, That the Attorney be and he is hereby instructed to cause suits to be entered to condemn for the corporate purposes of this District such of the tracts of land included within the right of way under said propositions one (1) and three (3) which cannot be secured by purchase as lie south of Contract Section 14 and north of the east and west center line of Section twenty-eight (28), Township thirty-six (36) North, Range ten (10), East of the Third Principal Meridian; that he also cause estimates to be made of the probable cost of the right of way south of said east and west center line under each of said propositions one (1) and three (3) modified as aforesaid, and that the Engineer estimate the probable cost of the main channel and waste works south of Contract Section 14 under each of said propositions."

EMERGENCY FUND FOR PAYMENT OF RIVER DIVERSION EMPLOYES.

Mr. Eckhart presented an order authorizing and directing the Clerk to draw a warrant, as emergency fund, in the sum of forty-eight thousand ($48,000) dollars, in favor of the Clerk, for the payment of laborers and employes on the river diversion and levees on Sections 1, 2, 3 and 4 of the main channel, said money to be paid on approved pay-rolls, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to draw a warrant, as emergency fund, in the sum of forty-eight thousand ($48,000) dollars, in favor of the Clerk, for the payment of laborers and employes on the river diversion and levees on Sections 1, 2, 3 and 4, of the Main Channel, said money to be paid on approved pay-rolls, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby directed to draw a warrant for forty-eight thousand ($48,000.00) dollars on the Treasurer, in favor of himself, the same to be used in paying laborers and employes working on contract Sections one (1), two (2), three (3) and four (4), on the river diversion and levees on said sections—said money to be paid to the employes on Section one (1) on the pay-roll of employes working under the direction of Alfred Harlev, Agent of this District, and to the employes on Sections two (2), three (3) and four (4), on the pay-roll of employes working under the direction of McArthur Brothers Company, Agent of this District, and that when said respective pay-rolls have been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall cause said employes to be paid through said agents the amounts found respectively due them."

EMERGENCY FUND FOR PAYMENT OF EMPLOYES FOR "EXTRA" WORK ON SECTIONS 11 AND 12.

Mr. Eckhart presented an order, au-

thorizing and directing the Clerk to draw a warrant, as emergency fund, in the sum of sixteen thousand ($16,000) dollars, in favor of the Clerk, for the payment of laborers and employes on "extra" work on the river diversion and levees on Sections 11 and 12, said money to be paid on approved pay-rolls, as provided in the order; and the order was read.

Mr. Eckhart. seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to draw a warrant, as emergency fund, in the sum of sixteen thousand ($16,000) dollars, in favor of the Clerk, for the payment of laborers and employes on extra work on the river diversion and levees on Sections 11 and 12, said money to be paid on approved pay-rolls, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby directed to draw a warrant for sixteen thousand ($16,000) dollars on the Treasurer, in favor of himself, the same to be used in paying laborers and employes for work on the river diversion on contract Sections eleven (11) and twelve (12), said money to be paid to employes on said Sections eleven (11) and twelve (12) on the pay-rolls of Mason, Hoge & Co., who are doing said work on said river diversion on said Sections eleven (11) and twelve (12) as provided in their contracts for said Sections eleven (11) and twelve (12) under the head of extra work and as authorized by the Board of Trustees of this District, and that when said respective pay-rolls have been approved by the Chief Engineer, the Clerk and the Finance Committee of the District, the Clerk shall be authorized and instructed to pay over said sixteen thousand ($16,000.00) dollars to said Mason, Hoge & Co. for the purpose of paying said employes as aforesaid."

PRESENTATION OF BIDS ON RE-LETTING OF SECTIONS 2, 3 AND 4 OF THE MAIN CHANNEL.

The President then announced that in conformity with the advertisement of August 5, 1893, published for sixty (60) days, as provided by the Sanitary District Act, inviting proposals for work on a portion of the Main Channel between Willow Springs and Joliet, known as Sections two (2), three (3) and four (4), the Board would now proceed to open the bids received in response to same.

The Clerk then presented bids, as shown by the following

SCHEDULE OF BIDS:

NO	NAME.	PLACE.	SECTIONS BID ON.	CHECKS DEPOSITED.
1	Christie & Lowe	Chicago, Ill	2 and 3	$ 6,000 00
2	Dawson, Symmes & Co	Chicago, Northeast Pennsylvania and Niagara Falls	2, 3 and 4	9,000 00
3	McMahon & Montgomery Co	Chicago, Ill	4	3,000 00
4	*Madison, Garretson & Co	Cincinnati, Ohio	2, 3 and 4	Irregular No Check
5	Sinclair Construction Co	Chicago, Ill	3	3,000 00
6	Ezekiel Smith	Chicago, Ill	2, 3 and 4	9,000 00
7	McKeown, Stowell & Co	Buffalo, N. Y	2, 3 and 4	9,000 00
8	Strang & Lee	New York City and Lawrence, Kan	2, 3 and 4	9,000 00
9	F. H. Clement	New York City	2, 3 and 4	9,000 00
10	Winston Bros. & Stevens	Minneapolis and St. Paul	3	3,000 00
11	C. C. Gilman	Marshalltown, Iowa	3	3,000 00
12	Mason, Hoge & Co	Frankfort, Ky	2, 3 and 4	9,000 00

*Bid No. 4 of Madison, Garretson & Co. was irregular, no check being enclosed and the bid was therefore, by unanimous consent, rejected and excluded entirely from the competition.

KEY TO SCHEDULE OF BIDS RECEIVED OCTOBER 4, 1893.

Names of bidders in the order in which their bids were received.

Bid No.	Name.	PRICE BID.								
		SECTION 2.			SECTION 3.			SECTION 4.		
		Classification.			*Classification.*			*Classification.*		
		Glacial Drift.	Solid Rock.	Retain'g Walls.	Glacial Drift.	Solid Rock.	Retain'g Walls.	Glacial Drift.	Solid Rock.	Retain'g Walls.
1	Christie & Lowe	.75	.75	2.00	.72	.72	2.00	.....	.....	.....
2	Dawson, Symmes & Co.	.45	.98	2.25	.45	.98	2.25	.47	1.00	2.25
3	M'Mahon&MontgomeryCo	.....	.....	.....	.....	.....	.....	1.00	2.50	3.50
4	*Madison, Garretson & Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Sinclair Construction Co.	.....	.....	.....	.32	.86	2.00	.....	.....	.....
6	Ezekiel Smith	.73	.93	2.25	.73	.93	2.25	.73	.93	2.25
7	McKeown, Stowell & Co.	.48	.84	1.80	.46	.82	1.78	.46	.84	2.26
8	Strang & Lee	.62	.90	2.00	.59	.85	2.00	.59	.90	2.00
9	F. H. Clement	.68	.68	2.00	.72	.72	2.25	.68	.68	2.00
10	Winston Bros. & Stevens	.....	.....	.....	.70	1.10	3.50	.....	.....	.....
11	C. C. Gilman	.....	.....	.....	.56	.76	1.80	.....	.....	.....
12	Mason, Hoge & Co	.48½	.89	1.75	.45	.89⅛	1.75	.49	.89⅜	1.75

*Irregular—Rejected.

(Signed) ISHAM RANDOLPH,
Chief Engineer.

QUANTITIES OF EXCAVATION USED IN COMPARING BIDS.

FOUR COMPARISONS—(TABLES A, B, C, AND D.)

Section	Material.	Total Estimate March 29. 1893. (Cubic Yds.)	Total Estimate Less River Diversion. (Cubic Yds.)	Total Estimate Less River Diversion and work done. (Cubic Yds.)	Total Estimate Oct. 6, 1893, Less River Diversion and work done. (Cubic Yds.)
2	Glacial Drift	833,381	725,509	697,909	692 509
	Rock	375,168	375,168	375,168	380 568
	Retaining Walls	32,670	32 670	32 670	32 250
3	Glacial Drift	312 826	312 826	246,026	261,226
	Rock	792,140	792,140	792,140	776,940
	Retaining Walls	6,304	6,304	6,304	7,699
4	Glacial Drift	1,033 317	913,317	869,117	960 617
	Rock	317,485	317,485	317,485	225,985
	Retaining Walls	47,492	47,492	47,492	55,145

(Signed) ISHAM RANDOLPH,
Chief Engineer.

The following are

THE BIDS IN DETAIL:

TABLE A—TABLE OF BIDS RECEIVED OCTOBER 4, 1893, IN ORDER OF MAGNITUDE. HIGHEST BID FIRST.

(Compared on Basis of Total Estimate, March 29th, 1893, less River Diversion.)

Section No. 2.		Section No. 3.		Section No. 4.	
Bid No.	Amount.	Bid No.	Amount.	Bid No.	Amount.
6	$1,030,781 87	10	$1,112 396 20	3	$1,993,251 50
1	971,751 75	6	979.287 18	6	1,156,439 46
8	919,687 42	2	931,252 90	9	1,013,529 36
9	887,153 32	8	870,494 34	8	990,377 53
2	816.193 59	12	859,448 77	2	910,000 99
12	795,261 81	9	809,759 52	12	874,114 55
7	773,970 00	1	808,183 52	7	849,345 14
		7	804,675 88		
		5	793.952 72		
		11	788,556 16		

(Signed) ISHAM RANDOLPH,
Chief Engineer.

TABLE B—TABLE OF BIDS RECEIVED OCTOBER 4, 1893, IN ORDER OF MAGNITUDE. HIGHEST BID FIRST.

(Compared on Basis of Estimate of March 29th, 1893, less River Diversion.)

Section No. 2.		Section No. 3.		Section No. 4.	
Bid No.	Amount.	Bid No.	Amount.	Bid. No.	Amount.
6	$952 035 31	10	$1,112,896 20	3	$1.873 251 50
1	890 847 75	6	979,287 18	6	1,068,839 46
8	852,806 78	2	931,252 90	9	931 929 36
9	813.800 36	8	870,494 34	8	919 577 53
2	767.651 19	12	859,448 77	2	853 600 99
12	742 943 89	9	809,759 52	12	815 314 55
7	722,191 44	1	808.183 52	7	794,145 14
		7	804,675 88		
		5	793,952 72		
		11	788,556 16		

(Signed) ISHAM RANDOLPH,
Chief Engineer.

TABLE C—TABLE OF BIDS RECEIVED OCTOBER 4, 1893, IN ORDER OF MAGNITUDE. HIGHEST BID FIRST.

(Compared on basis of Estimate of March 29, 1893, less River Diversion and material removed from Main Channel up to June 15, 1893.)

SECTION NO. 2.		SECTION NO. 3.		SECTION NO. 4.	
Bid No.	Amount.	Bid No.	Amount.	Bid No.	Amount.
9	$795,032 36	7	$773 947 88	9	$901,873 36
2	755.231 19	5	772,576 72	8	893,499 52
12	729,557 88	9	761,663 52	2	832.826 99
7	708,943 44	1	760,087 52	12	793 656 55
		11	751,148 16	7	773,813 14

(Signed) ISHAM RANDOLPH,
Chief Engineer.

TABLE D—TABLE OF BIDS RECEIVED OCTOBER 4, 1893, IN ORDER OF MAGNITUDE. HIGHEST BID FIRST.

(Compared on Basis of Revised Estimate, October 6th, 1893.)

SECTION NO. 2.		SECTION NO. 3.		SECTION NO. 4.	
Bid. No.	Amount.	Bid No.	Amount.	Bid. No.	Amount.
9	$794,192 36	7	$770,958 98	9	$917.179 36
2	757,148 19	5	767,158 72	8	880.440 53
12	731,009 88	9	764.797 27	2	801.551 24
7	710,131 44	1	762,877 52	12	769.839 30
		11	750,619 16	7	756,338 92

(Signed) ISHAM RANDOLPH,
Chief Engineer.

BIDS REFERRED TO JOINT COMMITTEE ON ENGINEERING AND FINANCE.

Mr. Eckhart, seconded by Mr. Cooley, moved that the bids just presented as above, and as compiled and summarized by the Chief Engineer, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the bids were so referred.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

OCTOBER 11, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, October 11, 1893, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter —six (6), and subsequently Messrs. Gilmore and Prendergast, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held October 4, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Time-keepers, River Diversion, (half month, ending Sept. 30, 1893).....		$ 299 87

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (River Diversion. Sec. 1, Sept 30, 1893).....	$33,029 01	
McArthur Bros. Co. (River Diversion, Sec. 2, Sept. 30, 1893).....	12,189 85	
McArthur Bros. Co. (River Diversion, Sec. 4, Sept. 30, 1893).....	9,518 93	
		$54,737 79

ENGINEERING DEPARTMENT.

Geo. E. Marshall & Co. (stationery)	$ 20 00	
Keen & DeLang, (stationery)	4 88	
Hibbard, Spencer, Bartlett & Co. (hardware)	9 88	
Edw. L. Fry, (oil)	2 30	
Frank E. Michaud, (repairs to Sag bridge)	85 25	
Frank E. Michaud, (building platform)	41 75	
D. C. Dunlap, (horse and buggy)	45 00	
John T. Allison, (rent, Summit)	20 00	
A. M. Munson, (rent, Mt. Forest)	20 00	
H. S. Norton, (rent, Lemont)	18 00	
O. W. Moon, (rent, Lockport)	20 00	
Alex. E. Kastl, (expense)	20 80	
Chas. L. Harrison, (traveling expense)	9 35	
Ebin J. Ward, (traveling expense)	2 36	
F. G. Ewald, (traveling expense)	12 89	
F. G. Ewald, (traveling expense)	6 50	
		$ 338 46

LAW DEPARTMENT.

John Morris Co. (stationery)	$ 3 50	
Chicago Telephone Co. (service to Jan. 1, '94)	31 25	
S. A. Moffett Co. (Livery)	4 50	
		$ 39 25

GENERAL ACCOUNT.

The Chicago Deposit Vault Co. (rent to Sept. 30, 1893)	$ 2,110 00	
The Chicago Deposit Vault Co. (janitor service, Sept., 1893)	80 00	
Chicago Telephone Co. (service to Jan. 1, '94)	31 25	
John F. Higgins, (printing proceedings, Sept., 1893)	134 33	
		$ 2 355 58

POLICE DEPARTMENT.

Frank E. Michaud, (erecting police stations at Willow Springs and Summit)	$ 1 297 24	
John Naghten & Co. (insurance on stations)	150 00	
Edward Williams, (expense)	68 55	
		$ 1,515 79
Grand total		$ 59,286 74

Accompanying the vouchers, the Clerk presented the following

REPORTS:

"CHICAGO, Oct. 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith the labor rolls of Alfred Harlev for work upon river diversion, Section No. 1, as per contract dated August 30, 1893:

Total amount of rolls from September 15 h to September 30th	$28.497 55
Add 15 per cent	4.274 63
Total	$32 772 18

In making my report of labor on this Section, September 27th, I held for investigation items footing up $248 33. I have satisfied myself that those items constitute a proper charge against the river diversion except that the salary of the General Foreman (entered on bill as General Superintendent) should be rated at $150 per month. This bill will therefore appear as $223.33; with 15 per cent added, it foots up $256.83. No bills for material or repairs have been returned in for the period corresponding with the rolls.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, Oct. 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith the labor rolls of McArthur Brothers for work upon river diversion, Sections Nos. 2 and 4 as per contract dated August 30, 1893:

Section No. 2.

Total amount of rolls, September 15th to September 30th	$10,599 87
Add 15 per cent	1 589 98
Total	$12 189 85

Section No. 4.

Total amount of rolls, September 15th to September 30th	$ 8 277 33
Add 15 per cent	1 241 60
Total	$ 9.518 93

No bills for material have been returned for the period covered by the rolls.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

Mr. Kelly, seconded by Mr. Boldenweck, moved that the reports of the Chief Engineer, just presented, be ordered printed and placed on file, and the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck (*except as to percentage on Harlev and McArthur Construction Vouchers*), Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the reports of the Chief Engineer, just presented, ordered printed and placed on file, and the vouchers, as read and shown above, approved and ordered paid.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending October 7, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, October 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending October 7, 1893, as the same have been reported to me:

Engineering Department	106	
Engineering Department, Tow-path	53	
Engineering Department, Time-keepers and Trainmen	12	
		—171
Clerical Department		4
Treasury Department		1
Law Department		8
Police Department		36
Total employes		220

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the Engineering Department for the month of September, 1893; and the report was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report be ordered printed, and, with accompanying classified statement, placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, October 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3 showing the detailed operations of the Engineering Department for the month of September, including table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of September were as follows:

Contractors estimates	$287,099.44
River Diversion estimate	19,049.91
Pay rolls	12,500.44
Material, etc	863.08
Total	$319,512.87

I estimate the expenses for October will be $450,000.00, including contractor's estimates.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosing classified statement.)

"CHICAGO, October 11, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I herewith submit the following report for the month of September:

Pay rolls	$ 7,064.84
Pay rolls, repair of tow-path	710.50
Contractors estimates	287,099.44
Total	$294,874.78

(The extra work done on river diversion, Sections 1, 2, 4, 11 and 12, is not included.)

CONDITION OF WORK, OCTOBER 1, 1893.

Sec.	Contractor.	Total amount done Oct. 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done by Oct. 1, 1893.	Amount behind as per contract Oct. 1, 1893.	Amo'nt ahead as per contract, Oct. 1, 1893.
A	L. D. Conner & Co.....	$ 22,785 00	$ 25,669 92	$ 77,009 76	$ 54,224 76	.....
B	L. D. Conner & Co.....	36,442 71	13 412 99	40,238 97	3,796 26	.....
C	Western Dredg. & Imp Co	36,810 17	14.545 65	43,636 95	6,826 78	.....
D	E. D. Smith & Co.....	33,404 05	15.286 51	45 859 53	12,455 48	.....
E	Streeter & Kenefick.....	108,552 40	15,537 72	46.613 16	.....	$ 61.939 24
F	Ricker, Lee & Co.....	48,585 85	11,524 58	34,573 74	.....	14,012 11
1	Alfred Harlev.....	20.207 55	22,481 34	134,902 68	108,695 13	.....
2	.....	15.988 00	16.980 75	135,846 00	119.858 00	.....
3	.....	18,036 00	20,098 79	200 987 90	182,951 90	.....
4	.....	11,934 00	16 886 39	151,977 51	140.043 51	.....
5	Agnew & Co.....	33,912 00	13.275 92	110,845 32	76 933 32	.....
6	Agnew & Co.....	38.826 00	15,599 38	132.594 73	93,768 73	.....
7	Agnew & Co.....	77.889 00	18,777 24	159,606 54	81,717 54	.....
8	Agnew & Co.....	98,683 00	23,441 42	234,414 20	135,731 20	.....
9	Agnew & Co.....	63,555 60	19.833 79	198,337 90	134,782 30	.....
10	E. D. Smith & Co.....	147,100 00	23,680 43	236.804 30	89,704 30	.....
11	Mason, Hoge & Co.....	166,684 75	19,891 32	198,913 20	32,228 45	.....
12	Mason, Hoge & Co.....	176.060 75	19.172 88	191,728 80	15,668 05	.....
13	Mason, Hoge & Co.....	218,132 72	18 588 65	185 886 50	.....	32,246 22
14	McCormick Constr'n Co.	71,110 00	19,891 82	198,918 20	127,808 20	.....
	Totals.....	$1.450.699 55	$364.577 49	$2 759,695 89	$1.417.193 91	$108.197 57

Total amount required to be done October 1, 1893...$ 2,759,695 89
Total amount done October 1, 1893..... 1,450,699 55

Amount short as per contracts.....$ 1,308.996 34

Note—In addition to the above amounts done October 1, 1893, there has been material excavated at various points by labor employed by the Sanitary District, which material, if rated at the regular contract prices would reduce the shortage as follows:

Section 1, river diversion—53,000 cubic yards glacial drift at 27c....$14,310 00
Section 2, river diversion—44,100 cubic yards glacial drift at 28c.... 12.348 00
Section 4, river diversion—25,000 cubic yards glacial drift at 27c.... 6,750 00
Section 11, river diversion— 4,148 cubic yards glacial drift at 30¼c.. 1,254 77
Section 11, river diversion— 1,210 cubic yards solid rock at 79¼c.. 958 93

Reducing shortage a total of.....$35.621 70

AMOUNT OF WORK DONE TO OCTOBER 1, 1893.

SEC.	MAIN CHANNEL. Glacial Drift. Cu. Yds.	MAIN CHANNEL. Solid Rock. Cu. Yds.	RIVER DIVERSION. Glacial Drift. Cu. Yds.	RIVER DIVERSION. Solid Rock. Cu. Yds.	RIVER LEVEES AND DITCHES. Glacial Drift. Cu. Yds.	Total value of work done to October 1, 1893, on each Section.	12½ per cent. reserve.
A	.....	.....	74,400	.....	.....	$ 22,785 00	$ 2,848 12
B	.....	.....	134,973	.....	.....	36,442 71	4,555 34
C	38,143	.....	118,496	.....	.....	36,810 17	4,601 27
D	126,351	.....	.....	.....	.....	33,404 05	4,175 51
E	350,831	.....	43,905	.....	.....	108,552 40	13,569 05
F	96,753	.....	69,700	.....	38,119	48,585 85	6,073 24
1	91,189	.....	*5,876	.....	.....	26,207 55	3,275 94
2	27,600	.....	*29,500	.....	.....	15 988 00	1,998 50
3	66,800	.....	.....	.....	.....	18,036 00	2,254 50
4	44,200	.....	.....	.....	.....	11,934 00	1,491 75
5	125,600	.....	.....	.....	.....	33,912 00	4,239 00
6	84,900	.....	58,900	.....	.....	38,826 00	4,853 25
7	21,000	37,300	75,600	34,500	.....	77,889 00	9,736 12
8	7,500	45,800	48,900	66,600	.....	98,683 00	12,335 38
9	28,100	50,600	37,700	9,800	.....	63,555 60	7.944 45
10	21,300	118,900	27,400	49,600	.....	147,100 00	18.387 50
11	39,200	186,800	*4,100	*7,000	.....	166,684 75	20,835 59
12	27,400	211,700	†	†	.....	176,060 75	22,007 59
13	32,822	280,400	.....	.....	.....	218,132 72	27,266 59
14	45,300	85,000	.....	.....	.....	71,110 00	8,888 75
Total	1,275,489	1,016,500	729,450	167,500	38,119	$1,450,699 55	$181,337 44

Main Channel, glacial drift	1,275,489	Cu. Yds.
Main Channel, solid rock	1,016,500	"
River Diversion, glacial drift	729,450	"
River Diversion, solid rock	167 500	"
River Levees and Ditches, glacial drift	38,119	"
Total value of work done to October 1st, 1893		$1,450,699 55
Total 12½ per cent reserved as per contracts		181,377 44
Total of vouchers, including those of October 2, 1893		$1,269,322 11

*The following approximate quantities have been here excavated during September, 1893, by labor employed by the Sanitary District:

Section 1, river diversion, glacial drift	53,000	Cu. Yds.
Section 2, river diversion, glacial drift	44,100	"
Section 4, river diversion, glacial drift	25,000	"
Section 11, river diversion, glacial drift	4,148	"
Section 11, river diversion, solid rock	1,210	"

†About 5,000 cubic yards of solid rock excavated in river diversion Section 12 on contractor's force report; also 2,475 cubic yards of glacial drift.

FORCE REPORT—DAILY AVERAGE, SEPTEMBER, 1893.

SECTION.	Men.	Teams.	Steam Shovels.	Steam and Air Pumps.	Steam and Air Drills.	Steam and Air Hoists	Channelers.	Air Compressors.	Cableways	Steam Scrapers.	Cantilever Derricks.	Locomotives.	Steam Derrick.
A	156	13	....	2	....	....	....	....	....	....	....	....	....
B	108	93	1	1.6	....	....	....	....	1	....	....	....	....
C	126	93	2	2.3	....	2	....	....	....	....	....	....	....
D	137	....	2	1.2	....	....	....	....	....	....	....	4	....
E	117	142	1.4	1.3	....	....	....	....	....	....	....	3	....
F	119	98	2.3	1.4	....	....	....	....	....	....	....	2	....
1	69	21	.3	1.3	....	....	....	....	....	....	....	....	....
5	77	22	1.5	2.7	....	....	....	....	....	....	....	.7	1.0
6	261	1	....	.6	....	....	....	....	....	1.9	....	....	....
7	380	18	....	1.6	12	4.3	2.4	....	....	....	....	....	....
8	421	38	....	.3	9.3	2.3	1.1	....	.7	....	....	....	....
9	307	31	....	.5	4.6	1.9	1.9	....	....	....	....	....	....
10	539	14	....	3	12	3.5	5.6	1.0	....	....	2.5	....	....
11	344	24	....	4.1	13	2.7	5.4	1.0	1.4	....	.2	....	....
12	325	19	....	5	11.9	4	5.9	1.0	....	....	....	....	....
13	374	20	....	5	10.2	3	4.6	1.0	....	....	.5	....	....
14	172	12	....	2	7	2	5.2	....	....	....	....	....	....
Totals	4032	659	10.5	35.9	80.0	25.7	33.1	4.0	3.1	1.9	3.2	9.7	1.0

The above report does not include the forces on special work, amounting to about 2500 men.

Yours truly,

(Signed) D. C. DUNLAP,

Assistant Superintendent of Construction."

"CHICAGO, October 10, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of September was as follows:

Made sketches showing Summit road bridge, Willow Springs road bridge, and Calumet Terminal bridge, showing proposed elevations and general dimensions for same.

Plans and specifications were drawn up for the Stephens street bridge and for the Santa Fe bridge, both over river diversion, near Lemont.

Plans were made for the Western Stone Co.'s bridge over river diversion at county line.

Platting of the Summit and Lyons road from Illinois and Michigan Canal was completed.

Started the field work on the county line, Stephens street and Santa Fe bridges.

Made estimate of excavation necessary on line of main channel, Summit to Corwith.

Reduced and platted the notes of the survey of the Chicago and Calumet Terminal Railroad.

Made survey of Willow Springs road, from the Illinois and Michigan Canal westward to 25 foot contour. Reduced notes of same and started platting.

Made survey in vicinity of C., S. F. & C. R. R. bridge above Summit. Notes are being reduced.

Commenced test pits for spillway on east bank of Desplaines River, north of C., S. F. & C. Railroad bridge above Summit. Thirteen pits completed to rock surface and several more started.

Continued the cross-sectioning of territory along line of river diversion channel. This survey is now completed from head of Goose Lake to a point opposite Sag bridge.

High water gauge at Willow Springs inspected and reset to Chicago datum.

The maintenance and records of water gauges was continued. Reduction of notes pertaining to Illinois River floods was continued.

Miscellaneous estimates and calculations were made with reference to levees and river diversion between Summit and Lockport.

The work for October will be a continuation of that for September, with

such additional work as may be ordered.

The expense for October will approximate to that for September.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

"CHICAGO, Oct. 11, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I herewith submit the report of Division 3 for the month of September, 1893. The following work was finished:

A copy of the map accompanying first proposals from Willow Springs to Summit; tracings of the condensed map and profile of the territory between Chicago and Joliet, of the new crossing of the C, S, F. & C. Railway at Lemont, and of the contour map at Willow Springs; tracings for the right of way between Summit and Bridgeport of Manchester, Canalport, and of tracts 117 to 119, 130, 141, 150, 156, 158, 159, 170, 171, 290 to 293; and drawings and tracings of the map, profile and sections accompanying the proposals for the main channel between Summit and Corwith.

The platting of the Stadia notes on the large scale contour maps from the Sag to Joliet, and the inking of the Sanitary District map was continued.

The coloring of the reverse prints and the platting of the contour lines of the condensed map and profile, was continued.

During next month it is proposed to continue the platting of the Sanitary District map, the main topographical maps, and the regular routine work of the Division.

Yours respectfully,

(Signed) EDGAR WILLIAMS,

Second Assistant Chief Engineer."

LEVEE AND TRESTLE OF SECTION A.

The Clerk presented a report from the Chief Engineer, accompanied by specification and order, with reference to the construction of a levee on Section A and trestle for same; and the report was read.

Mr. Boldenweck, seconded by Mr Eckhart, moved that the report be ordered printed, and, with enclosed specification and order, be referred to the Joint Committee on Engineering and Finance, with directions to report back at the next meeting, and with instructions to the Chief Engineer to receive bids, as suggested in the report, and present same to that Committee.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report ordered printed, and, with enclosed specification and order, so referred, with instructions to the Chief Engineer, to receive bids as suggested in the report, and present same to that Committee.

The following is

THE REPORT:

"CHICAGO, October 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the levee on Section A, and trestle necessary for constructing same, upon which I made a preliminary report on the 4th inst., I have to report further, that owing to the difficulties in the way of making tests of depth of soft material, I have secured but little information additional to that in my possession when the report above mentioned was made. In my judgment this is a piece of work which must be done whether the cost be greater or less than my preliminary estimate, and the information which I have taken steps to secure will not change the needs of the case but will only determine such details as the lengths of piles and the amount of filling required I therefore ask that, to avoid delays, you make such orders at this meeting for the prosecution of the work as will enable me to make the necessary preliminary arrangements.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

(Enclosing specification and order.)

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of September, 1893; and the same was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Oct. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I submit herewith the monthly report for September, 1893. The total amount paid out by this Department is as follows:

Salaries.

Attorneys	$ 1,525 00	
Office force	195 00	
		$ 1,720 00

Expenditures.

Right of way	$ 500 45	
Court costs	224 20	
Legal services	89 02	
Stationery	77 98	
Sundries	29 10	
		$ 920 75

Land Account.

Right of way	$339,556 50	
Taxes—		
Will County, $38 41		
Cook County, 49 38		
	87 79	
		$339,644 29
Total		$342,285 04

A larger amount of money has been paid out for land during the past month than during any other one month since the first purchase of land by the District. Negotiations are progressing satisfactorily for the purchase of a number of other tracts. Agreements for purchase have been made in some cases which it is impossible to close until we get opinions of title from the abstract company.

Much work has been done during the past month and is now being carried on in connection with new work already undertaken or about to be undertaken by the District.

Several employes of this Department have been engaged a portion of their time in looking after the sending of the laborers to work on the river diversions for Sections one (1), two (2), three (3) and four (4). The District has assumed the payment of the tickets for carrying these laborers back and forth, and has directed that the price of the tickets for each laborer be kept out of his pay. This has necessitated much extra work, as over five thousand dollars worth of tickets were used during the month of September.

The arguments and briefs before the Supreme Court in the case of the Sanitary District of Chicago vs. Tedens et al., appealed from DuPage County, have been prepared and filed at Ottawa; the case of the Sanitary District of Chicago vs. Burke et al. was continued until the next term of court on our motion for the purpose of supplying certain omissions in the record.

This Department is now fully occupied upon work connected with settlements for real estate purchases, in seeing that good title is obtained by the District, in entering verdicts where compensation for land taken has been agreed upon, and also, in drawing contracts and ordinances pertaining to the large amount of extra work now undertaken by the District.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM POLICE DEPARTMENT.

The Clerk presented a report from the Marshal, covering the period from the organization of the Police Department to October 1, 1893; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Oct. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to submit the following as my first formal report, and will say, by way of explanation, that while under the rules these reports should be made monthly, the great volume of business I have had to attend to has so occupied my time that I have been unable to arrange correct data for an earlier report, but in future will submit reports monthly as the rules require. On August 21st, thirty-four of the thirty-five men selected as patrolmen (which selection was duly reported) assembled at the Rialto Building in response to notice and went with me to the Central Station at Sag Bridge, where they remained under drill and instruction until Saturday, August 24th, when I appointed the following sergeants and assigned them to duty with six men each, except the Central Station, where I kept five men:

Thomas A. Mahoney, First Sergeant, Central Station.

Henry J. Doran, Second District, Summit.

Robert L. Nelson, Third District, Willow Springs.

Michael Madden, Fifth District, Lemont.

Edward J. Coen, Sixth District, Romeo.

The men were lodged, pending the building of the stations at Summit, in tents belonging to me, for which no expense follows; at Willow Springs, in a cottage belonging to Mrs. Sherwood, at a cost of $12.00; at Sag, in the building turned over by Engineering Department to the Police Department; at Lemont, in a building held by Mr. Talty, for the use of which we may have to pay $10.00; at Romeo, in the building erected for a coal shed on the station site—no expense following.

The four stations contracted for at $1,148.62 each were completed within the time specified, except a little of the painting, (which has since been well done) and for the contract price, without extra charge of any kind.

The five iron cages, requisition for which was allowed by your Honorable Board, were contracted for at $120.00 each, complete and in place, from Frank Smith, of Chicago, who was the lowest bidder, the weight and strength of construction considered. The cages are all in place and in use and are complete except the soil buckets, which latter, I am advised, will be here this week.

Beckwith, who was appointed as one of the original men, failed to report for duty and J. H. Devine was appointed in his stead. Martin Koller having resigned September 30th, George W. Bull was taken from the list of eligibles and assigned to the vacancy.

Eleven men have been sworn in as special policemen, as follows:

On my own motion—

Farrell C. Larney, the driver of the police team, and F. E. Michaud, carpenter and contractor.

On request of Wm. Harley & Son—

T. D. Ives, Charles Wink, John Donelly, James Maloney, Ferdinand Wallenberg, C. S. Hardy, John D. Boyd, Frank Gwynn, Martin Koller.

The star of Martin Koller has been recalled for improper conduct.

The work of the department has been greatly increased by the emergency work; four men have been detailed on the Chicago & Alton work trains since the start and three men on the Santa Fe work trains. Since the start two men each have been detailed to Harley & Son and McArthur Bros. each pay day and the night following. The health of the department has been good, five men in all have been absent on sick leave, two are now absent, one suspended pending an investigation.

As the season advances the work of the department increases, notwithstanding the fact that the army of idle persons unwilling to work which we found infesting the District, have almost entirely disappeared.

The discipline, efficiency and deportment of the force is at a high standard.

The following is a summary of the work of the department not before referred to:

Total number of arrests	112
Total fines imposed	$546 00
Committed to County Jail—Cook and Will	13
Committed to Bridewell	2
Dead bodies recovered from canal	3
Dead bodies removed from railroad tracks and right of way	7
Dead bodies removed from river	1
Obstructions removed from railroad tracks	9

Respectfully submitted,

(Signed) EDWARD WILLIAMS,
Marshal."

CANCELLATION OF SUPPLEMENTAL BOND OF TREASURER.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, with reference to and accompanied by the report from the Treasurer, requesting the cancellation and return of his last supplemental bond, presented and referred to that Committee at the meeting held September 27, 1893 (page 1482 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with accompanying report from the Treasurer, placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to cancel and return the supplemental bond, as provided in the report.

On roll-call the vote stood: Yeas—

Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with accompanying report from the Treasurer, placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to cancel and return the supplemental bond as provided in the report.

The following is

THE REPORT:

"CHICAGO, Oct. 11, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Finance, to whom was referred the communication of the Treasurer of September 27, 1897, requesting the cancellation and return to him of his last supplemental bond on account of a reduction in the amount of funds in his hands, recommend that the Clerk of the Board be authorized and directed to cancel and surrender to the Treasurer of the District said supplemental bond, bearing date the 8th day of June, 1893, and approved the 14th day of June, 1893.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.

THOMAS KELLY,
Committee on Finance."

PURCHASE OF "ROSENCRANS," "HURFORD," "JONES," "NEWELL," "SABIN" AND "LEMAN" LANDS.

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order, authorizing and directing the Clerk to pay Jacob Rosencrans, William Hurford, Harriet A. Jones, William Jarvis Jones, George Edwin Jones, Mary O. Newell, Harriet G. Sabin and Henry W. Leman, Trustee, on the vouchers of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, for right of way lands in said county, in full of verdict for said lands in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Jacob Rosencrans, Harriet A. Jones, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Jacob Rosencrans, William Hurford, Harriet A. Jones, William Jarvis Jones, George Edwin Jones, Mary O. Newell, Harriet G. Sabin and Henry W. Leman, Trustee, on the vouchers of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, for right of way lands in said County, in full verdict for said lands in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Jacob Rosencrans, Harriet A. Jones, et al., as proviced in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the vouchers of the Attorney, to Jacob Rosencrans, represented by Samuel R. Hurford, his attorney, the sum of one thousand four hundred and seventy-five and sixty one-hundredths ($1,475.60) dollars, and to William Hurford, represented by said Samuel R. Hurford, his attorney, the sum of nine hundred and seventy-eight and forty one-hundredths ($978.40) dollars, in full payment for their respective undivided interests in and to the following described land, to-wit:

That part of the northeast quarter (N. E. ¼) of the south west quarter (S. W. ¼) of the the south west quarter (S. W. ¼) of Section five (5), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of said section, five hundred and forty-one (541) feet north (N.) of the southwest (S. W.) corner of said section, to a point in the east- line of said south west quarter (S. W. ¼) of said section, one thousand and seventy-eight and eight one-hundredths (1078.08) feet south (S.) of the northeast (N. E.) corner of said southwest quarter (S. W. ¼) of said section; said premises lying and being situate in the County of Cook, State of Illinois;

And to Harriet A. Jones, William Jarvis Jones, George Edwin Jones, Mary C. Newell, Harriet G. Sabin, and Henry W. Leman, trustee, represented by Swift, Campbell, Jones & Martin, their attorneys, the sum of thirty-eight thousand two hundred and fifty-eight ($38,258.00) dollars, in full payment for their respect-

ive undivided interests in and to the following described lands, to-wit:

The north (N.) two hundred and sixty-four and six-tenths (264.06) feet of the west half (W. ½) of the southeast quarter (S. E. ¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, except railroad right of way.

That part of the east half (E. ½) of the southwest quarter (S. W. ¼) of the northeast quarter (N. E. ¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of said northeast quarter (N. E. ¼); thirty-three and ninety-four one-hundredths (33.94) feet north (N.) of the center of said section, to a point in the east line of said section, ten hundred and ninety and ten one-hundredths (1090.10) feet north (N.) of the east (E.) quarter corner of said section.

That part of the east half (E. ½) of the southeast quarter (S. E. ¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Atchison, Topeka & Santa Fe Railroad Company in Chicago.

All of said premises lying and being situate in the County of Cook, State of Illinois,

Said sums being the respective amounts awarded by the verdict and report of the jury, and the order and judgment entered thereon in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Jacob Rosencrans, Harriet A. Jones et al., in the Circuit Court of Cook County, Illinois, General Number 118,948, on the Fourth day of October 1893."

PURCHASE OF "PECKHAM" LANDS.

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order, authorizing and directing the Clerk to pay Orville Peckham, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, for right of way lands in said County, in full verdict for said lands, in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Orville Peckham, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Orville Peckham, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, for right of way lands in said county, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Marianna A Ogden, Orville Peckham et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay on the voucher of the Attorney to Orville Peckham the sum of two thousand dollars ($2,000.00), in full payment for the following described land, to-wit:

That part of the south half (S. ½) of the south half (S. ½) of the northwest quarter (N. W. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west line of said northeast quarter (N. E. ¼), one thousand and seventeen (1,017) feet north (N.) of the southwest (S. W.) corner of said northeast quarter (N. E. ¼) to a point in the east line of said section, four hundred and ninety-six and ninety-five one-hundredths (496.95) feet south (S.) of the northeast (N. E.) corner of said section. Said land lying and being situate in the County of Cook, State of Illinois.

Said sum being the amount awarded by the verdict and report of the jury and the order and judgment entered thereon in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Orville Peckham et al., in the Circuit Court of Cook County, Illinois, General Number 118,948, on the tenth day of October, A. D. 1893."

EMPLOYMENT OF MEN ON RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committee

on Labor, stating that by the reports of the Chief Engineer there were about 2,500 men employed each day on the special river diversion work on Sections 1, 2, 3 and 4, and that the work was progressing satisfactorily.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

OCTOBER 18, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, October 18, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call, Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, and Wenter—seven (7) members were present.

MINUTES.

The minutes of the regular meeting held October 11, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, (half month, ending Oct. 15, 1893).....	$ 2,690 54
Eng. Dept., Div. No. 1, tow path, (half month ending Oct. 15, 1893).	480 67
Eng. Dept., Div. No. 1, trainmen, (half month. ending Oct. 15, 1893).....	116 00
Eng. Dept., Div. No. 2, (half month, ending Oct. 15, 1893).....	745 80
Eng. Dept., Div. No. 3, (half month, ending Oct. 15, 1893).....	679 25
Eng. Dept., Div. No. 4, (half month, ending	

Oct. 15, 1893).....	$ 107 50	
Eng. Dept., Div. No. 4, Time-keepers, (half month, ending Oct. 15, 1893).....	499 20	
		$ 5,318 96
Clerical Dept., office roll,(half month,ending Oct. 15, 1893).....		137 50
Law Dept., office roll, (half month, ending Oct. 15, 1893).....		102 50
Police Dept., field roll, (half month, ending Oct. 15, 1893).....		1,309 14
Total.....		$ 6,868 10

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, Oct. 16, '93).....$	590 62	
Agnew & Co. (Sec. 5, Oct. 16, '93).....	4,205 25	
Agnew & Co. (Sec. 6, Oct. 16, '93).....	2,622 38	
Agnew & Co. (Sec. 7, Oct. 16, '93).....	8,830 50	
Agnew & Co. (Sec. 8, Oct. 16, '93).....	8,175 79	
Agnew & Co. (Sec. 9, Oct. 16, '93).....	3,962 61	
E. D. Smith & Co. (Sec. 10, Oct. 16, '93).....	9,992 50	
Mason, Hoge & Co. (Sec. 11, Oct. 16, '93).	8,737 31	
Mason, Hoge & Co. (Sec. 12, Oct. 16, '93).	13,314 00	
Mason, Hoge & Co. (Sec. 13, Oct. 16, '93).	12,819 62	
McCormick Const. Co. (Sec. 14, Oct. 16, '93).	4,599 00	
L. D. Conner & Co. (Sec. A, Oct. 16, '93).	4,073 12	
L. D. Conner & Co. (Sec. B, Oct. 16, '93).	6,426 00	
Western Dredging and Impt. Co. (Sec. C, Oct. 16, '93).....	5,851 26	
E. D. Smith & Co. (Sec. D, Oct. 16, '93).....	3,079 90	
Streeter & Kenefick, (Sec. E, Oct. 16, '93).	7,809 49	
Ricker, Lee & Co. (Sec. F, Oct. 16, '93).	5,946 98	
		$111,036 33

ENGINEERING DEPARTMENT.

J. R. Davis & Son, (test pits).....$	375 37	
E. D. Smith & Co. (erecting platform, Sec. 11).....	75 38	
Seelig & Kandler, (repairing calculating machine).....	3 00	
Chicago Towel Supply Co. (toweling).....	5 40	
Geo. Brainard, (gauge reading).....	10 00	
E. Hastings, (gauge reading).....	10 00	
Wm. Kirkham, (gauge reading).....$	10 00	
P. McGinnis, (gauge reading).....	10 00	
Mary Rusk, (gauge reading).....	10 00	
W. T. Keating, (expense).....	39 72	
U. W. Weston, (traveling).....	38 10	
D. C. Dunlap, (traveling).....	149 77	
H. B. Alexander, (traveling).....	20 41	
F. Wollenberg, (traveling).....	16 28	
		$ 773 43

LAW DEPARTMENT.

John P. Wilson, (services as Gen. Counsel)$	1,250 00	
Chicago Daily Law Bulletin, (subscription).....	2 50	
Orrin N. Carter, (expense).....	200 00	
Orrin N. Carter, (expense).....	400 00	
Orrin N. Carter, (expense).....	17 26	
		$ 1,869 76

GENERAL ACCOUNT.

The Engineering Record, (advertising re-letting Secs. 2, 3 and 4).....	$ 84 00

POLICE DEPARTMENT.

Marshall Field & Co., (window shades)....	$ 37 88
Grand total.....	$120,669 50

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 373, Engineering Department, (level rod).....$	7 75
No. 374, Engineering Department, (level pole).....	6 00
No 375, Engineering Department, (cement tester).....	100 00

No. 465, Law Department, (stationery)	$ 6 00
No. 1052, Clerical Department, (furniture and stationery)	32 50
Total	$152 25

Mr. Eckhart, seconded by Mr. Kelly, moved that Requisition No. 375 for the Engineering Department, as read and shown above, be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and Requisition No. 375, for the Engineering Department, as read and shown above, was so referred.

Mr. Kelly, seconded by Mr. Eckhart, moved that Requisitions Nos. 373 and 374, for the Engineering Department, No. 465, for the Law Department, and No. 1052, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisitions, Nos. 373 and 374 for the Engineering Department, No. 465, for the Law Department, and No. 1052, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending October 14, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, October 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending October 14, 1893, as the same have been reported to me:

Engineering Department	106
Engineering Department, Towpath	47
Engineering Department, Timekeepers	12
Engineering Department, Trainmen	4
	—169
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	218

Respectfully submitted,

(Signed) THOS. F. JUDGE, *Clerk.*"

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of September, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of September, 1893, was $796.30, divided as follows:

Salaries	$ 741 66
Stationery	26 39
General expenses	28 25
Total	$796.30

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $900.

The total amount expended and charged to the General Account during the month of September, 1893, was $3,924.58, divided as follows:

Salaries	$2,533 33
Advertising	230.15
Printing and Stationery	308 57
Janitor Service	80.00
Insurance Premium	750.00
General expenses	22.53
Total	$3,924 58

There are outstanding liabilities against the General Account to the amount of about $400, for advertising,

and the expenses for the present month will be about $6,500.

During the month of September, 1893, there were warrants authorized and drawn against the various accounts as follows:

Engineering Department	$ 12,040 40
Clerical Department	796.30
Law Department	2,640.75
Treasury Department	166.67
General Account	3,924.58
Engineering Department (Construction Account)	323 149 35
Law Department (Land Acc't)	305,750.29
Police Department	6.494.47
Total	$654.962 81

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

PLANS AND SPECIFICATIONS FOR SPILLWAY AT SUMMIT.

The Clerk presented a report from the Chief Engineer, accompanied by two tracings and specification, being plans and specifications for the spillway at Summit; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report, with accompanying plans and specifications, be approved and adopted, and the report ordered printed, and, with enclosures, placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report, with accompanying plans and specifications, approved and adopted, the report ordered printed and, with enclosures, placed on file.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith map of the locality with plans of the spillway north of the Santa Fe railway and specifications under which it is to be constructed. This location was selected after careful investigation by test pits had demonstrated that the underlying rock furnished secure foundations and a natural apron to receive the discharge over the wier, thus saving the very large outlay which would have been involved in securing stable foundations and making apron should any one of the other sites which have been considered have been adopted. The body of this dam is to be made of concrete for reasons of economy and expedition. This will be capped with stone coping and faced with stone wherever it will be subject to impact from drift of any character.

Estimated quantities are as follows:

Concrete (body of dam) 1290 cubic yards, at $6.50	$ 8,385.00
Masonry, coping and facing, 150 cubic yards, at $12	1,800.00
Portland cement facing, 1050 cubic yards, at 60 cents	630.00
2,000 square yards of rip-rap, at 50 cents	1,000.00
	$11,815,00
Add for contingencies of all kinds	1,772.25
	$13,587.25

In the levee the estimate calls for 25,000 cubic yards which, at contract price, figures up $5,937.50.

The crest of the wier is to be sixteen and twenty-five one-hundredths (16.25) feet above datum. This height will prevent any flow towards Chicago of Desplaines flood waters until a volume not less than two hundred and fifty thousand (250,000) cubic feet per minute is passing Riverside. Heretofore the flow toward Chicago has begun when the flood passing Riverside reached fifty thousand (50,000) feet per minute. This provision for the protection of Chicago we believe to be the best which we are able to make until such time as arrangements have been made for the westerly end of our channel for the carrying of larger volumes of water safely through Joliet. The benefit to Chicago by what we are now able to accomplish will be very great as it will lessen the duration of floods from this quarter and also materially diminish their volume.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,

Chief Engineer."

(Including specification and two (2) tracings.)

MANNER OF CONSTRUCTION OF SPILLWAY AT SUMMIT.

The Clerk presented a report from the Chief Engineer, suggesting a manner of

constructing a spillway at Summit; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be ordered printed and referred to the Joint Committee on Engineering and Finance, and the Chief Engineer directed to ascertain the approximate cost of various methods of constructing the spillway, and submit the same to that Committee, the Committee to report at the next meeting.

The motion prevailed unanimously; and the report was ordered printed and so referred, and the Chief Engineer so instructed.

The following is

THE REPORT:

"CHICAGO, October 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In the matter of the construction of spillway, for which plans and specifications have this day been submitted, I am of the opinion that time and money can be saved to the District by employing a competent and reliable mason foreman and a suitable force of masons and laborers, buying the material and doing the work ourselves. I therefore ask for an order to do the work in this manner.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

PAYMENT OF BALANCE ON "HINCKLEY" LAND.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the payment of balance on purchase made from Francis E. Hinckley, of certain right of way lands in Cook County, part payment having been previously ordered made on the report of that Committee, presented and adopted at the meeting held September 6, 1893, (page 1437 of the Proceedings) and authorizing and directing the Clerk to pay the balance for said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Francis E. Hinckley, on the voucher of the Attorney, the balance for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said Francis E. Hinckley, on the vouchers of the Attorney, the balance for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In our report to your Honorable Body of September 6, 1893, we reported an agreement to purchase, for the corporate purposes of the District, from Francis E. Hinckley, land in said report described, for the sum of seven hundred and seventy dollars ($770.00), and by a misunderstanding the price as stated in our report was fixed at seven hundred and seventy dollars ($770.00), or at the rate of one thousand dollars ($1,000) per acre, whereas as claimed by Mr. Hinckley the price for which he agreed to sell same was one thousand dollars ($1,000.00) for the tract. Inasmuch as one thousand dollars ($1,000.00) for the tract is as favorable a rate as we have been able to obtain in the purchase of adjoining tracts, we recommend that the Clerk of this District be directed to pay upon the voucher of the Attorney to said Francis E. Hinckley, in addition to the sum heretofore authorized to be paid, the sum of two hundred and thirty dollars ($230.00), in full payment for said land, described in said report as follows, to-wit:

That part lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company, of the east half (E. ½) (in area) of that part of the northwest quarter (N. W. ¼) of the northeast quarter (N. E. ¼) of Section three (3), Township thirty-eight (38) North, Range thirteen (13) East of the Third Principal Meridian, lying north (N.) of the northerly reserve line of the Illinois and Michigan Canal, containing seventy-seven one-hundredths (0.77) of an acre, more or less.

Said land lying and being situate

in the County of Cook, in the State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY.
THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

LEVEE, TRESTLE AND BORINGS ON SECTION A.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by two reports, with enclosures, from the Chief Engineer, concerning a levee, trestle and borings on Section A., presented and referred to that Committee at the meeting held October 4, 1893, and October 11, 1893, (Pages 1492 and 1508 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and, with enclosures, placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and, with enclosures, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the matter of a pile trestle, and the filling of a levee and borings for same on Section A., as recommended in reports of the Chief Engineer, October 4, (Page 1492) and October 11, (Page 1508), referred to the Joint Committee on Engineering and Finance, the Committee reports as follows:

The Chief Engineer has made the necessary borings on the suggestion of the Committee, and it is recommended that his action be approved.

The Chief Engineer has ascertained the cost of the trestle in the manner authorized at the last meeting. The order submitted is therefore unnecessary. The specifications submitted are herewith returned for the approval of the Board.

It is recommended that the Chief Engineer be authorized and instructed to make the necessary arrangements for the construction of the trestle as soon as practicable at a cost not exceeding ten thousand ($10,000) dollars, and with the concurrence and approval of the President and Clerk.

It is further recommended that the Chief Engineer be directed to ascertain the actual cost of filling in the levee with suitable material, with a view to completing the work at the earliest date practicable, and to submit his results to the Committee.

The communications of the Chief Engineer and the specifications for the trestle are herewith returned.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
JOHN J. ALTPETER,
WM. BOLDENWECK,
B. A. ECKHART,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

(Accompanied by three (3) enclosures.)

ACTION ON BIDS ON RE-LETTING SECTIONS 2, 3 AND 4 OF THE MAIN CHANNEL.

Mr. Cooley, Chairman, presented a verbal report from the Joint Committee on Engineering and Finance, with reference to the bids for the reletting of Sections 2, 3 and 4 of the Main Channel, received, opened and referred to that Committee at the meeting held October 4, 1893, (page 1498 of the proceedings); stating that the Committee were not yet ready to report recommending the awarding of contracts to any of the bidders, pending the presentation and action on two communications received from McArthur Brothers, proposing to complete the work on Sections 2, 3 and 4, at certain prices and under certain condi-

tions, as set forth in the communications.

TRUSTEES' ILLINOIS VALLEY TRIP.

Mr. Boldenweck, Chairman, presented a report from the Committee on Federal Relations, with reference to a trip by boat down the Illinois Valley, as recommended in the report of that Committee adopted and concurred in by the Board at the meeting held July 19, 1893, (page 1341 of the Proceedings); and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be adopted, ordered printed and placed on file, and the recomendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Committee on Federal relations has given further consideration to the question of a trip down the Illinois Valley, as recommended in its report of July 19, 1893, (Page 1341 of the Proceedings,) and adopted by the Board.

It is concluded that the most convenient time will be the first week in November, the party to leave Chicago on Wednesday afternoon, November 1st, and that the trip should cover the lower Illinois from LaSalle to the Mississippi. It will be feasable to take a boat at La Salle on Thursday morning, making Peoria on Thursday night, stopping at such intermediate points en route as may be expedient. On Friday it will be feasable to reach Beardstown in a similar manner, and on Saturday, the trip may be extended to Alton, should it be practicable to arrange for a boat, and the passage of the LaGrange lock. The party could return on Sunday, at latest, and those who found it necessary could return from Beardstown or other point.

It is recommended that the trip be undertaken substantially as outlined, and that the Clerk, in conjunction with Assistant Engineer E. J. Ward, be instructed to make the necessary arrangements.

Very respectfully submitted,

(Signed) WM. BOLDENWECK,
Chairman.
L. E. COOLEY,
JOHN J. ALTPETER,
Committee on Federal Relations."

INSPECTION OF MAIN CHANNEL BY CONGRESS OF PUBLIC HEALTH.

Mr. Gilmore, Chairman, presented a verbal report from the Committee on Health and Public Order, with reference to the communication from Dr. F. W. Brewer, representing the "International Congress of Public Health," suggesting an inspection of the Main Channel by the visiting delegates attending that Congress, which communication was presented and referred to that Committee at the meeting held October 4, 1893, (page 1495 of the Proceedings).

Mr. Gilmore stated that the Committee had been unable to secure a train from the Santa Fe Railroad, that meantime the Congress had adjourned, and that it was was not necessary at this time to take any further action, and the Committee therefore returned the communication from Dr. Brewer, with the recommendation that it be placed on file.

By unanimous consent it was so ordered.

EMPLOYMENT OF MEN ON RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committee on Labor, stating that there were no new devolopments, that work was proceeding rapidly and that the river diversion on Section 1 was now in good condition.

PROPOSITION FOR COMPROMISE ON SECTIONS 2, 3 AND 4 FROM MCARTHUR BROTHERS.

The Clerk presented two communications from McArthur Brothers proposing to complete their work on Sections 2, 3 and 4 at certain prices and under certain conditions, as set forth in the communications; and the communications were read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the communications be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed, and the commu-

nications were ordered printed and so referred.

The following are

THE COMMUNICATIONS:

"CHICAGO, Oct. 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We herewith submit to you a proposition to proceed with and complete our work on Sections 2, 3, and 4 of the Main drainage Channel at the prices therein shown, modified to meet the unexpected character of the material now demonstrated to exist on those sections. We have cleared and grubbed these sections, built large levees along them at extraordinary cost, as the surface from which the material was taken was largely swamp, and covered with trees, roots, water, etc., which made it very difficult and expensive, and to expedite the work, we pushed it during wet and winter weather. For this work we have not yet been paid. The contractors who recently bid for these sections of ours did not have to estimate this expense, and of course bid less on this account. Our large plant is still upon the ground, and our boarding houses, shops, store-houses, stables, office buildings, track and material are yet on the work and in good order for immediate use by us. If the cost of the preliminary work we have done was added to the aggregate of the present lowest bidder, we would be found many thousands of dollars lower than any.

We make this compromise proposition that we may prosecute our work in the spirit with which it was begun, and to aid the District in an amicable adjustment of the unexpected difficulties encountered, with the understanding that if it is accepted by you, we will waive all existing claims for advances, preparatory work and other claims now made by us.

Very respectfully,

(Signed) MCARTHUR BROS."

"CHICAGO, Oct. 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We hereby offer to immediately proceed with and complete the work under our contracts on Sections 2, 3 and 4 of the Main Drainage Channel, within the contract time, and in accordance with the opinion as to classification of your present Chief Engineer, as rendered to your Honorable Board, in consideration of the following prices, viz:

SEC.	Glacial Drift.	Solid Rock.	Retaining Walls.
	Price per cu. yd.	Price per cu. yd.	Price per cu. yd.
No. 2..	$ 0.50	$ 0.80	$ 1.74
No. 3..	56	76	1 75
No. 4..	49	80	1.87

These prices are less in the aggregate on each section than the aggregate prices of the lowest bidder in the proposals received by you October 4, 1893, upon our work.

We make this offer as a settlement of existing differences, and trust this proposition will meet the approval of your Honorable Body.

Very respectfully,

(Signed) MCARTHUR BROS."

INVITATION TO VISIT PEORIA.

The Clerk presented a communication, directed to President Wenter by Hon. Philo B. Miles, Mayor of the City of Peoria, Illinois, inviting the Board of Trustees, on behalf of the City Council of that city, to visit Peoria on their proposed tour of inspection down the Illinois River; and the same was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the communication be ordered printed and placed on file, and the Clerk directed to answer the communication, accepting the invitation on behalf of the Board.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

PEORIA, Ill., Oct. 12, 1893.

Hon. Frank Wenter, President of the Board of Trustees of the Sanitary District of Chicago:

DEAR SIR—Having been advised that your Board of Trustees contemplate making a tour of inspection down the Illinois River at an early date, our City Council have unanimously instructed me to extend to your Board a cordial invitation to visit our city at such time as may be most convenient to you when making the trip, and while here you are expected to be the guests of the city. Our citizens feel a deep interest in the great enter-

prise which your Board have in charge, and will be pleased to meet the gentlemen comprising your Board.

Yours very respectfully,

(Signed) PHILO B. MILES,
Mayor"

COMMISSIONER OF PUBLIC WORKS ON DIVERSION OF DESPLAINES RIVER.

The Clerk presented a communication from Mr. H. J. Jones, Commissioner of Public Works of the City of Chicago, with reference to the diversion of the Desplaines River, between Riverside and the Lyons road, and requesting information on the intentions of the District with regard to the same; and the communication was read.

Mr. Gilmore, seconded by Mr. Kelly, moved that the communication be ordered printed and referred to the President, with directions to answer the same, setting forth the condition of the work, and what the District proposes to do, and to transmit to the Board for record a copy of the letter so sent.

The motion prevailed unanimously, and it was ordered printed and so referred.

The following is

THE COMMUNICATION:

"DEPARTMENT OF PUBLIC WORKS,
CHICAGO, Oct. 12, 1893.

To the Hon. Frank Wenter, President, and Commissioners of the Sanitary District of Chicago:

GENTLEMEN—The City of Chicago is very anxious about the progress of the work you are doing on the Desplaines river diversion, between Riverside and Lyons road. The fall season is here, and we may naturally expect the usual rain with consequent floods. By your operations the bed of the Desplains river is obstructed by materials which will of necessity send nearly all of the water of the upper Desplaines through the Ogden ditch and the Chicago river, putting the river in a very unsanitary condition, and in case of floods, liable to do much damage in the city.

We respectfully ask that you give this matter your immediate attention, to the end that dykes be built and the diversion completed between these points as early as possible and before the fall rains and floods are upon us.

Respectfully yours,

(Signed) H. J. JONES,
Commissioner of Public Works."

PAYMENT OF EMPLOYES FROM EMERGENCY FUND FOR "EXTRA" WORK ON SECTIONS 11 AND 12.

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay out of the special emergency fund now in his hands for the payment of employes, pursuant to order of the Board of October 4th, 1893, a certain sum, as provided in the order, for the payment of laborers and employes on the "extra" work on the river diversion and levees on Sections 11 and 12, said money to be paid on approved pay-rolls of October 15; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart. Gilmore, Kelly, and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay out of the special emergency fund in his hands in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby authorized and directed to pay out of the moneys in his hands drawn upon his own voucher as emergency fund for the payment of employes pursuant to order of this Board of October 4th, 1893, (page 1497 of the Proceedings), to Mason, Hoge & Co., who are doing the work of the river diversion on contract Sections eleven (11) and twelve (12) as provided in their contracts under the head of extra work, the sum of Four Thousand Dollars ($4,000.00), the same to be applied by them to the payment of the pay rolls of employes on said Sections of October 15th; *provided* said respective pay rolls shall have been first approved by the Chief Engineer, the Clerk and the Finance Committee of the District."

PAYMENT OF RIVER DIVERSION EMPLOYES ON SECTIONS 1, 2, AND 4 OUT OF EMERGENCY FUND.

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay out of the special emergency fund now in his hands for the payment of employes, pursuant to orders of the Board of September 19 and October 4, 1893, (pages 1458 and 1497 of the Proceedings), certain sums as provided in the order, for the payment of laborers and employes on the

river diversion and levees on Sections 1, 2 and 4 of the Main Channel, said money to be paid on approved pay-rolls of October 15, 1893; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore. Kelly and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay out of the special emergency fund in his hands, in accordance with the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby authorized and directed to pay out of the moneys in his hands, drawn upon his own vouchers as emergency fund, for the payment of employes, pursuant to orders of this Board of September 19th and October 4th, 1893, the pay-roll of October 15th of employes working upon the river diversion upon Section one (1), under the direction of Alfred Harlev agent of this District, to the amount of twenty-eight thousand dollars ($28,000), and the pay-roll of October 15th of employes working upon the river diverson on Sections two (2) and four (4), under the direction of the McArthur Brothers Company, agent of this District, to the amount of twenty-five thousand dollars ($25,000), and that when said respective pay-rolls have been approved by the Chief Engineer, the Clerk and the Finance Committee of the District, the Clerk shall cause said employes to be paid through said agents the amounts found respectively due them."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

OCTOBER 25, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-third regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, October 25, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll call, Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9) members were present.

MINUTES.

The minutes of the regular meeting held October 18, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

Accompanying the vouchers, the Clerk presented three (3) reports from the Chief Engineer with reference to the rolls transmitted for the work done on Sections 1, 2, 4, 11 and 12; and the reports were read.

Mr. Prendergast, seconded by Mr. Boldenweck, moved that the reports be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Oct. 18, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith vouch-

er for amount of pay rolls on Section No. 1, river diversion. Alfred Harlev, agent, October 1st to 15th.

Amount of rolls....	$28,694 68	
15 per cent added..	4,304 20	
		$32,998 88
Previous payments.		43,473 67
Total to date. ..		$76,472 55

No extra bills included in above statement since October 5th.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, October 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith vouchers for emergency work on Sections No. 2 and No. 4, October 1st to 15th, McArthur Bros. Co., agents.

Section No. 2.

Amount of labor rolls.....	$13,342 05	
15 per cent added..	2,001 31	
Total now due.....		$15,343 36
Previous payments		17,891 65
Total to date...		$33,235 01

Section No. 4

Amount of labor rolls.....	$11,393 88	
15 per cent added..	1,709 08	
Total now due.....		$13,102 96
Previous payments		12,422 38
Total to date...		$25,525 34

No extra bills included in these returns since September 27th.

Respectfully submitted.

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, Oct. 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith vouchers for work done on Sections No. 11 and 12, river diversion, by Mason, Hoge & Co., under extra work clause of contract.

Section No. 11, September 5th to 30th.....	$ 7,691 84
Section No. 11, September 30th to October 15th.....	4,325 90
Total to October 15th.....	$12,017 74

Section No. 12, draining Goose Lake:

Total amount of bills rendered for completed work, including percentage.....	$ 8,942 88

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, River Diversion, October 15, 1893).....	$32,998 88	
McArthur Bros. Co. (Sec. 2, River Diversion, October 15, 1893)	15,343 36	
McArthur Bros. Co. (Sec. 4, River Diversion, October 15, 1893)	13,102 96	
Mason, Hoge & Co. (Sec. 11, extra work, River Diversion, September 30, 1893).....	7,691 84	
Mason, Hoge & Co. (Sec. 11, extra work, River Diversion, October 15, 1893).....	4,325 90	
Mason, Hoge & Co. (Sec. 12, extra work, River Diversion, September 25, 1893).....	8,942 88	
E. D. Smith & Co. (Sec. 10, extra work, Western Stone Co. Bridge, October 14. 1893).....	4,291 68	
E D. Smith & Co. (Sec. 18, extra work, Stephens Street Bridge, October 21, 1893).....	6,963 88	
		$33 661 38

ENGINEERING DEPARTMENT.

F. Mayer & Co., (blue prints).....	$ 126 71
Barnard & Gunthorp, (printing specifications, Secs 2, 3 and 4)	110 00
Shoemaker & Higbee, (timber).....	235 78
R. W. Goodwillie Box Co. (pine stakes)....	80 00
Seth Thomas Clock Co. (clock).....	4 00

Robt. H. Cowdrey, (postage stamps)....	20 00	
S. L. Derby, (lumber, railroad platforms)..	579 88	
M Paterson (typewriting and stenographer)	23 85	
Alex. E. Kastl, (expense).....	19 61	
Thos. T. Johnston, (expense).....	38 70	
		$ 1,238 53

CLERICAL DEPARTMENT.

Waukesha Hygeia Mineral Springs Co. (water).....		3 75

LAW DEPARTMENT.

Barnard & Gunthorp, (printing briefs).....	$ 68 00	
Chicago Legal News Co. (printing notices)	26 50	
Chicago Legal News Co. (printing notices)	14 40	
Western Union Telegraph Co. (telegraph service).....	7 61	
Orrin N. Carter, (expense).....	46 67	
Orrin N. Carter, (expense).....	26 29	
Thos. B Lantry, (traveling).....	10 98	
		$ 200 45

LAW DEPARTMENT.

Land Account—		
Wm. C. Barber, (Will Co. abstracts).....		600 00

GENERAL ACCOUNT.

Chicago Arbeiter Zeitung Publishing Co. (advertising Secs. 2, 3 and 4).....	$ 9 00	
The Chicago Times, (advertising Secs. 2, 3 and 4, 60 days).....	384 00	
Chicago Edison Co. (electric lighting)..	24 00	
		$ 417 00

POLICE DEPARTMENT

Lanz, Owen & Co. (belts and batons)...		72 50
Grand total.....		$ 96 193 61

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck *(except as to percentage on Construction Vouchers)*, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 376, Engineering Department, (drawing paper).....	$ 10 23
No. 377, Engineering Department, (time sheets)	9 38
No. 467, Law Department, (stationery).....	19 00
No. 915, Police Department, (lap robes).....	25 50
Total.....	$ 64 11

Mr. Boldenweck, seconded by Mr. Russell, moved that Requisitions Nos. 376 and 377, for the Engineering Department, No. 467, for the Law Department, and No. 915, for the Police Department, as read and shown above, be allowed.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None..

Upon which result the President declared the motion carried, and Requisitions, Nos. 376 and 377 for the Engineering Department, No. 467 for the Law Department, and No. 915 for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending October 21, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, October 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending October 21, 1893, as the same have been reported to me:

Engineering Department	107
Engineering Department, Towpath	47
Engineering Department, Timekeepers	10
Engineering Department, Trainmen	4
	—168
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	217

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

PAYMENT FOR "HAWTHORNE ESTATE" LANDS.

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order, authorizing and directing the Clerk to pay to the County Treasurer of Cook County, Illinois, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of said County, certain moneys as a deposit for right of way lands in said County, in full of verdict for said lands in the case of the Sanitary District of Chicago vs. Isaac H. Price, Rose Hawthorne Lathrop, Thomas Kearney, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay to the County Treasurer of Cook County, Illinois, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of said County, certain moneys as a deposit for right of way lands in said County, in full of verdict for said lands in the case of the Sanitary District of Chicago vs. Isaac H. Price, Rose Hawthorne Lathrop, Thomas Kearney, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to the County Treasurer of Cook County, Illinois, the sum of nine thousand eight hundred and sixty ($9,860.00) dollars, to be held on deposit by said County Treasurer for the use and benefit of the owners of or persons interested in the land and property hereinafter described in Cook County, Illinois, in accordance with an order of the Circuit Court of Cook County, Illinois, filed October 25, 1893, in said court, in certain condemnation proceedings brought by the Sanitary District of Chicago against Isaac H. Price, Rose Hawthorne Lathrop, Thomas Kearney, et al., in said Circuit Court, general number 115,771. Said sum of nine thousand eight hundred and sixty ($9,860.00) dollars being the amount awarded by the verdict of the jury and said order of judgment in said condemnation proceedings to the owners of or persons interested in the land described in said order of judgment as follows, to-wit:

The south half (S. ½) of the north half (N. ½) of the southwest quarter (S. W. ¼) of the northeast quarter (N. E. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian; said premises lying and being situate in the County of Cook, State of Illinois."

WELLS AT POLICE STATIONS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Health and Public Order, with reference to and accompanied by a communication from the Marshal to President Wenter, transmitting bids for wells at police stations, presented and referred to that Committee at the meeting held October 4, 1893, (page 1494 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and, with enclosures, placed on file, and the recommendations made therein concurred in.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with enclosures, placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Oct. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Joint Committee

on Finance and Health and Public Order have duly considered the communications, accompanied by bids, from the Marshal to President Wenter, concerning wells for the Police Stations presented and referred to that Committee at the meeting held October 4, 1893, (page 1494 of the Proceedings).

Your Committee respectfully recommend that the proposition of Messrs. Foley & Bresnigham, for drilling and completing the five wells proposed, with tubing and pump as per specifications, for $1.50 per lineal foot, be accepted, and that the Attorney be instructed to draw a contract for the said work, to be performed in accordance with the specifications; 15 per cent of each estimate to be retained until the completion of the entire work; and that the President and Clerk be authorized and directed to execute said contract on behalf of the District.

The original communication of the Marshal, together with another received by the Committee, both enclosing bids, are returned herewith.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman
THOMAS KELLY,
WM. BOLDENWECK,
W. H. RUSSELL,
JOHN J. ALTPETER,
A. P. GILMORE.

Joint Committee on Finance and Health and Public Order."

(Six (6) enclosures.)

RECOMMENDATIONS ON CONSTRUCTION OF SPILLWAY AT SUMMIT, ON REQUISITION NO. 375 AND ON THE REVETMENT TO LEVEE ON SECTION A.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by reports, with specification, concerning the construction of a spillway at Summit, presented and referred to that Committee at the meeting held October 18, 1893, (page 1517 of the Proceedings); with reference to and accompanied by Requisition No. 375, for the Engineering Department, presented and referred to that Committee at the same meeting, (page 1515 of the Proceedings); and with reference to the building of a revetment to levee on Section A of the Main Channel; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed and, with all enclosures, placed on file, and the recommendations made therein concurred in, and the President, Clerk and Chief Engineer authorized and instructed, as provided in the report

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with all enclosures, placed on file, the recommendations made therein concurred in, and the President, Clerk and Chief Engineer authorized and instructed, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Oct. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In regard to the matter of constructing a spillway above the Santa Fe Railway, referred to the Committee at the last meeting (pages 1517-18) the Committee reports that actual prices have been received by the Chief Engineer, showing the cost of masonry to be $13,860, or slightly in excess of the estimate, and that $2,250 will be added for cost of excavating the foundations.

We therefore recommend that this very necessary work be at once undertaken at the approximate cost of $16,110, and that the Chief Engineer, with the concurrence and approval of the President and Clerk, be authorized and instructed to make the necessary arrangements for the construction thereof.

In regard to Requisition No. 375, for a cement testing machine, also referred to this Committee at the last meeting (page 1515), the Committee recommends that the same be allowed. Requisition is returned herewith.

In regard to certain work on the river diversion on Section A, the Committee recommends that the Chief Engineer be authorized and instructed to allow not to exceed 15 cents per yard for removing not to exceed 6,000 cubic yards of material between Stations 671 and 692, and place the same as a revetment to the levee when constructed of muck below said stations, said material to be so dis-

posed as to make said levee tight and secure.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
WM. BOLDENWECK,
JOHN J. ALTPETER,
B. A. ECKHART,
W. H. RUSSELL,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

(Two Enclosures and Specifications.)

ACTION ON BIDS ON RE-ADVERTISED SECTIONS 2, 3, AND 4, AND M'ARTHUR BROTHERS' COMPROMISE.

Mr. Cooley, Chairman, presented majority and minority reports from the Joint Committee on Engineering and Finance, with reference to the bids received on the re-advertised Sections 2, 3 and 4 of the Main Channel, and with reference to the proposition of compromise received from McArthur Brothers, recommending action concerning the compromise; awarding of contracts for said sections, and the return of deposits made by the bidders on certain sections as provided in the reports; and the reports were read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the majority report be adopted, ordered printed, and, with the minority report, placed on file, the recommendations of the majority report concurred in, and the Clerk authorized and directed, as provided in the said report.

Mr Kelly, seconded by Mr. Cooley, moved as a substitute that the minority report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed, as provided in the report.

On roll call, on the motion of Mr. Kelly, the vote stood: Yeas—Messrs. Cooley, Gilmore and Kelly—three (3). Nays—Messrs. Altpeter, Boldenweck, Eckhart, Prendergast, Russell and Wenter—six (6).

Upon which result the President declared the motion to substitute lost.

Mr. Prendergast, seconded by Mr. Eckhart, moved as an amendment to the motion of Mr. Eckhart, that the supplemental contract to be entered into with McArthur Brothers be drawn, including a provision protecting the Sanitary District against loss, damage or litigation of any and all kinds arising out of the re-advertising of said Sections, receiving bids thereon and the settling with said McArthur Brothers as set forth in the majority report, and a provision requiring the consent of the present bondsmen of McArthur Brothers and the continuance of the present bond.

On roll-call on the amendment the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Prendergast, Russell and Wenter—eight (8). Excused and not voting—Mr. Kelly—one (1). Nays—None

Upon which result the President declared the motion carried, and the amendment adopted.

On roll-call on the original motion of Mr. Eckhart, as amended, for the adoption of the majority report, the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Prendergast, Russell and Wenter—six (6). Nays—Messrs. Cooley, Gilmore and Kelly—three (3)

Upon which result the President declared the motion carried, the majority report adopted, ordered printed, and, with the minority report, placed on file, the recommendations of the majority report concurred in, the Clerk authorized and directed as provided in the said report, and the supplemental contract to be entered into with McArthur Brothers ordered drawn, including a provision protecting the Sanitary District against loss, damage or litigation of any and all kinds arising out of the re-advertising of said sections, receiving bids thereon and the settling with said McArthur Brothers as set forth in the majority report, and a provision securing the consent of the present bondsmen of McArthur Brothers and the continuance of the present bond.

The following is

THE MAJORITY REPORT:

"CHICAGO, Oct. 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance, to whom was referred the bids received October 4, 1893, under re-advertisement for the work on contract Sections two (2), three (3) and

four (4), submits herewith its report with reference to the same, together with a report on a communication from McArthur Brothers touching this same work, referred to this Committee on October 18, 1893.

The Committee has given the subject careful and exhaustive consideration, and recommends that all bids on Sections two (2) and four (4) be rejected, and that the checks deposited be returned to the bidders. It also recommends that the work on Section three (3) be let to Charles C. Gilman and Edwin McNeill. The bid was made in the name of Charles C. Gilman, and was the lowest bid on this section. The Finance Committee, acting as a sub-committee, has investigated the responsibility and experience of Mr. Gilman and is satisfied to recommend the letting of the contract to him, but Mr. Gilman, having informed this Committee that Mr. McNeill—also an experienced contractor of responsibility—is in partnership with him and is willing to enter into this contract with him it is thought advisable by this Committee to recommend that the contract be let to to them jointly.

The Committee further recommends that the Clerk of this District return all deposits made by bidders on said contract Section three (3) except the deposits of Charles C. Gilman, Sinclair Construction Co., and Christie & Lowe, and that these last named deposits be returned as soon as the contract for said work, with a satisfactory bond, has been entered into by said Gilman and McNeill.

This Committee would recommend that a settlement of all differences between the District and McArthur Bros. be made upon the following basis, viz:

First—McArthur Bros. contract as to Section three (3) be cancelled and the moneys due McArthur Bros. on same be paid to them.

Second—McArthur Bros. to be permitted to complete the work on Sections two (2) and four (4) under their existing contracts, the material excavated to be classified in accordance with the rulings of the Chief Engineer of the District heretofore made,—such classification to be accepted by said McArthur Bros., and in consideration thereof the prices to be paid said McArthur Bros. under their contracts for Sections two (2) and four (4) to be made to conform to the said proposition of McArthur Bros., dated October 17, 1893; said prices being as follows, viz..

Sec.	Glacial Drift.	Solid Rock.	Retaining Walls.
	Price cu. yd.	Price cu. yd.	Price cu. yd.
No. 2..	$0.50	$0 80	$1.74
No. 4..	49	.80	1.87

These prices in the aggregate are several thousand dollars lower than the aggregate prices of the lowest bids on these sections; the Committee further recommends that the necessary papers be executed to carry said settlement into effect.

Respectfully submitted,

(Signed) B. A. ECKHART,
W. H. RUSSELL,
WM. BOLDENWECK,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

The following is

THE MINORITY REPORT:

"CHICAGO, October 25, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—We are unable to concur in the recommendations of the majority. Any adjustment with McArthur Bros., on the basis of that firm's continuing the work, should have been made prior to the receiving of bids. To that end, the withdrawal of the advertisement would have been proper at any time, which would have permitted sufficient notice to intending bidders.

After the Board has advertised the work, and issued notice that this advertisement is made in good faith, and has actually received bids, we believe that no course is proper except to let the contracts to the lowest responsible bidders.

We are unable also to agree on the propriety of using bids so received in adjusting the matters in controversy with the McArthur Brothers. We believe the course proposed to be extremely impolitic, and that it will set a most uncomfortable precedent in treating other contracts which must soon come before the Board.

We do not concede any inalienable right on the part of McArthur Brothers to continue the work, but are disposed

to believe that they have claims that are entitled to the best consideration of the Board. Any settlement, however, at this time, should be based on the idea of payment out of hand for any work which may have benefitted the District.

We therefore conclude as follows:

1. That Sections 2, 3 and 4 be let to the lowest responsible bidders.

2. That any equity existing on account of work done under the prior contract be adjusted at once.

We therefore recommend that the subject matter be referred back to the Committee, with instructions to report in harmony with the above conclusions.

Very respectfully submitted,

(Signed) L. E. COOLEY.

THOMAS KELLY,

Of the Joint Committee on Engineering and Finance."

EMPLOYMENT OF MEN ON RIVER DIVERSION WORK.

Mr. Kelly, Chairman, presented a verbal report from the Special Committee on Labor, stating that the work on the river diversion on Sections 1, 2, 3 and 4 would be completed in about two weeks, and that the force at present had been reduced by about 500 men.

By unanimous consent, Mr. Prendergast was excused from the meeting.

PAYMENT OF DISCHARGED RIVER DIVERSION EMPLOYES ON SECTION 1 OUT OF EMERGENCY FUND.

Mr. Kelly presented an order, authorizing and directing the Clerk to pay out of the special emergency fund now in his hands for the payment of employes, pursuant to orders of the Board of September 19 and October 4, 1893, (pages 1458 and 1497 of the Proceedings) a certain sum as provided in the order for the payment of laborers and employes on the river diversion and levees on Section 1, laid off prior to October 31, 1893; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay out of the special emergency fund now in his hands, as provided in the order.

The following is

THE ORDER:

"WHEREAS, It will soon be found necessary on account of the progress of the work on the river diversion on Section one (1) to lay off some of the men employed by the District on said work; therefore be it

Ordered, That the Clerk be and he is hereby instructed to advance Alfred Harlev, agent of the District, out of the moneys in his hands as emergency fund for the payment of said employes, a sum not to exceed five thousand dollars ($5,000.00) to be used by said Alfred Harlev, agent, in paying said employes from time to time, as it is found necessary to lay them off—said sum to be advanced all at one time or in separate amounts at different times, as the Clerk may deem advisable."

ASSIGNMENT OF L. D. CONNER & COMPANY'S CONTRACTS TO HELDMAIER & NEU.

Mr. Kelly presented an order, accompanied by two (2) bonds, consenting, on behalf of the District, to the assignment by L. D. Conner & Company to Heldmaier & Neu, of their contracts on Sections A. and B. of the Main Channel and the acceptance of new and the cancellation of old bonds on the same, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and with accompanying bonds placed on file, and the assignment by L. D. Conner & Co. to Heldmaier & Neu of their contracts on Sections A and B of the Main Channel, and the acceptance of new and cancellation of old bonds on the same consented to by the District, as provided in the order.

The following is

THE ORDER:

"WHEREAS, Lewis D. Conner, Ernst Heldmaier and Peter W. Neu, composing the firm of L. D. Conner & Co., contractors with this District for contract

Sections A and B, have assigned all their right, title and interest in and to said contracts, and in and to all moneys due, or that shall hereafter become due and payable thereunder, to Ernst Heldmaier and Peter W. Neu, doing business under the firm name and style of Heldmaier & Neu; and

WHEREAS, Said Heldmaier & Neu have accepted said assignments of said respective contracts and have assumed and taken upon themselves the performance of all the obligations of said L. D. Conner & Co. under same, and agree fully to keep and perform all the terms and conditions of said contracts and each of same in all respects as though they had been the original contractors named therein, and

WHEREAS, Said Heldmaier & Neu herewith submit to this Board for its approval new bonds in the sum of seventy-five thousand ($75,000 00) dollars each, for the faithful execution by them of said respective contracts, with the American Surety Company of New York as surety on each of same, being the same surety as on the former bonds: now, therefore, be it

Ordered, That this District hereby consents to the assignment by L. D. Conner & Co. to Heldmaier & Neu of said respective contracts for Contract Sections A and B of this District; that it accepts the new bonds herewith tendered by said Heldmaier & Neu for each contract section, and the Clerk is he reby authorized and directed to release and cancel the former bonds for said respective contract Sections given by L. D. Conner & Co. of date of February 1, 1893."

(Accompanied by two (2) bonds).

COMPLETION OF PORTION OF RIVER DIVERSION ON SECTION 8.

Mr. Kelly presented an order directing the Chief Engineer to order Agnew & Company to complete a portion of their river diversion on Section 8 at a certain time, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer instructed in accordance with the same.

The following is

THE ORDER:

"WHEREAS, The use of the river diversion and the completion of work thereon above Lemont turns on the opening of a sufficient channel to accommodate the ordinary flow of the river through Section eight (8); and

WHEREAS, Work on the river diversion on said Section eight (8) has not been prosecuted with the speed or with the force and tools called for by order of this Board of September 11, 1893, said work being greatly, unnecessarily and unreasonably delayed beyond the time set for the completion; and

WHEREAS, The necessary bridging will be completed at an early day so that the early completion of said river divers on is a work of paramount necessity; therefore be it

Ordered, That the Chief Engineer order Agnew & Co. to complete not less than seventy-five (75) feet in width of said river diversion along the westerly side of Section eight (8) below Stephens street within ten (10) days from date, and in such manner that the water can be turned therein, and that he order the completion of all river diversion work now being done by Agnew & Company on Section eight (8) on or before November 15, 1893; and whenever the Chief Engineer believes the said work cannot be done in the time specified he shall so notify the President of the Board, who shall immediately convene the Board for action on the same."

ANSWER OF PRESIDENT TO COMMISSIONER OF PUBLIC WORKS ON DIVERSION OF DESPLAINES RIVER.

By unanimous consent, the President presented a copy of his reply in answer to the communication from Mr. H. J. Jones, Commissioner of Public Works of the City of Chicago, with reference to the diversion of the Desplaines River between Riverside and the Lyons Road, presented and referred to the President for reply at the meeting held October 18, 1893, (page 1522 of the Proceedings); and the same was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the President's communication be ordered printed and placed on file.

The motion prevailed unanimously and it was so ordered.

The following is

THE COMMUNICATION:

"CHICAGO, Oct. 20, 1893.

Hon. H. J. Jones, Commissioner of Public Works, City Hall, City:

DEAR SIR—Your letter of the 12th inst. was received and read at the regular meeting of the Board of Trustees of this District, and referred to me for answer, and I am glad to be able to advise you that our work along the lines indicated by you is making rapid progress. We are prosecuting the work of straightening and deepening the channel of the Desplaines River and the construction of levees for the proper control of its flood waters, with large forces of men and teams properly equipped for the work, and we are about to erect a spillway in the town of Lyons, about 2,000 feet north of the Santa Fe bridge, at a height which will protect Chicago against Desplaines River floods, until the volume passing Riverside exceeds 250,000 cubic feet per minute. Heretofore the flow toward Chicago has begun when the flow at at Riverside reached 50,000 cubic feet per minute. This is a subject in which we feel a vital interest, and I can assure you that whatever we can do for the protection of our city will be done as promptly and as completely as it lies within our power to accomplish.

Yours truly,

(Signed) FRANK WENTER,
President."

DEPOSITS MADE FOR PLANS ON SECTIONS 2, 3 AND 4.

By unanimous consent the Clerk presented a report from the Chief Engineer, accompanied by a list of contractors who had deposited for, taken out, and retained plans of the re-advertised work on Sections 2, 3 and 4 of the Main Channel, and enclosing check for the amounts deposited with the same; and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report and enclosure be ordered printed and placed on file, and the Clerk directed to deposit the accompanying check ($25.00) with the Treasurer to the credit of the District.

The motion prevailed unanimously, the report and enclosure were ordered printed and placed on file, and the Clerk directed to deposit the accompanying check ($25.00) with the Treasurer of the District to the credit of the District.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, Oct. 14, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I transmit herewith a report made to me by R. H. Cowdrey, Record Clerk, giving names of persons who secured and paid for maps of Sections 2, 3 and 4, together with check for total amount paid, twenty-five dollars.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure)

"CHICAGO, Oct. 13, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—Enclosed I hand you my check for twenty-five dollars, the same being the amounts paid for maps by contractors proposing to bid on the reletting of the work on Sections 2, 3 and 4. Following also is the list of said contractors, with the amount paid by each of them:

J. Christie	$1.00
E. Ward	1.00
W. Crilly	1.00
Drake & Stratton Co.	1.00
A. V. Powell	1.00
G. Smalley	1.00
R. C. Strip	1.00
A. McGaw	1.00
McKeown & Stowell	1.00
C. C. Gilman	1.00
C. C. Gilman	1.00
S. N. Lee	1.00
D. St. Clair	1.00
Gus Wilkie	1.00
H. A. Stevens	1.00
J. O. Rourke	1.00
J. O'Connor	1.00
H. Kirkendall	1.00
McMahon & Montgomery	1.00
W. H. Kilpatrick	1.00
E. Smith	1.00
J. Shields	1.00
F. H. Clement	1.00
Winston Bros.	1.00
R. Brodhead	1.00

Respectfully submitted.

(Signed) ROBERT H. COWDREY,
Record Clerk."

(Enclosing check—$25.)

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

OCTOBER 30, 31 AND NOVEMBER 1, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

SPECIAL MEETING.

A special meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Monday, October 30, 1893, at 10:30 o'clock A. M., pursuant to call.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Kelly, Russell and Wenter —six (6) and subsequently Mr. Eckhart, making a total of seven (7) members, were present.

CALL FOR MEETING.

The Clerk then read the call for the Special Meeting, which is as follows:

"CHICAGO, Oct. 28, 1893.

Mr. Thomas F. Judge, Clerk of the Sanitary District of Chicago:

DEAR SIR—Please issue call for a Special Meeting of the Board of Trustees of the Sanitary District of Chicago, to be held in their rooms, Rialto Building, Monday, October 30, 1893, at 10:30 o'clock A. M.—said Special Meeting being called to consider and act in the matter of the payment of laborers and employes on Section Eight (8) of the Main Channel of this District, and for the transaction of such other business as may come before the meeting.

Yours truly,

(Signed) FRANK WENTER,
President."

After the reading of the call, President Wenter stated that in view of the death of the Mayor of Chicago, Hon. Carter

H. Harrison, it would be fitting that the Board take some action with reference to resolutions of respect to the dead.

COMMITTEE ON RESOLUTIONS.

Mr. Cooley, seconded by Mr. Boldenweck, moved that a Committee of five (5) be appointed by the President to draft resolutions with reference to the death of the Mayor of Chicago, Hon. Carter H. Harrison, and report back to the Board at once.

The motion prevailed unanimously, and it was so ordered.

The President then appointed as a Committee on Resolutions Messrs. Cooley, Eckhart, Kelly, Boldenweck and Russell.

PAYMENT OF MEN ON SECTION 8.

Mr. Kelly, seconded by Mr. Boldenweck, moved that the Committee on Finance be given full power to act in the matter of the payment of men on Section 8 of the Main Channel, for which Agnew & Company are contractors.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the Committee on Finance given full power to act in the matter of the payment of men on Section 8 of the main channel, for which Agnew & Company are contractors.

RECESS.

Mr. Kelly, seconded by Mr. Eckhart, then moved that the Board then take a recess until 12 o'clock noon the same day.

The motion prevailed unanimously, and it was so ordered.

On re-assembling at the close of the recess at 12 o'clock, on roll-call Messrs. Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—six (6) members, were present.

RESOLUTIONS ON DEATH OF HON. CARTER H. HARRISON, MAYOR OF CHICAGO.

Mr. Cooley, Chairman, presented a report from the Committee on Resolutions, transmitting resolutions with reference to the death of the Mayor of Chicago, Hon. Carter H. Harrison, with the recommendation that the same be adopted, and that the Board take other appropriate action, as provided in the report.

Mr. Cooley, seconded by Mr. Gilmore, moved that the report and resolutions be adopted, ordered printed and placed on file, and the recommendations made in the report concurred in.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH RESOLUTIONS:

"CHICAGO, Oct. 30, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—Your Committee appointed to recommend suitable action by the Board in view the death of the Mayor of the City, Hon. Carter H. Harrison, present herewith resolutions for the adoption of the Board.

We recommend that the same be spread on the records of the Board, and that a copy be engrossed and furnished the family of the deceased, and that a copy be also sent to the City Government.

We further recommend that the offices of the District be closed on the day of the funeral, and that the Board and its officers attend same in a body, and that the President be authorized to make all suitable arrangements in the premises.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
THOMAS KELLY,
WM. BOLDENWECK,
W. H. RUSSELL,
Committee on Resolutions."

RESOLUTIONS:

"WHEREAS, The assassination of the Mayor of the City of Chicago, the Hon. Carter H. Harrison, is an appalling public calamity, and a matter of the deepest regret to the people of this city and of concern to the State and Nation.

WHEREAS, The deceased in a long public career and especially as Mayor of this City for five terms, has become a part of the growth and history of Chicago, has been recognized by all as a man of rare ability, wise purpose and patriotic impulses, has by his character personally endeared himself to all classes, and as a wise counselor, has taken his place among the men of the Nation.

WHEREAS, He was identified with the

official inception of the plans adopted for a solution of the sanitary problem of Chicago, which are now being carried out by this District, and has at all times by public attendance and private counsel, aided in forwarding this work and this District is greatly indebted to him for his interest in its behalf; therefore be it

Resolved, That we share with all citizens extreme regret at the deplorable circumstances connected with his death, and express our deep sense of the common loss which has been visited upon this people, and extend to those nearest to him our heartfelt sympathy and condolence."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Cooley, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

SPECIAL MEETING

A special meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Tuesday, October 31, 1893, at 12 o'clock noon, pursuant to call.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members, were present.

CALL FOR MEETING.

The Clerk then read the call for the Special Meeting, which is as follows:

"CHICAGO, Oct. 30, 1893.

Mr. Thomas F. Judge, Clerk of the Sanitary District of Chicago:

DEAR SIR—Please issue call for a Special Meeting of the Board of Trustees of the Sanitary District of Chicago, to be held in their rooms, Rialto Building, Tuesday, October 31, 1893, at 12 oclock (noon), said Special Meeting being called to consider and act in the matter of the payment of maturing bonds and interest on bonds of the District, and for the transaction of such other business as may come before the meeting.

Yours truly,

(Signed) FRANK WENTER,
President."

PAYMENT OF MATURING BONDS AND INTEREST ON BONDS.

Mr. Eckhart, Chairman of the Committee on Finance, presented an order, authorizing and directing the Clerk to draw a warrant on the Treasurer, payable to the order of the Treasurer, in the sum of one hundred and fifty thousand ($150,000) dollars, to be used in the payment of maturing bonds and interest on bonds as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to draw a warrant on the Treasurer, payable to the order of the Treasurer, in the sum of one hundred and fifty thousand ($150,000) dollars, to be used in the payment of maturing bonds and interest on bonds, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be and he is hereby authorized and directed to draw a warrant upon the Treasurer, payable to the order of Melville E. Stone, Treasurer, in the sum of one hundred and fifty thousand ($150,000) dollars, and deliver the same to said Treasurer—fifty thousand ($50,000) dollars of said sum to be used by him in paying the semi-annual interest on the bonds of the District, due November 1, 1893, and one hundred thousand ($100,000) dollars of said sum to be used by him in paying the principal of such of said bonds as fall due on said November 1, 1893."

AMENDMENT OF RECORD OF SPECIAL MEETING OF OCTOBER 30, 1893.

By unanimous consent Mr. Prendergast made a statement, to be inserted in the record, to the effect that he had no actual notice of the special meeting of October 30, 1893, and that if he had been present at that meeting he would have voted "aye" on the motion to adopt the resolutions then presented concerning the death of the late Carter H. Harrison.

ARRANGEMENTS TO ATTEND FUNERAL OF THE LATE MAYOR.

The Clerk announced that pursuant to

instructions, he had made arrangements for the Trustees and officers of the District for a place in the funeral procession of the late Mayor of Chicago, Hon. Carter H. Harrison, and that those who expected to be present should report at the offices of the District on Wednesday, November 1, 1893, at 9 o'clock A. M., where carriages and badges would be provided.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

REGULAR MEETING.

The one hundred and ninety-fourth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 1, 1893, at 1:30 o'clock P. M.

The Clerk called the Board to order.

On roll-call there were no members of the Board present.

At 2 o'clock there being still no members of the Board present, and consequently no quorum, in pursuance of the rules the Board stood adjourned.

THOS. F. JUDGE,
Clerk.

SPECIAL MEETING.

A special meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 1, 1893, at 7:30 o'clock P. M., pursuant to call.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Gilmore, Kelly, Russell and Wenter—seven (7), and subsequently Mr. Eckhart, making a total of eight (8) members, were present.

CALL FOR MEETING.

The Clerk then read the call for the Special Meeting, which is as follows:

"CHICAGO, Oct., 31, 1893.

Thomas F. Judge, Esq., Clerk Sanitary District of Chicago:

DEAR SIR—You will please issue a call for a Special Meeting of the Board of Trustees of the Sanitary District of Chicago, to be held in the offices of the District, Rialto Building, Chicago, Wednesday, November 1, 1893, at 7:30 o'clock p. m., the object of said meeting being the consideration of, and action upon the pay rolls; contractors' estimates; expense bills of the various departments; contract and bond for work on Section 3; contracts and bonds in connection with the settlement with McArthur Bros. for work on Sections 2 and 4; payment of men working for the District on the River Diversion on Sections 1, 2, 3 and 4; the payment up to October 18, 1893, of the men on Section 3, working for Agnew & Co.; and such other business as may properly come before such meeting.

(Signed) FRANK WENTER,
President."

VOUCHERS.

In pursuance of the call, the President announced that the Board would take up the regular order of business.

Whereupon the Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, (October, 1893)	$ 3,226 67	
Eng. Dept., Div. No. 1, (half month, ending Oct. 31, 1893)	2,550 94	
Eng. Dept., Div. No. 1, trainmen, (half month, ending Oct. 31, 1893)	120 00	
Eng. Dept., Div. No. 2, (half month, ending Oct. 31, 1893)	795 80	
Eng. Dept., Div. No. 3, (half month, ending Oct. 31, 1893)	829 25	
Eng. Dept., Div. No. 4, (half month, ending Oct. 31, 1893)	107 50	
	$	7,630 16
Clerical Dept., Clerk's roll, (Oct., 1893)	$ 566 66	
Clerical Dept., office roll, (half month, ending Oct. 31, 1893)	137 50	
		704 16
Treasury Dept., Treasurer's roll, (Oct., 1893)		166 66
Law Dept., Attorney's roll, (Oct., 1893)	$ 1,306 67	
Law Dept., Joliet roll, (Oct., 1893)	333 33	
Law Dept., office roll, (half month, ending Oct. 31, 1893)	102 50	
	$	1,742 50

Police Dept., Marshal's roll, (Oct., 1893).....	$ 250 00	
Police Dept., field roll, (half month, ending Oct. 31, 1893).....	1,399 18	
		$ 1,649 18
General Account, Sanitary Inspector's roll, (Oct., 1893).....	$ 200 00	
General Account, Trustees' roll, (Oct., 1893).....	2,333 33	
		$ 2,533 33
Total.....		$14,425 99

LAW DEPARTMENT.

Joseph Donnersberger, (expert services, right of way Oct., 1893)....	300 00
Grand total.....	$14,725 99

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 378, Engineering Department, (time books).....	$ 6 00
No. 916, Police Department, (blankets).....	54 00
Total.....	$ 60 00

Mr. Kelly, seconded by Mr. Boldenweck, moved that Requisitions No. 378, for the Engineering Department, and No. 916, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 378, for the Engineering Department, and No. 916, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending October 28, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 1, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending October 28, 1893, as the same have been reported to me:

Engineering Department.....	107	
Engineering Department, Towpath.....	20	
Engineering Department, Timekeepers.....	10	
Engineering Department, Trainmen.....	4	
		—141
Clerical Department.....		4
Treasury Department.....		1
Law Department.....		8
Police Department.....		36
Total employes.....		190

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

ENLARGEMENT OF RIVER DIVERSION ON SECTION F.

Mr. Cooley presented an order authorizing and directing the Chief Engineer to enlarge the river diversion below the Santa Fe Railway on Section F, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Gilmore, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Boldenweck, Cooley, Gilmore, Kelly, Russell and Wenter—six (6). Excused and not voting—Mr. Altpeter—one (1). Nays—Mr. Eckhart—one (1).

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer authorized and directed to enlarge the river diversion below the Santa Fe Railway on Section F., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be

and he is hereby authorized and directed to enlarge the river diversion immediately below the Santa Fe Railway on Section F, to an amount not exceeding 11,000 cubic yards, and cause the same to be placed in the levee crossing the old river channel between the end of the present levee and the Santa Fe Railway."

TRUSTEES' ILLINOIS VALLEY TRIP.

Mr. Boldenweck, Chairman, presented a verbal report from the Committee on Federal Relations, stating that all arrangements had been made for the Trustees' trip down the Illinois Valley, and that the Board would leave at 10:30 o'clock p. m., on November 1, 1893, would follow the time schedule arranged and would return to Chicago about Sunday, November 5, 1893.

PAYMENT OF RIVER DIVERSION EMPLOYES ON SECTION 1 OUT OF THE EMERGENCY FUND.

Mr. Kelly presented an order authorizing and directing the Clerk to advance to Alfred Harlev, Agent, out of the special emergency fund now in his hands for the payment of employes pursuant to orders of the Board of September 19 and October 4, 1893, (Pages 1458 and 1497 of the Proceedings,) certain sums as provided in the order for the payment of laborers and employes on the river diversion and levees on Section 1 of the main channel, said money to be paid on the approved pay-rolls of October 31, 1893, and for the payment of laborers and employes on the same work discharged prior to November 15, 1893, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to advance Alfred Harlev, Agent, certain moneys out of the special emergency fund now in his hands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby authorized and directed to pay out of the moneys in his hands, drawn upon his own vouchers as emergency fund, the pay-roll of October 31, 1893, of employes working upon the river diversion upon Section One (1), under the direction of Alfred Harlev, Agent of this District, to the amount of twenty-five thousand ($25,000) dollars, and that when said pay-roll has been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall require said Alfred Harlev, Agent, to pay said employes the amounts found respectively due them, and to file with him the receipted rolls for the same.

Ordered further, That the Clerk be authorized and directed to advance to said Alfred Harlev, Agent, out of said moneys in his hands to the amount of not to exceed five thousand ($5,000) dollars for the payment of employes working upon the river diversion upon said Section, who shall have been discharged during the period between October 31, 1893, and November 16, 1893."

ADVANCE OUT OF EMERGENCY FUND TO AGNEW & COMPANY MONEY FOR THE PAYMENT OF MEN ON SECTION 8.

Mr. Eckhart presented an order, authorizing and directing the Clerk to advance to Agnew & Co. out of the special emergency fund now in his hands, for the payment of laborers and employes, a certain sum, for the payment of laborers and employes on Section 8 of the Main Channel, said money to be repaid the District from the amounts due and to become due said contractors, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to advance Agnew & Company money out of the special emergency fund now in his hands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby authorized and directed to advance out of the moneys in his hands drawn upon his own voucher as emergency fund, the sum of eleven thousand four hundred and sixty-three ($11,463.00) dollars to Agnew & Co., contractors for contract Section eight (8) of this District, said money to be used by them in the

payment of the respective amounts due to the employes on said contract section up to October 18, 1893; said sum so advanced to be charged to said contractors and repaid to this District from the amount which shall become due said contractors on the first estimate hereafter presented to this Board for work on said Contract Section, or in case the amount of said estimate shall not be sufficient to repay said sum, then the remainder to be paid from any sums due or that shall thereafter become due and payable to said contractors."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

NOVEMBER 8, 1893.

OFFICIAL RECORD.

Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-fifth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 8, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7), and subsequently Mr. Gilmore, making a total of eight (8) members, were present.

MINUTES.

The minutes of the regular meetings held October 25 and November 1, 1893, and of the special meetings held October 30 and 31 and November 1, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS:

Eng. Dept., Div. No. 1, tow-path, (half month ending Oct. 31, 1893).	$ 372 96	
Eng. Dept., Div. No. 4, Time-keepers, (half month, ending Oct. 31, 1893).....	421 75	
Eng. Dept., discharged men's roll, (October, 1893).....	26 87	
		$ 821 58

ENGINEERING DEPARTMENT.

Construction Account—

Agnew & Co. (Sec. 5,

Nov. 1, '93)		$ 7,063 88
Agnew & Co. (Sec. 6, Nov. 1, '93)		7,040 25
Agnew & Co. (Sec. 7, Nov. 1. '93)		9,071 12
Agnew & Co. (Sec. 8, Nov. 1. '93)		11,912 47
Agnew & Co. (Sec. 9, Nov. 1, '93)		7,383 73
E. D. Smith & Co. (Sec. 10, Nov. 1, '93)		13,951 88
Mason, Hoge & Co. (Sec. 11, Nov. 1, '93)		18,954 69
Mason, Hoge & Co. (Sec. 12, Nov. 1, '93)		18,098 71
Mason, Hoge & Co. (Sec. 13, Nov. 1, '93)		14,716 41
McCormick Const. Co. (Sec 14, Nov. 1, '93)		7,281 75
L. D. Conner & Co. (Sec. A, Nov. 1, '93)		5,463 08
L. D. Conner & Co. (Sec. B, Nov. 1, '93)		4,409 61
Western Dredging and Impt. Co. (Sec. C, Nov. 1, '93)		8,791 50
E. D. Smith & Co. (Sec. D, Nov. 1, '93)		3 234 44
Streeter & Kenefick, (Sec. E, Nov. 1, '93)		12,190 30
Ricker, Lee & Co. (Sec. F, Nov. 1, '93)		11,302 30
		$160,816 12

ENGINEERING DEPARTMENT.

J. R. Davis & Son, (test pits, Summit)	$	165 38
Jacobs, Coles & Co. (stationery)		31 96
John Morris Co. (stationery)		120 58
The Polygraph Print Co (polygraphs)		41 73
E. Dietzgen Co., (drafting material)		10 23
E. Dietzgen Co., (drafting material)		57 75
Keuffel & Esser Co. (drafting material)		152 45
Marshall Field & Co. (signal cloth)		4 84
Gerts, Lumbard & Co. (marking brushes)		1 20
Fuller Warren Co. (stoves)		46 18
Edw. L. Fry, (stoves)		15 60
Hibbard, Spencer, Bartlett & Co. (hardware)		12 67
Chicago Towel Supply Co. (toweling)		5 40
John T. Allison, (rent, Summit)		20 00
A. M. Munson, (rent, Mt. Forest)		20 00
H. S. Norton, (rent, Lemont)		18 00
O. W Moon, (rent, Lockport)		20 00
D. C. Dunlap, (horse and buggy)		45 00
H. S. Norton, (vault rent, Lemont, 1892-1893)		5 00
Trevor Spring Water Co. (ice)	$33 00	
N. Eulert, (hardware, tow-path)	21 20	
J. M. Abbitt, (coal)	10 04	
Geo. B. Norton, (livery)	13 00	
F. E. Michaud, (repairing bridge)	33 50	
		$ 904 71

CLERICAL DEPARTMENT.

The Tobey Furniture Co. (desk and chair)		$ 28 00

LAW DEPARTMENT.

E. B. Myers & Co. (docket)	$ 3 00	
Orrin N. Carter, (expense)	21 21	
		$ 24 21

LAW DEPARTMENT.

Land Account—		
Orrin N. Carter, (taxes on acquired land)		$ 40 00

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings, Oct., 1893)	$	121 17
Thos. F. Judge, (payroll and sundry expenses)		33 86
Cameron, Amberg & Co. (funeral badges)		7 00
Chicago Herald Co. (advertising Secs. G to M inclusive)		22 50
The Tribune Co. (advertising Secs. G to M inclusive)		22 50
Victor F. Lawson, publisher, *th Record*, (advertising Secs. G to M inclusive)		15 00
Chicago Evening Post Co. (advertising Secs. G to M inclusive)		15 80
Chicago Daily News Co. (advertising Secs. G to M inclusive)		22 50
The Mail, (advertising Secs. G to M inclusive)		15 00
The Chicago Daily Globe, (advertising Secs. G to M inclusive)		11 25
John R Wilson, publisher *Chicago Evening Journal*, (advertising Secs. G to M inclusive)		6 00
The Abendpos Co. (advertising Secs. G to M inclusive)		10 00
Chicago Arbeiter Zeitung Pub. Co. (advertising Secs G to M inclusive)		9 00

German-American Pub. Co., Pub. *Freie Presse* (advertising Secs. G to M inclusive)	$12 50	
Aug. Geringer, publisher. *Svornost*, (advertising Secs. G to M inclusive)	7 50	
		$31 58

POLICE DEPARTMENT.

The Fuller Warren Co. (stoves for police stations)	$ 160 23	
M. Freytag, (carriage robes)	16 00	
		$ 176 23
Grand total		$163.142 43

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 708, Treasury Department, (canceling stamp, etc).....$ 13 15

Mr. Boldenweck, seconded by Mr. Eckhart, moved that Requisition No. 708, for the Treasury Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 708, for the Treasury Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District for the week ending November 4, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employés in each department for the week ending November 4, 1893, as the same have been reported to me:

Engineering Department	97	
Engineering Department, Towpath	21	
Engineering Department, Trainmen	4	
Engineering Department, Timekeepers	10	
		132
Clerical Department		4
Treasury Department		1
Law Department		8
Police Department		36
Total employes		181

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

PROTECTION LEVEE ON SECTIONS A AND B.

The Clerk presented a report from the Chief Engineer, transmitting a report from the Superintendent of Construction, with reference to the building of a levee, on Sections A and B of the Main Channel, for protection from the excavation made by hydraulic dredges; and the report and enclosure were read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report and enclosure be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report and enclosure were ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURE:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith a letter just received from Mr. U. W. Weston, Superintendent of Construction giving his views in regard to what is needed on Sections A and B. I am not prepared to give my own judgment on the questions involved as I have not seen the work since the hydraulic dredge began opera-

tions. My idea has been, however, that the material is of such a character that it will flow back into the channel almost as fast as it can be excavated, unless restrained by some form of dock or levee. I am not sure that a proper interpretation of the contract will not place the responsibility of this work, and the cost of doing it, upon the contractor.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

(Enclosure)

"CHICAGO, Nov. 7, 1893.

Isham Randolph, Esq., Chief Engineer, Sanitary District:

DEAR SIR—To-night, while considering the present status of Sections A and B, and the proposed levee which is now contemplated to restrain the Desplaines River, it seems clear to me that before any substantial progress can be made on the Main Channel that the same expensive treatment by way of piling and transported material for levee must necessarily be put in to protect the westerly bank of such Main Channel from the same difficulties now apprehended in the river diversion in a greatly enhanced degree, for the reason that the river diversion excavation is only about 3 to 3½ feet in depth while that in the Main Channel must penetrate the same class of muck and bog to its full depth, which varies from 10 to upwards of 20 feet. Now, inasmuch as the prime and paramount necessity is to provide immediate and ample protection against the sliding or sloughing into the Main Channel from the westerly side thereof, I would recommend that the proposed piling and levee now contemplated be constructed along the westerly berm line of the Main Channel for several reasons.

First—It would afford the same protection to the Main Channel from overflow that would accrue from the present proposed levee.

Second—It would permit the immediate prosecution of work on such Main Channel which cannot now probably be done until another levee of equal proportions of the one now contemplated along the line of the river diversion is constructed along the westerly berm line of the Main Channel.

Third—If such piling and fixed levee were located upon the westerly berm line of the Main Channel it would at once afford protection from both sloughing and inundation, both of which are indispensible considerations, and would also permit the immediate prosecution of the work and the disposition of the material excavated from the Main Channel immediately beyond such levee which would not necessarily interfere with the Desplaines River waterway.

In my opinion, before any practical progress can possibly be made on the Main Channel, a substantial levee, of the character now proposed for the river diversion, must first be constructed along the westerly berm line of the Main Channel—that work on the Main Channel cannot be successfully prosecuted until such levee along westerly berm line of the Main Channel is first built—that such levee should, by all means, be constructed first to enable the Main Channel to proceed and which would very probably obviate the necessity for a river diversion levee of such an expensive character; at all events, in the interest of the expedition of the work, the former (Main Channel) levee should be built first, for the further reason that it extends much farther through this mucky deposit which must be excavated to its full depth.

The character of this material is so well known that it seems unnecessary to make further suggestions, all of which are respectfully submitted.

Yours truly,

(Signed) U. W. WESTON,
Superintendent of Construction."

MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of October, 1893. The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since submitting my report for the month of September, the evils that I had occasion to refer to at that time in regard to the use of poor tents for the sheltering of the laborers on some of the sections, have been remedied, and at present they are all comfortably provided for.

The health of the employes on the Drainage Channel has been exceptionally

good. Out of some eight or nine thousand that have been at work, not a single case of sickness has resulted fatally of the small number that have been ill. This is an unusually fine showing, and indicates a very satisfactory state of the sanitary conditions at present existing in the various camps.

Most respectfully submitted,

(Signed) WILLIAM MARTIN, M. D.,
Sanitary Inspector."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of October, 1893. The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report		$1,696,566.14
Received from County Treasurer, Tax Account	$ 50,000 00	
Received from County Treasurer, Tax Account	25,000 00	
Received from County Treasurer, Tax Account	25,000 00	
Received from Engineering Department, Maps Sold	25 00	
Received from General Account, Rent, Western Dredging and Improvement Company	150 00	
Received from Metropolitan National Bank, int. for October	608 76	
Received from Ft. Dearborn National Bank, int. for October	604 77	
Received from National Bank of Illinois, interest for October	611 92	
Received from American Trust and Savings Bank, interest for October	44 57	
Received from Globe National Bank, interest for October	562 86	
Received from Chicago National Bank, interest for October	609 84	
		$103,217 72
Total cash received for month		$1,799,783 86
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department	$ 827 61	
Treasury Department	166 67	
Engineering Department	15,954 99	
Engineering—Construction—Department	506,053 68	
Law Department	2,964 23	
Law Department Land Account	44,312 00	
General Account	5,399 36	
Police Department	5,213 12	
		$581,091 66
Balance this date, in banks as per schedule endorsed hereon		$1,218,692 20

(Signed) MELVILLE E. STONE,
Treasurer.

Chicago, November 2, 1893."

SCHEDULE:

Fort Dearborn National Bank	$ 256,122 08
National Bank of Illinois	256,962 61
Chicago National Bank	255,638 08
Metropolitan National Bank	258,859 95
American Trust and Savings Bank	21,003 79
Globe National Bank	170,105 69
Total	$1,218,692 20

PAYMENT FOR "PRATT LAND."

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order, authorizing and directing the Clerk to pay Lorenzo Pratt, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, a certain sum of money for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs Marianna A. Ogden, Lorenzo Pratt, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Lorenzo Pratt, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, a certain sum of money for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Lorenzo Pratt, et al., as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this Dis-

trict be and he is hereby authorized and directed to pay, on the voucher of the Attorney, to Lorenzo Pratt the sum of eleven thousand seven hundred and thirty ($11,730) dollars, in full payment for the following described land, to-wit:

The east half (E. ½) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of the northeast quarter (N. E. ¼) of Section thirty-five (35), Township thirty-nine (39) north, Range thirteen (13) east of the Third Principal Meridian; said premises lying and being situate in the County of Cook, in the State of Illinois, and containing five and ten one-hundredths (5.10) acres, more or less.

Said sum being the amount awarded by the verdict and report of the jury and the order of judgment entered therein in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Lorenzo Pratt et al., in the Circuit Court of Cook County, Illinois, general number 118,948, on the 2d day of November, A. D. 1893."

REPORT ON TRUSTEES' ILLINOIS VALLEY TRIP.

Mr. Boldenweck, Chairman, presented a report from the Committee on Federal Relations, detailing the results of the Trustees' trip down the Illinois Valley; and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report be adopted, ordered printed and placed on file.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Your Committee on Federal Relations beg leave to make the following report of the Board's recent trip down the Illinois River by invitations from various cities and towns.

The party left Chicago on the Rock Island road at 10:30 o'clock P. M. Wednesday November 1st, and consisted of President Wenter, Trustees Altpeter, Boldenweck, Cooley, Eckhart and Gilmore, Clerk Thomas F. Judge, Attorneys Carter and O'Donnell, Chief Engineer Randolph, Assistant Engineers Ward and Nickson, Chief of Construction Weston, and Right-of-way Agent Donnersberger.

Invitations to send delegates and the time of arrival and departure of boat had previously been sent to the following cities and towns along the Illinois River: La Salle, Peru, Hennepin, Henry, Chillicothe, Lacon, Peoria, Havana, Pekin and Beardstown.

Mayor F. W. Mathieson and Canal Commissioner J. M. Welch, from La Salle, joined the party at Peru. The boat left Peru at 8 o'clock A. M. Thursday and arrived at Hennepin at 10 o'clock A. M., where the following gentlemen came on the boat: J. P. Towle, Clerk; J. Dore and James Turner, Aldermen; J. H. Steaton and A. Deck.

The boat arrived at Henry at 11 o'clock A. M., and the following gentlemen from Henry were in waiting: B. F. Forrest, Mayor; Chas. Camp, Alderman; State's Attorney T. F. Clover, S. Burt, Editor of *The Henry Times*, and H. J. Gregory; also, J. E. F Fisher, Alderman from Peoria, and Mayor J. Kinlock and Aldermen Wm. M. Mead, Sidney Wood, J. Fisher and Chas. Dougherty, of Chillicothe.

Lacon was reached at 12 o'clock noon; and the following gentlemen joined the party: J. S. Thompson, Mayor; J. R. Chapman, Clerk; J. H. Noel, Alderman; G. M. Bain, City Attorney; G. F. Whiteman, City Engineer; Editor S. Ellsworth, Dr. B. S. Roseberry, and S. H. Thompson.

At Chillicothe at 1 o'clock P. M. the following gentlemen from Peoria met the party: Commissioner of Public Works I. Taylor, Superintendent of Streets D. McDonald, Alderman Wm. Bittle, City Engineer J. A. Harman, Ex-Senator M. M. Bassett, Ex-Mayor S. A. Kinsey, Canal Commissioner A. Gerdes, Alderman Chas. J. Off, B. L. T. Borland, H. Rouse, E. Wing and Editor of *The Transcript*, F. R. Weddell.

The party on arriving at Peoria at 4 o'clock P. M. were driven in carriages, which were in waiting, through the city and were then taken to the National Hotel, where a reception was tendered in the evening, at which maps, profiles and photographs of the work on the channel were explained to the officials of the city and a large number of citizens.

At this point a great many of the party left for their respective places, and the

remainder started by boat down the river, leaving at 8 o'clock Friday morning.

At Pekin, a few miles below Peoria, at 9:30 o'clock A. M. the following gentlemen were in waiting, who joined the party: Mayor E. W. Wilson, Attorneys J. V. Graff and E. S. Prettyman, C. A. Kuhl and U. J. Albertson

The boat landed at Beardstown at 6 o'clock P. M. and found waiting: Mayor Wm. Hagenor, Hon. H. J. Tice, Member of the Legislature, C. Allard and F. K. Condet. The Mayor invited the entire party to the Park Hotel where, after partaking of refreshments, a reception was tendered, and maps, profiles and photographs were displayed and explained.

Saturday morning at 5 o'clock we left Beardstown and arrived at Grafton at 6:30 P. M. where we were invited by Mayor Mysenberg to the Ruebel House, and a few hours were devoted to explaining the work and the benefits of the same to the Illinois River, after which the party proceeded by train to Alton and thence to Chicago, where we arrived Sunday at 7:30 o'clock A. M.

In conclusion we beg leave to say that it is the opinion of your Committee that from all points of view the trip was highly advantageous. It required a personal inspection of the valley on the part of the Trustees to understand fully the problems to be met and the difficulties to be overcome along the Illinois River; besides, meeting the people and becoming personally acquainted with them cannot but be very helpful to the interests of the District. The Trustees found the citizens all along the River alive to the necessity of the building of our channel to supply them with abundant water, and we expect their hearty support in securing federal aid to remove the dams and deepen the river. The water in the Illinois River, especially below Peoria, is quite shallow and the added volume of water from our channel, taken in connection with the removal of the dams, will be of great benefit to the people of the Illinois Valley.

Your Committee would therefore recommend that the question of obtaining aid from the Federal Government in removing the dams at La Grange and Kampsville and the deepening of the river be taken up by this Board at the earliest practicable moment and that the Committee on Federal Relations be instructed to consider and report such action in the matter as it may deem advisable.

The circumstances attending this trip did not permit of visiting the cities and towns of the valley from Joliet to La Salle from which the Board has received invitations, and it is recommended that the Clerk be instructed to advise these places that the Board contemplates an inspection of the upper river and a visit to their places at an early date.

Respectfully submitted,

(Signed) WM. BOLDENWECK.
Chairman.
L. E. COOLEY,
A. P. GILMORE,
JOHN J. ALTPETER,
W. H. RUSSELL,
Committee on Federal Relations."

EXTENSION OF RIVER DIVERSION THROUGH SECTION 5.

Mr. Cooley presented an order, authorizing and directing the Chief Engineer to extend the River Diversion and levee on Section 4 through the upper end of Section 5, said work to be done by McArthur Brothers Company, Agents, under the agreement of August 30, 1893, as provided in the order; and the order was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Chief Engineer authorized and directed, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Chief Engineer be and he is hereby authorized and directed to extend the River Diversion on Section Four (4) through the upper end of Section five (5), so as to complete said diversion as a whole, and to extend the levee opposite as far as the material excavated will go, and that he direct said work to be done by the Agents of the District, McArthur Brothers Company, under the agreement authorized August 30, 1893, in regard to the River Diversion on Sections two (2), three (3) and four (4)."

PAYMENT OF RIVER DIVERSION EMPLOYES OF SECTION 1, 2 AND 4 OUT OF EMERGENCY FUND.

Mr. Kelly presented an order, author-

izing and directing the Clerk to pay out of the special emergency fund, now in his hands for the payment of employes, pursuant to orders of the Board of September 19 and October 4, 1893, (pages 1458 and 1497 of the Proceedings) certain sums, as provided in the order, for the payment of laborers and employes working for Alfred Harlev and McArthur Brothers Company, Agents, on the River Diversion and levees on Sections 1, 2, 4 and 5 of the Main Channel, said money to be paid on the approved pay-rolls of October 31 and November 18, 1893, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Alfred Harlev and McArthur Brothers Company, Agents, out of the special emergency fund in his hands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk be and he is hereby authorized and directed to pay out of the moneys in his hands, drawn upon his own vouchers as emergency fund, the pay-roll of October 31, 1893, of employes working upon the River Diversion upon Sections two (2), four (4), and the upper part of Section five (5) under the direction of McArthur Brothers Company, Agent of this District, to the amount of thirty-two thousand ($32,000) dollars, and that when said pay-roll has been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall require said McArthur Brothers Company, Agent, to pay said employes the amounts found respectively due them, and to file with him the receipted rolls for the same.

Ordered further, That the Clerk be and he is hereby authorized and directed to advance to Alfred Harlev, Agent, out of said moneys in his hands to the amount of not to exceed ten thousand ($10,000) dollars for the payment of employes working upon the River Diversion upon Section one (1), who shall have been discharged up to and including November 18, 1893, and that said Alfred Harlev file with the Clerk receipted pay-rolls for the amounts so paid out."

ORDINANCE FOR ISSUE OF $3,000,000 BONDS.

Mr. Eckhart, Chairman, presented as a report from the Committee on Finance an ordinance, providing for the issue of bonds for the corporate purposes of the District, in the sum of three million ($3,000,000) dollars; and the ordinance was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the passage of the ordinance.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried and the ordinance passed.

The following is

THE ORDINANCE:

"*Be it ordained by the Board of Trustees of the Sanitary District of Chicago:*

SECTION 1. That there be borrowed the sum of three million ($3,000,000) dollars for the corporate purposes of the Sanitary District of Chicago, and that interest-bearing coupon bonds be issued therefor to the amount of three million ($3,000,000) dollars by said Sanitary District of Chicago, said bonds to be of the denomination of one thousand ($1,000) dollars each, all to bear date of the first day of January, 1894, one hundred and fifty thousand ($150,000) dollars of the principal of said bonds to be payable on the first day of January, of the year 1895, and of each of the years thereafter following until and including the year 1914; said bonds to be numbered consecutively from two thousand and one (2,001) to five thousand (5,000) inclusive, and to bear interest at the rate of five (5) per centum per annum from the date thereof. Interest to be payable on the first day of January and of July in each year and to be evidenced by coupons attached to each bond, to be numbered consecutively, each coupon to bear the number of the bond to which it is attached, and to be for the sum of twenty-five ($25.00) dollars, and the first or number one (1) coupon of each bond to be payable on the first day of July, 1894, and the next or number two (2) coupon on each bond to be payable on the first day of January, 1895, and so on, each succeeding coupon being payable six (6) months after the preceding one, both principal and interest to be payable at the office of the Treasurer

of the Sanitary District of Chicago, interest to be payable only upon presentation and surrender of the proper interest coupon. Such bonds shall be signed on behalf of the Sanitary District of Chicago, by the President of the Board of Trustees and countersigned by the Clerk thereof, and attested by the seal of said Sanitary District.

SEC. 2. That said bonds, when they are executed, shall be deposited with the Treasurer of said District for safe keeping, and shall be sold at such price and for such rates as the Board of Trustees of this District shall from time to time determine and direct, and the proceeds arising from the sale of said bonds shall be received by the Treasurer of said District as such; and shall be used for the corporate purposes thereof, as may be directed from time to time by the Board of Trustees.

SEC. 3. That in each of the hereinafter mentioned years there shall be levied and assessed on the taxable property within said District, the sums respectively, as follows:

For the year 1894, three hundred thousand ($300,000) dollars.

For the year 1895, two hundred and ninety-two thousand, five hundred ($292,500) dollars.

For the year 1896, two hundred and eighty-five thousand ($285,000) dollars.

For the year 1897, two hundred and seventy-seven thousand, five hundred ($277,500) dollars.

For the year 1898, two hundred and seventy thousand ($270,000) dollars.

For the year 1899, two hundred and sixty-two thousand, five hundred ($262,500) dollars.

For the year 1900, two hundred and fifty-five thousand ($255,000) dollars.

For the year 1901, two hundred and forty-seven thousand, five hundred ($247,500) dollars.

For the year 1902, two hundred and forty thousand ($240,000) dollars.

For the year 1903, two hundred and thirty-two thousand, five hundred ($232,500) dollars.

For the year 1904, two hundred and twenty-five thousand ($225,000) dollars.

For the year 1905, two hundred and seventeen thousand, five hundred ($217,500) dollars.

For the year 1906, two hundred and ten thousand ($210,000) dollars.

For the year 1907, two hundred and two thousand, five hundred ($202,500) dollars.

For the year 1908, one hundred and ninety-five thousand ($195,000) dollars.

For the year 1909, one hundred and eighty-seven thousand, five hundred ($187,500) dollars.

For the year 1910, one hundred and eighty thousand ($180,000) dollars.

For the year 1911, one hundred and seventy-two thousand, five hundred ($172,500) dollars.

For the year 1912, one hundred and sixty-five thousand ($165,000) dollars.

For the year 1913, one hundred and fifty-seven thousand, five hundred ($157,500) dollars.

For the purpose of paying the principal and interest of the bonds issued under this ordinance, said sums so levied being sufficient to pay the interest on said bonds as it falls due, and also to pay and discharge the principal thereof as the same shall fall due, and the Clerk of this District is hereby directed in the year 1894, and in each of the years thereafter until the year 1913, to include the amount required by this ordinance to be raised by taxes in each of said years respectively, in the amount which shall be certified to the County Clerk in each of said years as the amount required to be raised by taxation in said District.

SEC. 4. Bonds to be issued in pursuance of this ordinance may be registered with the Treasurer of said District, and after such registry no transfer shall be valid except upon the books of said Treasurer, but the registry thereafter upon the books of the Treasurer of a transfer to bearer, shall restore transferability by delivery.

Said bonds shall continue subject to successive registrations and transfers to bearer as aforesaid, at the option of each holder.

SEC. 5. That the credit and resources of the Sanitary District of Chicago be and the same are hereby irrevocably pledged to the payment of the bonds which shall be issued in pursuance of this ordinance, and the interest thereon as it shall fall due.

SEC. 6. This ordinance shall take effect and be in force from and after its passage."

CLERK AND COMMITTEE ON FINANCE TO HAVE BONDS PRINTED AND ADVERTISED.

Mr. Eckhart presented an order directing the Clerk, under the supervision of the Committee on Finance, to advertise for bids for the purchase of $3,000,000 bonds, provided for by the ordinance just passed, and make arrangements for the engraving and printing of the said bonds, as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk directed as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be and he is hereby directed to advertise, under the supervision of the Finance Committee, for bids for the purchase of three million ($3,000,000) dollars of the bonds of the Sanitary District of Chicago, to be issued in accordance with the ordinance this day passed, and that the Clerk also, under the direction of said Committee, make the necessary arrangements for the engraving and printing of said bonds."

COMMUNICATION FROM CANAL COMMISSIONERS.

The Clerk presented a communication, directed to President Wenter, by Alt. Gerdes, of the Board of Canal Commissioners, enclosing a circular from that Board to the members of Congress from the State of Illinois, with reference to the Illinois River as a navigable stream; and the communication and enclosure were read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the communication and enclosure be ordered printed and placed on file, and the President directed to answer the communication

The motion prevailed unanimously, and it was so ordered.

The following is

THE COMMUNICATION, WITH ENCLOSURE:

"PEORIA, Ill., Oct. 28, 1893.

Honorable Frank Wenter, President of Board of Trustees of the Sanitary District of Chicago, Chicago, Ill.:

DEAR SIR—I herewith enclose a copy of a circular letter from our Board, of which we have mailed one copy to each of the Senators and Representatives from Illinois, in Washington.

I hope your trip down the Illinois River will revive the agitation of the people of the valley and in the Western and Southern States to work for the great waterway project between the Gulf and the Lakes.

The benefit which the people of our country would derive from this project, if carried out, cannot be over-estimated.

Yours respectfully,

(Signed) ALT. GERDES."

(Enclosure.)

"PEORIA, ILL., Oct. 24, 1893.

To the Honorable Senators and Representatives in Congress from Illinois:

The undersigned desire respectfully to call attention of the Illinois delegation in Congress to the present status of the Illinois River as a navigable stream, and to make some suggestions concerning congressional action in reference thereto. Some years ago in the absence of any apparent prospect of realizing the project of deep water navigation by the construction of a water way connecting Lake Michigan, by means of the Illinois and Desplaines Rivers, with the Mississippi and the Gulf of Mexico, the State of Illinois and the National Government adopted the idea of providing a system of slack water navigation, constructing a series of dams along the course of the stream, one being located at Henry, one at Copperas Creek, one at La Grange, and one at Kampsville. The dams at Henry and Copperas Creek having been built by the joint action of the State and National Government, and the last two by the National Government alone. The amount expended in the construction of these dams was about two million dollars. The results achieved by this method of improving the navigable features of the Illinois River have not proven very satisfactory. The dams have caused the sediment and other matter carried by the current to settle in the bed of the stream, thereby rapidly filling up its channel so that while the dams have raised the water line, the depth of the stream is no greater now than before their construction. In seasons of low water, water-craft drawing more than four feet of water can scarcely navigate.

We desire therefore to suggest that no

more money should be expended in the construction of dams on the Illinois River, and that the efforts of the National Government should be directed toward deepening the channel of the river especially between the dams. Furthermore, it is now clear that all the dams in the river will finally have to be removed. As is well known the Act of the General Assembly of Illinois passed in 1889 providing for the construction of a drainage canal, while primarily intended as a sanitary relief for Chicago, will result as well in creating the preliminary conditions for the final accomplishment of the great water way project between the Lakes and the Gulf. This drainage canal now in process of construction, will bring to the head waters of the Illinois, in the near future, six hundred thousand cubic feet of water per minute. To this immense volume of water the dams will simply be an obstruction. The General Assembly of Illinois, by Act of 1889, has already provided for the removal of the dams, which are under State control, namely those at Henry and Copperas Creek, as soon as it will be made necessary by the completion of the drainage canal. Since this action of the General Assembly, the National Government has nevertheless expended about two hundred thousand dollars more upon the dams under its control.

In view of the foregoing, we desire to respectfully submit that whatever money is hereafter appropriated by Congress for the improvement of the Illinois River should be expended for the purpose of dredging and deepening the channel of the river, especially with a view of utilizing the increased volume of water that it will eventually receive upon the completion of the drainage canal, and that for such purpose liberal appropriations should be made, and that it would be desirable for Congress to take such action as may be thought best for the final removal of the dams now under control of the National Government from the Illinois River.

ALT. GERDES, President.

JOHN M. WELCH, Treasurer.

WM. A. S. GRAHAM, Secretary.

Board of Commissioners of the Illinois and Michigan Canal."

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

NOVEMBER 15 AND 17.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 15, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting held November 8, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. Co. (Sec. 2, River Diversion, October 31, 1893)	13,302 87
McArthur Bros. Co. (Sec. 4, River Diversion, October 31, 1893)	20,871 86
McArthur Bros. Co. (Sec. 5, River Diversion, October 31, 1893)	2,848 68
E. D. Smith & Co. (Sec. 8, Santa Fe and Stephens street bridges, October 28, 1893).....	1,145 43
E. D. Smith & Co. (Sec. 8, Santa Fe and Stephens street bridges, November 4, 1893)...	8,586 16

E. D. Smith & Co. (Sec. 10, Western Stone Co. Bridge, October 28, 1893)	$4,734 91	
Mason, Hoge & Co. (Sec. 11, River Diversion, October 25, 1893)	2,096 08	
		$ 53,585 99

ENGINEERING DEPARTMENT.

Geo. Brainard, (gauge reading)	$ 10 00	
E. Hastings, (gauge reading)	10 00	
Wm. Kirkham, (gauge reading)	10 00	
P. McGinnis, (gauge reading)	10 00	
Mary Rusk, (gauge reading)	10 00	
Riverside Hotel (livery)	35 50	
H. B. Alexander, (traveling)	8 30	
F. G. Ewald, (traveling)	19 25	
Alex. E. Kastl, (traveling)	19 10	
Hiram A. Miller, (traveling)	30 80	
Hiram A. Miller, (traveling)	17 88	
J. B. Rohrer, (traveling)	22 70	
A. C. Schrader, (traveling)	25 95	
Ebin J. Ward, (traveling)	24 66	
Robert H. Cowdrey, (traveling)	37 08	
Ebin J. Ward, (traveling)	14 50	
J. R. Davis & Son, (test pits, Sec. A)	397 50	
J. R. Davis & Son. (test pits, Sec. A, final)	387 60	
		$ 1,090 83

CLERICAL DEPARTMENT.

Trevor Spring Water Co. (ice, October, '93)	$3 00	
Warner's Towel Supply, (toweling)	1 50	
		$ 4 50

LAW DEPARTMENT.

J. F. Snyder, (Du Page Co. Attorney, services)	200 00	
W. W. Wheelock, (legal services)	125 00	
Orrin N. Carter, (expense)	8 66	
Thos. B. Lantry, (expense)	12 72	
Samuel M. Dickson (expense)	18 26	
		$ 364 64

GENERAL ACCOUNT.

The Chicago Deposit Vault Co. (janitor service, October, 1893)	$ 80 00	
Illinois Staats Zeitung Co. (advertising Sections G to M)	11 25	
Thos. F. Judge, (expense, Trustees' Illinois Valley trip)	264 70	
		$ 355 95

POLICE DEPARTMENT.

J. H. Banks, (coal)	42 23	
J. H. Tedens & Co. (coal)	70 94	
W. H. Shieldr, (coal)	36 40	
F. E Michaud, (repairing Lemont station, etc.)	81 25	
		$ 230 82
Grand total		$ 55,632 73

Mr. Boldenweck, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 468, Law Department (postage)	$10 00
No. 1053, Clerical Department, (postage)	25 00
Total	$35 00

Mr. Boldenweck, seconded by Mr. Russell, moved that Requisition No. 468, for the Law Department, and No. 1053, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 468 for the Law Department, and No. 1053, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the

number of persons in the employ of the District for the week ending November 11, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending November 11, 1893, as the same have been reported to me:

Engineering Department	105	
Engineering Department, Towpath	13	
Engineering Department, Timekeepers	10	
Engineering Department, Trainmen	4	
		132
Clerical Department		4
Treasury Department		1
Law Department		8
Police Department		36
Total employes		181

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of October, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of October, 1893, was $829.92, divided as follows:

Salaries	$ 821.67
General expenses	8.25
Total	$829.92

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $900.

The total amount expended and charged to the General Account during the month of October, 1893, was $5,777.15, divided as follows:

Salaries	$2,533.33
Advertising	864.24
Printing and Stationery	134.33
Rent and Janitor Service	2,190.00
General expenses	55.25
Total	$5,777.15

There are outstanding liabilities against the General Account to the amount of about $40, and the expenses for the present month will be about $5,500.

During the month of October, 1893, there were warrants authorized and drawn against the various accounts as follows:

Engineering Department	$ 16,549 40
Clerical Department	829 92
Law Department	4,213.71
Treasury Department	166.67
General Account	5,777.15
Engineering Department (Construction Account)	515,140 18
Law Department (Land Acc't)	53,402.00
Police Department	4,602.47
Total	$600,681 50

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the Engineering Department for the month of October, 1893. The report was read, and by unanimous consent was ordered printed and, with accompanying classified statement, placed on file.

The following is

THE REPORT:

"CHICAGO, November 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of October, including table giving the rate of progress on the several contracts; also a

classified statement of expenses in the usual form.

Expenses for the month of October were as follows:

Contractors estimates	$302,741.01
River Diversion estimate	148,399.17
Pay rolls	13,770.70
Material, etc	3,200.55
Total	$468.111.43

I estimate the expenses for November will be $400,000.00, including contractor's estimates.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

"CHICAGO, November 6, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I transmit herewith report for October, 1893, with some additional tables:

Pay rolls	$ 6,907.35
Pay rolls, repair of tow-path	862.63
Contractors estimates	302,741.01
Total	$310,510.99

(The extra work done on river diversion, Sections 1, 2, 3, 4, 11 and 12 is not included in the above.)

(Signed) D. C. DUNLAP,
Asst. Supt. of Construction."

SANITARY DISTRICT OF CHICAGO.

Revised Preliminary Estimates of Main Channel and River Diversion from Range Line near Summit to end of Section 14 above Lockport based on contract prices and quantities determined mostly from center line elevations of located lines and from borings for Rock Surface; also includes additional quantities by change of grade in Main Channel as per order of Board of Trustees dated September 6, 1893.

Section.	Classification.	No. of cu. yds. estimated.	Price per cu. yd.	Amounts.	Total Amounts.
A	Glacial Drift, Main Channel	2,370,492	$0.30 5/8	$ 725,963 18	
	Glacial Drift, River Diversion	127,339	0.30 5/8	38,997 57	
	Solid Rock, Main Channel	33,777	0.80	27,021 60	
	Retaining Wall	31,500	1.75	55,125 00	$ 847,107 35
B	Glacial Drift, Main Channel	1,439,189	$0.27	$ 388,581 03	
	Glacial Drift, River Diversion	200,176	0.27	54,047 52	$ 442,628 55
C	Glacial Drift, Main Channel	1,875,018	$0.23 1/2	$ 440,629 23	
	Glacial Drift, River Diversion	167,562	0.23 1/2	39,377 07	$ 480,006 30
D	Glacial Drift, Main Channel	1,908,103	$0.26 7-16	$ 504,454 73	$ 504,454 73
E	Glacial Drift, Main Channel	1,773 307	$0.27 1/2	$ 487,659 43	
	Glacial Drift, River Diversion	67,465	0.27 1/2	18,552 88	
	Glacial Drift, Ditches	5,572	0.27 1/2	1,532 30	
	Solid Rock, Main Channel	5,000	1.00	5,000 00	$ 512,744 61
F	Glacial Drift, Main Channel	1,329,597	$0.23 3/4	$ 315,779 76	
	Glacial Drift, River Diversion	69,900	0.23 3/4	16 601 25	
	Glacial Drift, River Levees & Ditches	47,200	0.23 3/4	11.210 00	
	Solid Rock, Main Channel	45,900	0.80	36,720 00	$ 380 311 01
1	Glacial Drift, Main Channel	1,672.276	$0.27	$ 451,514 52	
	Glacial Drift, River Diversion	158,861	0.27	42.892 47	
	Solid Rock, Main Channel	434,724	0.83 1/2	362,994 54	
	Solid Rock, River Diversion	.....	0.83 1/2	.....	
	Retaining Wall	46,788	1.37 1/2	64,333 50	$ 921,735 03
2	Glacial Drift, Main Channel	725,509	$0.28	$ 203,142 52	
	Glacial Drift, River Diversion	121,011	0.28	33,883 08	
	Solid Rock, Main Channel	432,797	0.91	393,845 27	
	Solid Rock, River Diversion	.....	0.91	.....	
	Retaining Wall	32,670	2.00	65,340 00	$ 696,210 87
3	Glacial Drift, Main Channel	312,826	$0.27	$ 84,463 02	
	Solid Rock, Main Channel	845,325	0.86	726.979 50	
	Retaining Wall	6,304	2.00	12,608 00	$ 824,050 52
4	Glacial Drift, Main Channel	913,317	$0.27	$ 246 595 59	
	Glacial Drift, River Diversion	94,400	0.27	25.488 00	
	Solid Rock, Main Channel	366,226	0.86	314.954 36	
	Solid Rock, River Diversion	12,000	0.86	10,320 00	
	Retaining Wall	47,492	2.00	94,984 00	$ 692,341 95
	To be carried forward				$ 6,301,590 92

Section	Classification.	No. of cu. yds. estimated.	Price per cu. yd.	Amounts.	Total Amounts.
	Bro't forward (Sec. A to 4 inclusive)..	.....	.....	.....	$6, 801,590 92
5	Glacial Drift, Main Channel.....	978,985	$0.27	$ 264,325 95	
	Glacial Drift, River Diversion.....	11,185	0.27	3,019 95	
	Solid Rock, Main Channel.....	267,821	0.73½	196,848 44	
	Retaining Wall.....	54,134	1.48	80,118 32	$ 544,312 66
6	Glacial Drift, Main Channel.....	576,714	$0.27	$ 155,712 78	
	Glacial Drift, River Diversion.....	129,972	0.27	35,092 44	
	Solid Rock, Main Channel.....	557,661	0.73½	409,880 84	
	Retaining Wall.....	26,276	1.48	38,888 48	$ 639,574 54
7	Glacial Drift, Main Channel.....	143,908	$0.26	$ 37,416 08	
	Glacial Drift, River Diversion.....	97,142	0.26	25,256 92	
	Solid Rock, Main Channel.....	915,389	0.73½	672,810 92	
	Solid Rock, River Diversion.....	42,148	0.73½	30,978 78	
	Retaining Wall.....	2,300	1.48	3,404 00	$ 769,866 70
8	Glacial Drift, Main Channel.....	38,051	$0.26	$ 9,893 26	
	Glacial Drift, River Diversion.....	57,778	0.26	15,022 28	
	Solid Rock, Main Channel.....	1,150,588	0.74¾	860,064 53	
	Solid Rock, River Diversion.....	97,629	0.74¾	72,977 68	
	Retaining Wall.....	2,122	1.48	3,140 56	$ 961,098 31
9	Glacial Drift, Main Channel.....	74,534	$0.26	$ 19,378 84	
	Glacial Drift, River Diversion.....	39 852	0.26	10,361 32	
	Solid Rock, Main Channel.....	993,922	0.76 9-10	764,326 02	
	Solid Rock, River Diversion.....	18,592	0.76 9-10	14,297 25	
	Retaining Wall.....	3,258	1.48	4,821 84	$ 813,185 27
10	Glacial Drift, Main Channel.....	30,733	$0.25	$ 7,683 25	
	Glacial Drift, River Diversion.....	36,000	0.25	9,000 00	
	Solid Rock, Main Channel.....	1,133,736	0.80	906,988 80	
	Solid Rock, River Diversion.....	50,667	0.80	40,533 60	
	Retaining Wall.....	3,346	2.00	6,692 00	$ 970,897 65
11	Glacial Drift, Main Channel.....	44,000	$0.30¼	$ 13,310 00	
	Glacial Drift, River Diversion.....	10,222	0.30¼	3,092 16	
	Solid Rock, Main Channel.....	984,982	0.79¼	780,598 24	
	Solid Rock, River Diversion.....	16,667	0.79¼	13,208 60	
	Retaining Wall.....	3,214	1.66	5,335 24	$ 815,544 24
12	Glacial Drift, Main Channel.....	25,316	$0.30¼	$ 7,658 09	
	Glacial Drift, River Diversion.....	2,475	0.30¼	752 69	
	Solid Rock, Main Channel.....	977,462	0.79¼	774,638 64	
	Solid Rock, River Diversion.....	5,000	0.79¼	3,962 50	
	Retaining Wall.....	2,284	1.66	3,791 44	$ 790,803 36
13	Glacial Drift, Main Channel.....	33,530	$0.26	$ 8,717 80	
	Solid Rock, Main Channel.....	1,005,690	0.74¾	751,753 28	
	Retaining Wall.....	1,124	1.48	1,663 52	$ 762,134 60
14	Glacial Drift, Main Channel.....	228,952	$0.20	$ 45,790 40	
	Solid Rock, Main Channel.....	1,021,373	0.73	745,602 29	
	Retaining Wall.....	12 086	2.00	24,172 00	$ 815,564 69
	Grand total.....				$14 184.572 94

SANITARY DISTRICT OF CHICAGO.

Revised Preliminary Estimates of Main Channel and River Diversion from Range Line near Summit to end of Section 14 above Lockport based on contract prices and quantities determined mostly from centre line elevations of located lines and from borings for Rock Surface; also includes additional quantities occasioned by change of grade in Main Channel as per order of Board of Trustees dated September 6, 1893; also covers contracts passed upon October 25, 1893.

Section.	Classification.	Number of cubic yards estimated.	Price per cubic yard.	Amounts.	Total amounts.
A	Glacial Drift, Main Channel	2,370,492	0.30 5/8	$725,963 18	
	Glacial Drift, River Diversion	127,339	0.30 3/8	38,997 57	
	Solid Rock, Main Channel	33,777	0.80	27,021 60	
	Retaining Wall	31,500	1.75	55,125 00	$ 847,107 35
B	Glacial Drift, Main Channel	1,439,189	0.27	388,581 03	
	Glacial Drift, River Diversion	200,176	0.27	54,047 52	442,628 55
C	Glacial Drift, Main Channel	1,875,018	0.23 1/2	440,629 23	
	Glacial Drift, River Diversion	167,562	0.23 1/2	39,377 07	480,006 30
D	Glacial Drift, Main Channel	1,908,103	0.26 7-16	504,454 73	504,454 73
E	Glacial Drift, Main Channel	1,773,307	0.27 1/2	487,659 43	
	Glacial Drift, River Diversion	67,465	0.27 1/2	18,552 88	
	Glacial Dritt, River Levees & Ditches	5,572	0.27 1/2	1,532 30	
	Solid Rock, Main Channel	5,000	1.00	5,000 00	512,744 61
F	Glacial Drift, Main Channel	1,329,597	0.23 3/4	315,779 76	
	Glacial Drift, River Diversion	69,900	0.23 3/4	16 601 25	
	Glacial Drift, River Levees & Ditches	47,200	0.23 3/4	11,210 00	
	Solid Rock, Main Channel	45,900	0.80	36,720 00	380,311 01
1	Glacial Drift, Main Channel	1,672,276	0.27	451,514 52	
	Glacial Drift, River Diversion	158 861	0 27	42,892 47	
	Solid Rock, Main Channel	434,724	0 83 1/2	362,994 54	
	Solid Rock, River Diversion	.....	0.83 1/2	.....	
	Retaining Wall	46,788	1.37 1/2	64,333 50	921,735 03
2	(Contract of July 14, 1892.)				
	Glacial Drift, Main Channel	27,600	0.28	7.728 00	
	Glacial Drift, River Diversion	121,011	0 28	33.883 08	
	Solid Rock, Main Channel	.....	0.91	.....	
	Retaining Wall	.....	2.00	.....	41,611 08
3	(Contract of July 14, 1892.)				
	Glacial Drift, Main Channel	66,800	0.27	18,036 00	
	Solid Rock, Main Channel	.....	0.86	.....	
	Retaining Wall	.....	2.00	.....	18,036 00
	To be carried forward				$ 4,148,631 66

Section.	Classification.	Number of cubic yards estimated.	Price per cubic yard.	Amounts.	Total amounts
	Bro't forward (Secs. A to 3 inclusive)	.....	.....	.....	$ 4,148,634 66
4	(Contract of July 14, 1892.)				
	Glacial Drift, Main Channel	44,200	0.27	11,934 00	
	Glacial Drift, River Diversion	94,400	0 27	25,448 00	
	Solid Rock, Main Channel	.....	0.86	.....	
	Solid Rock, River Diversion	12,000	0.86	10,320 00	
	Retaining Wall	.....	2.00	.....	47,702 00
2	(Under Proceedings of Oct. 25, 1893.)				
	Glacial Drift, Main Channel	692,509	0 50	346,254 50	
	Solid Rock, Main Channel	438,197	0.80	350,557 60	
	Retaining Wall	32,250	1.74	56,115 00	752,927 10
3	(Under Proceedings of Oct. 25, 1893.)				
	Glacial Drift, Main Channel	261,226	0.56	146,286 56	
	Solid Rock, Main Channel	830,125	0.76	630 895 00	
	Retaining Wall	7,699	1.80	13,858 20	791,039 76
4	(Under Proceedings of Oct. 25, 1893.)				
	Glacial Drift, Main Channel	960,617	0.49	470,702 33	
	Solid Rock, Main Channel	274,726	0 80	219,780 80	
	Retaining Wall	55,145	1.87	103,121 15	793,604 28
5	Glacial Drift, Main Channel	978,985.	0.27	264,325 95	
	Glacial Drift, River Diversion	11,185	0 27	3,019 95	
	Solid Rock, Main Channel	287,821	0 73½	196,848 44	
	Retaining Wall	54,134	1.48	80,118 32	544,312 66
6	Glacial Drift, Main Channel	576,714	0 27	155.712 78	
	Glacial Drift, River Diversion	129,972	0 27	35,092 44	
	Solid Rock, Main Channel	557,661	0.73½	409.880 84	
	Retaining Wall	26,276	1.48	38,888 48	639,574 54
7	Glacial Drift, Main Channel	143 908	0.26	37,416 08	
	Glacial Drift, River Diversion	97,142	0.26	25 256 92	
	Solid Rock, Main Channel	915,389	0.73½	672,810 92	
	Solid Rock, River Diversion	42,148	0 73½	30,978 78	
	Retaining Wall	2,300	1.48	3,404 00	769,866 70
8	Glacial Drift, Main Channel	38 051	0 26	9,893 26	
	Glacial Drift, River Diversion	57.778	0 26	15,022 28	
	Solid Rock, Main Channel	1,150.588	0.74¾	860,064 53	
	Solid Rock, River Diversion	97.629	0.74¾	72 977 68	
	Retaining Wall	2,122	1.48	3,140 56	961,098 31
9	Glacial Drift, Main Channel	74.534	0.26	19,378 84	
	Glacial Drift, River Diversion	39,852	0.26	10,361 32	
	Solid Rock, Main Channel	993 922	0.76 9-10	764,326 02	
	Solid Rock, River Diversion	18.592	0.76 9-10	14.297 25	
	Retaining Wall	3,258	1.48	4,821 84	813,185 27
	To be carried forward				$10,261,945 28

Section.	Classification.	Number of cubic yards estimated.	Price per cubic yard.	Amounts.	Total amounts.
	Bro't forward (Secs. 4 to 9 inclusive)	.....	.....	.....	$10,261,945 28
10	Glacial Drift, Main Channel	30,733	0.25	7,683 25	
	Glacial Drift, River Diversion	36,000	0.25	9,000 00	
	Solid Rock, Main Channel	1,133 736	0.80	906,988 80	
	Solid Rock, River Diversion	50.667	0.80	40,533 60	
	Retaining Wall	3,346	2.00	6,692 00	970,897 65
11	Glacial Drift, Main Channel	44.000	0 30¼	13,310 00	
	Glacial Drift, River Diversion	10,222	0.30¼	3,092 16	
	Solid Rock, Main Channel	984,982	0.79¼	780,598 24	
	Solid Rock, River Diversion	16,667	0.79¼	13 208 60	
	Retaining Wall	3,214	1.66	5,335 24	815,544 24
12	Glacial Drift, Main Channel	25,316	0.30¼	7,658 09	
	Glacial Drift, River Diversion	2,475	0.30¼	752 69	
	Solid Rock, Main Channel	977,462	0.76¼	774,638 64	
	Solid Rock, River Diversion	5.000	0.79¼	3,962 50	
	Retaining Wall	2,284	1.66	3,791 44	790,803 36
13	Glacial Drift, Main Channel	33,530	0.26	8,717 80	
	Solid Rock, Main Channel	1,005,690	0.74¾	751,753 28	
	Retaining Wall	1,124	1.48	1,663 52	762,134 60
14	Glacial Drift, Main Channel	228,952	0.20	45,790 40	
	Solid Rock, Main Channel	1,021,373	0.73	745,602 29	
	Retaining Wall	12,086	2.00	24,172 00	815,564 69
	Grand total				$14,416,889 82

CONDITION OF WORK, NOVEMBER 1, 1893.

SEC.	CONTRACTOR.	Total amount done Nov. 1, 1893.	Av. monthly amt. called for in contract.	Total amount required to be done by Nov. 1, 1893.	Amount behind as per contract Nov. 1, 1893.	Amo'nt ahead as per contract, Nov. 1, 1893.
A	L. D. Conner & Co.....	$ 33,683 52	$ 25,669 92	$ 102,679 68	$ 68,996 16	.....
B	L. D. Conner & Co.....	48,826 26	13,412 99	53,651 96	4,825 70	.....
C	Western Dredg. & Imp Co	53,544 75	14.545 65	58,182 60	4,637 85	.....
D	E. D. Smith & Co.....	40,620 43	15.286 51	61,146 04	20,525 61	.....
E	Streeter & Kenefick.....	131,409 30	15,537 72	62,150 88	.....	$ 69 258 42
F	Ricker, Lee & Co.....	68,299 30	11,524 58	46,098 32	.....	22,200 98
1	Alfred Harlev.....	26,882 55	22.481 34	157,369 38	130,486 83	.....
2	McArthur Bros.....	15,988 00	19,378 98	174,410 82	158.422 82	.....
3	Gilman & Co.....	18,036 00	19,733 56	217,069 16	199,033 16	.....
4	McArthur Bros.....	11,934 00	20,519 67	205,196 70	193.262 70	.....
5	Agnew & Co.....	46,791 00	13,275 92	126,121 24	79.330 24	.....
6	Agnew & Co.....	49,869 00	15,599 38	148 194 11	98,325 11	.....
7	Agnew & Co.....	98,348 00	18,777 24	178,383 78	80.035 78	.....
8	Agnew & Co.....	121 ,641 00	23,441 42	257,855 62	136,214 62	.....
9	Agnew & Co.....	76,465 70	19,833 79	218,171 69	141,705 99	.....
10	E. D. Smith & Co.....	174,465 00	23,680 43	260,484 73	86,019 73	.....
11	Mason, Hoge & Co.....	198,332 75	19,891 32	218,804 52	20,471 77	.....
12	Mason, Hoge & Co.....	211,961 00	19,172 88	210,901 68	.....	1.059 32
13	Mason, Hoge & Co.....	249.602 47	18,588 65	204.475 15	.....	45,127 32
14	McCormick Constr'n Co.	84,688 00	19,891 82	218,810 02	134,122 02	.....
	Totals.....	$1.761.388 03	$570,243 77	$3,180,158 08	$1,556,416 09	$137,645 04

Total amount required to be done November 1, 1893.$ 3,180,158 08
Total amount done November 1, 1893..... 1,761,388 03

Amount short as per contracts.....$ 1,418,770 05

Note—In addition to the above amounts done November 1, 1893, there has been material excavated at various points by labor employed by the Sanitary District, which material, if rated at the regular contract prices would reduce the shortage as follows:

Section 1, river diversion—133,100 cubic yards glacial drift at 27c...$35,937 00
Section 2, river diversion— 79,500 cubic yards glacial drift at 28c... 22,260 00
Section 4, river diversion— 80,700 cubic yards glacial drift at 27c... 21,789 00
Section 4, river diversion— 4,100 cubic yards solid rock at 86c... 3,526 00
Section 5, river diversion— 3,700 cubic yards glacial drift at 27c... 999 00
Section 11, river diversion— 3,798 cubic yards glacial drift at 34¼c. 1,148 90
Section 11, river diversion— 2,885 cubic yards solid rock at 79¼c. 2,286 36

Reducing shortage a total of.....$87,946 26

AMOUNT OF WORK DONE TO NOVEMBER 1, 1893.

Sec.	Main Channel. Glacial Drift. Cu. Yds.	Main Channel. Solid Rock. Cu. Yds.	River Diversion. Glacial Drift. Cu. Yds.	River Diversion. Solid Rock. Cu. Yds.	River Levees and Ditches. Glacial Drift. Cu. Yds.	Total value of work done to November 1, 1893, on each Section.	12½ per cent. reserved as per contract.
A	10,859	.....	99,128	.....	.....	$ 33,683 52	$ 4,210 44
B	.....	.....	180,888	.....	.....	48,826 26	6,103 28
C	72,004	.....	155,846	.....	.....	53,544 75	6,693 09
D	153,647	.....	.....	.....	.....	40,620 43	5,077 55
E	406,458	.....	46,051	.....	25,343	131,409 30	16,426 16
F	170,460	.....	69,700	.....	47,416	68,299 30	8,537 41
1	93,689	.....	*5,876	.....	.....	26,882 55	3,360 32
2	27,600	.....	*29,500	.....	.....	15,988 00	1,998 50
3	66,800	.....	.....	.....	.....	18,036 00	2,254 50
4	44,200	.....	*.....	*.....	.....	11,934 00	1,491 75
5	173,300	....	*.....	.....	.....	46,791 00	5,848 87
6	109,000	.....	75,700	.....	.....	49,869 00	6,233 62
7	32,200	49,100	93,900	40,100	.....	98,348 00	12,293 50
8	7,500	57,400	49,800	85,400	.....	121,641 00	15,205 12
9	39,600	58,000	37,700	15,300	.....	76,465 70	9,558 21
10	24,700	148,000	27,400	53,800	.....	174,465 00	21,808 12
11	40,300	222,800	*4,400	*10,400	.....	198,332 75	24,791 59
12	27,400	257,000	†.....	†.....	.....	211,961 00	26,495 13
13	32,822	322,500	.....	.....	.....	249,602 47	31,200 31
14	45,300	103,600	.....	.....	.....	84,688 00	10,586 00
Total	1,577,839	1,218,400	875,839	205,000	72,759	$1,761,388 03	$220,173 47

Main Channel, glacial drift	1,577,839	Cu. Yds.
Main Channel, solid rock	1,218,400	"
River Diversion, glacial drift	875,839	"
River Diversion, solid rock	205,000	"
River Levees and Ditches, glacial drift	72,759	"

Total value of work done to November 1st, 1893	$1,761,388 03
Total 12½ per cent reserved as per contracts	220,173 47
Total of vouchers, including those of November 1, 1893	$1,541,214 56

*The following approximate quantities have been excavated to November 1, 1893, by labor employed by the Sanitary District:

Section 1, river diversion, glacial drift	133,100	Cu. Yds.
Section 2, river diversion, glacial drift	79,500	"
Section 4, river diversion, glacial drift	80,700	"
Section 4, river diversion, solid rock	4,100	"
Section 5, river diversion, glacial drift	3,700	"
Section 11, river diversion, glacial drift	3,798	"
Section 11, river diversion, solid rock	2,885	"

†On Section 12, river diversion, there have been excavated on contractor's force report, 2,475 cubic yards of glacial drift and 5,000 cubic yards of solid rock.

TABLE OF FUTURE PROGRESS NECESSARY IN ORDER TO COMPLETE CONTRACTS BY APRIL 30, 1896; COMPILED FROM CONDITION OF WORK NOVEMBER 1, 1893, AND USING THE LATEST REVISED PRELIMINARY ESTIMATES.

SECTIONS.	CONTRACTORS.	Revised Preliminary Estimates.	Total amount done November 1, 1893, River Diversion being considered as completed in quantities the same as the revised preliminary estimates.	Amount remaining to be done from November 1st, 1893, and April 30th, 1896. (30 months).	Average monthly progress necessary November 1st, 1893, to April 30th, 1896. (30 months).	Glacial Drift equal to the necessary average monthly progress. (Cubic yards.)	Solid Rock equal to the necessary average monthly progress. (Cubic yards).
A	L. D. Conner & Co	$ 847,107 35	$ 42,323 14	$ 804,784 21	$ 26 826,14	87,596	.....
D	L. D. Conner & Co	442 628 55	54 047 52	388,581 03	12,952 70	47,973	.....
O	Western Dredg. & Imp. Co	480,006 30	56 298 01	423,708 29	14,123 61	60,100	.....
D	E. D. Smith & Co	501 454 73	40,620 43	463,834 30	15 461 14	58,482	.....
E	Streeter & Kenefick	512 744 61	131 861 13	380,883 48	12,696 12	45,168	.....
F	Ricker, Lee & Co	380 311 01	68,299 30	312,011 71	10,400 39	43,791	.....
1	Alfred Harley	921,735 03	68,188 50	853,546 53	28,451 55	105 376 or	34 074
2	McArthur Brothers	794,538 18	41,611 08	752,927 10	25,097 57	50,195 or	31,372
3	Gilman & Co	809,075 76	18 036 00	791.039 76	26,367 99	47,086 or	34,695
4	McArthur Brothers	841,306 28	47,702 00	793 604 28	26,453 49	53,987 or	33,067
5	Agnew & Co	544,312 66	49 810 95	494,501 71	16,483 39	61,050 or	22.426
6	Agnew & Co	639 574 54	66 522 44	573 052 10	19,101 74	70,746 or	25,988
7	Agnew & Co	769 866 70	100,726 20	669 140 50	22 304 68	85,787 or	30 347
8	Agnew & Co	961,098 31	132 856 46	828,241 85	27 608 06	.....	36,934
9	Agnew & Co	813,185 27	79,556 57	733,628 70	24,454 29	.....	31,800
10	E. D. Smith & Co	970,897 65	176 615 00	794 282 65	26,476 09	.....	33 094
11	Mason, Hoge & Co	815,544 24	205 060 51	610 483 73	20,349 46	.....	25,678
12	Mason, Hoge & Co	790.803 36	216,676 19	574 127 17	19.137 57	.....	24,148
13	Mason, Hoge & Co	762,134 60	249.602 47	512,532 13	17,084 40	.....	22.855
14	McCormick Construction Co	815,564 69	84,688 00	730,876 69	24,362 56	121,813 or	33,373
	Totals	$14,416,889 82	$1,931,101 90	$12,485,787 92	$ 416,192 94	.....	.....

TABLE OF CONDITION OF WORK NOVEMBER 1, 1893, AND OF FUTURE PROGRESS NECESSARY TO COMPLETE CONTRACTS BY APRIL 30, 1896; TABLE BEING WORKED ON A PER CENTAGE BASIS, THE LATEST REVISED PRELIMINARY ESTIMATE ON EACH SECTION BEING CONSIDERED AS 100 PER CENT. FOR THAT SECTION.

SECTION.	CONTRACTORS.	Revised preliminary estimate. (100 per cent.)	Per cent done Nov. 1, 1893, River Diversion considered completed. (Sec. A to F 7 months.) (Sec. 1 to 14, 14 months.)	Per cent remaining to be done after November 1, 1893. (30 months.)	Per cent required to be done November 1, 1893.	Per cent ahead as per contract Nov. 1, 1893.	Per cent behind as per contract November 1, 1893.	Per cent for average monthly progress necessary, Nov. 1, 1893, to April 30, 1896. (30 months.)
A	L. D. Conner & Co	$ 847,107 35	5.00	95.00	12.12	.....	7.12	3.17
B	L. D. Conner & Co	442,628 55	12.21	87.79	12.12	0.09	.....	2.93
C	Western Dredg. & Imp. Co	480,006 30	11.73	88.27	12.12	.....	0.39	2.94
D	E. D. Smith & Co	504 454 73	8.05	91.95	12.12	.....	4.07	3.06
E	Streeter & Kenefick	512 744 61	25.72	74.28	12.12	13.60	.....	2.48
F	Ricker, Lee & Co	380,311 01	17.96	82.04	12.12	5.84	.....	2.73
1	Alfred Harley	921.735 03	7.40	92.60	17.07	.....	9.67	3.09
2	McArthur Brothers	794 538 18	5.24	94.76	21 95	.....	16.71	3.16
3	Gilman & Co	809 075 76	2.23	97.77	26.83	.....	24.60	3.26
4	McArthur Brothers	841.306 28	5.67	94.33	24 39	.....	18.72	3.14
5	Agnew & Co	544,312 66	9.15	90.85	23.17	.....	14.02	3.03
6	Agnew & Co	639.574 54	10.40	89.60	23.17	.....	12.77	2.99
7	Agnew & Co	769 866 70	13.08	86.92	23.17	.....	10.09	2.90
8	Agnew & Co	961 098 31	13.82	86.18	26.83	.....	13 01	2.87
9	Agnew & Co	813,181 27	9.78	90.22	26.83	.....	17.05	3.01
10	E. D. Smith & Co	970 897 65	18.19	81.81	26.83	.....	8.64	2.73
11	Mason, Hoge & Co	815.544 24	25.14	74.86	26.83	.....	1.69	2.50
12	Mason, Hoge & Co	790,803 36	27.40	72.60	26.83	0.57	.....	2.42
13	Mason, Hoge & Co	762 134 60	32.75	67.25	26.83	5.92	.....	2.24
14	McCormick Construction Co	815 564 69	10.38	89.62	26.83	.....	16.45	2.99
Totals		$14,416,889 92	13.39	86.61	22.06	0.95	10.80	2.89

FORCE REPORT—DAILY AVERAGE, OCTOBER, 189

SECTION.	Men.	Teams.	Steam Shovels.	Steam and Air Pumps.	Steam and Air Drills.	Steam and Air Hoists	Channelers.	Air Compressors.	Cableways.	Steam Scrapers.	Cantilever Derricks.	Locomotives.	Steam Derrick.	Cars.	Dredges.
A	170	5	....	2.2	....	....	....	....	....	....	....	....	....	23	.6
B	97	87	.6	4	....	....	....	....	.6	....	....	....	....	....	....
C	119	75	3	2	....	2.5	....	....	....	....	....	....	....	15	....
D	106	1	2	1.5	....	....	....	....	....	....	....	3.5	....	25	....
E	135	119	2	3.5	....	....	....	....	....	....	....	3	....	36	....
F	111	64	3	3.5	....	....	....	....	....	....	....	2	....	19	....
1	41	6	.5	1.9	....	.5	....	....	....	....	....	....	....	....	....
5	137	7	1.9	3.5	....	....	....	....	....	....	....	2	1	24	.6
6	143	7	....	1	....	....	....	....	....	1.7	....	....	....	....	....
7	309	13	....	1.6	....	3	1	....	....	....	....	....	.1	28	....
8	368	60	....	.3	9.7	1.6	.6	....	.4	....	....	....	....	24	....
9	251	28	....	.7	....	1.8	1.6	....	....	....	....	....	.2	38	....
10	478	13	....	5	13	3	5.5	1	....	....	2.6	....	....	36	....
11	316	20	....	4	13	1	6.2	1	.9	....	1.6	....	....	....	....
12	303	18	....	5	14	3	5	....	....	....	.8	....	1	35	....
13	292	10	....	5	10	2	4	....	....	....	2	....	....	23	....
14	167	6	....	4	5.9	2	3	....	....	....	....	....	....	28	....
Totals	3542	539	13	48.7	65.6	20.4	26.9	2	1.9	1.7	7.0	10.5	2.3	354	1.2

Respectfully submitted,

(Signed) D. C. DUNLAP,
Assistant Superintendent of Construction."

"CHICAGO, November 4, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of October was as follows:

Completed 43 borings on line of proposed levee north of Willow Springs road, between Stations 673 and 740. Made plat of same showing also location of proposed temporary trestle.

Completed the test pits for Spillway on the east bank of the Desplaines River, north of C., St. F. & C. R. R. bridge above Summit. Eleven pits were completed to rock surface, making a total of twenty-four pits.

Made detailed plans for Spillway and drew up specifications for same.

Staked out the excavation for Spillway and construction commenced.

Continued the cross-sectioning of territory along the line of the River Diversion Channel. This work is now completed from head of Goose Lake to a point opposite Byrneville.

Continued the locating of land corners with reference to the triangulation system from Lemont to Sag. The land corners adjacent to the Main Channel are now connected with the triangulation system as far up as the east line of Section 11, Township 37 North, Range 12 East.

Some miscellaneous surveys in connection with land boundaries were made on the east bank of the Desplaines river between the C., St. F. & C. R. R. and Ogden avenue.

Completed platting of Willow Springs road.

Completed the reduction of notes of survey in vicinity of C., S. F. & C. R. R. bridge above Summit and platted the same.

The construction of bridges over river diversion channel, vicinity of Lemont, for Western Stone company, Stephens street and Santa Fe R. R. was commenced. The railroad bridges are ready to receive the rail and the embankments for the Stephens street bridge are in progress.

A series of photographs at various points along line of channel under construction was taken.

The maintenance and records of water gauges was continued.

Some further work on the reduction of notes pertaining to Illinois river floods was done

The work for November will be a continuation of that of October, with such additional work as may be ordered.

The expense for November will approximate to that of October.

Very respectfully,

(Signed) THOS. T. JOHNSTON,
First Assistant Chief Engineer."

"CHICAGO, Nov. 8, 1893.

Isham Randolph, Esq., Chief Engineer.

DEAR SIR—I herewith submit the report of Division 3, for the month of October, 1893.

A revised estimate of material, and four copies of the profile of the borings and test pits in Sections 2, 3 and 4, and a drawing and tracing of Part 3 of the Index Maps of the Stadia Sections, were made

Tracings were completed of right of way tracts 117, 118, 130, 132 and 170, of the Western Stone Company's tracks at the Will County line, and of a contour map of the Des Plaines river near Summit.

Plans were drawn of a temporary trestle on Section A, and of the junction of the center lines of the Main Channel near Summit.

Estimates of material and strain sheets were made of five bridge plans of one hundred feet span.

Platting was done on right of way maps between Western avenue and Robey street, and between Lockport and the E. J. & E. R. R.

The topography of one and one-half townships was added to the condensed map of the channel from Chicago to Joliet.

On the one hundred feet scale contour maps, platting of the topography was done on Parts 14, 16 to 19, 21 and 22, and platting of the Section corners and lines of the Main Channel, River Diversion and embankments on Parts 12 to 15.

Platting was also continued on the map of the Main Channel at Lockport, and between Bridgeport and Summit.

A progress profile of the line, showing the amount of work done each month was commenced. During November, it is proposed to continue the work now on hand, and the platting of the Sanitary District and Watershed Maps, which has been delayed on account of other work.

Yours respectfully,

(Signed) EDGAR WILLIAMS,

Second Assistant Chief Engineer."

(Enclosing classified statement.)

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of October, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I submit herewith the monthly report for October, 1893. The total amount paid out by this Department is as follows:

Salaries.		
Attorneys	$ 1,487 50	
Office force	300 00	
		$ 1,787 50
General Expenses.		
Right of way	$ 998 70	
Court costs	64 65	
Legal services	1,250 00	
Printing and stationery	71 50	
Sundries	41 36	
		$ 2,426 21
Land Account.		
Right of way	$ 53,572 00	
Abstracts (Will Co.)	600 00	
		$ 54,172 00
Total		$ 58,385 71

Since my last report the condition of affairs upon Section Eight (8) arising out of the disagreements of Agnew & Co. and Guilford has demanded attention and several days time by employes of this Department has been given thereto. In the payment of the pay-rolls which is now being carried on as provided for by your Honorable Body, I deemed it expedient to have representatives of the Department present.

The new contract for Section Three (3) let by the Board to Gilman & Co. has been prepared, and also supplemental agreements between the District and McArthur Bros. for Sections Two (2) and Four (4), embodying the terms of the settlement made with them by your Honorable Body, and containing the provisions with reference thereto directed by you to be made. Agreements have also been prepared by my direction under which The Heidenreich Company is to superintend the construction of a pile trestle upon Section A, and McArthur Bros. Company the construction of a spillway on the left bank of the Desplaines River about 1,500 feet north of the Santa Fe bridge near Summit,

which said constructions have been undertaken by the District.

Attention has also been given to matters connected with the construction of bridges and railway on Section Eight (8), the raising of the levees on Section Ten (10) to guard against the flooding of the quarries of the Western Stone Company by reason of improvements made by the District upon its right of way, and also to the extra work being carried on upon the river diversion on Section Eleven (11) by Mason, Hoge & Co.

The purchase of the lands indicated by the above expenditure on land account necessitated the preparation and entry of verdicts and orders of judgment in each of same; but a few tracts of those included in the suit of the District vs. Ogden et al, now remain unsettled. Preparations have been made for the filing of a new petition for the purpose of condemning lands this side of Rockwell street and including the Subdivision of Manchester, and the same will doubtless be filed during the coming week.

The case of the Sanitary District vs. Piper, Cullerton et al., in which by your direction, an appeal was taken last fall to the Supreme Court, has been affirmed in that court. the decision having been rendered October 26, 1893. (The leading ground of the affirmance being the inadmissibility of affidavits of jurors to set aside a verdict in the motion for a new trial). In the case of the District vs. Cook et al., in which an appeal was taken by the District to the Appellate Court for the purpose of getting a construction of that portion of the Sanitary District Act which provides in case of an appeal for the deposit of the amount of compensation determined upon in a bank designated by the court, the record and briefs and arguments have been prepared.

This department has given much time in assisting to defeat the efforts being made to incorporate the town of Gary, which threatened, if successful, to become a disturbing element among the laborers employed upon the work of the District.

Much time, too, has been given by one of my assistants to the cases arising from the regular routine work of the Police Department.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM POLICE DEPARTMENT.

The Clerk presented a report from the Police Department, for the month of October, 1893; the same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to submit the following as my second monthly report. The health, dicipline and general condition of the Police Force is quite satisfactory, no cause for suspension, reproof or dismissal having occurred.

A summary of the business of the department for the month shows:

Total number of arrests	132
Committed to jail to await action of grand jury	14
Committed to jail in default of fines.	5
Total fines imposed	$726
Dead bodies recovered	5

Respectfully submitted,

(Signed) EDWARD WILLIAMS,
Marshal."

PURCHASE OF "JACKSON," "REHM," "BOYNTON," "SLEEPER," "BADGER," AND "BURGESS" LANDS.

Mr. Eckhart, Chairman, presented a report of the Joint Committee on Finance and Engineering, with reference to the purchase from Huntington W. Jackson, Receiver of the Third National Bank, Jacob Rehm, Charles W. Boynton, Joseph A. Sleeper, Alpheus C. Badger and William T. Burgess, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay to Huntington W. Jackson, Receiver of the Third National Bank, Jacob Rehm, Charles W. Boynton, Joseph A. Sleeper, Alpheus C. Badger and William T. Burgess, on the vouchers of the vouchers of the Attorney, for said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—

Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay to Huntington W. Jackson, Receiver of the Third National Bank, Jacob Rehm, Charles W. Boynton, Joseph A. Sleeper, Alpheus C. Badger and William T. Burgess, on the vouchers of the Attorney, for said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Nov. 15, 1893,

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with Huntington W. Jackson, Receiver of the Third National Bank, for the purchase from him, for the corporate purposes of this District of the land hereinafter described for the sum of eleven thousand five hundred and fifty-two ($11,552.00) dollars;

With Jacob Rehm for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of five thousand five hundred and twenty-two ($5,522.00) dollars;

With Charles W. Boynton for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of eleven thousand seven hundred and thirty ($11,730) dollars;

With Joseph A. Sleeper for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of thirty thousand seven hundred and eighty ($30, 780.00) dollars;

With Alpheus C. Badger and William T. Burgess for the purchase from them for the corporate purposes of this District of the land hereinafter described for the sum of three thousand four hundred and forty ($3,440.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said Huntington W. Jackson, Receiver of the Third National Bank, the sum of eleven thousand five hundred and fifty-two ($11,552.00) dollars, in full payment for the following described land, to-wit:

Lot two (2) in the Superior Court Partition of the west half (W. ½) of the southwest quarter (S. W. ¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian.

To Jacob Rehm the sum of five thousand five hundred and twenty-two ($5,522.00) dollars, in full payment for the following described land, to-wit:

That part of the west half (W. ½) of the southwest quarter (S. W. ¼) of the northeast quarter (N. E. ¼) of Section thirty-five (35), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying east (E.) of the right of way of the Atchison, Topeka and Santa Fe Railroad Company in Chicago, and south (S.) of a line drawn from a point in the west (W.) line of said north-east quarter (N. E. ¼), thirty-three and ninety-four one-hundredths (33.94) feet north (N.) of the center line of said section, to a point in the east (E.) line of said section, one thousand and ninety and ten one-hundredths (1090.10) feet north (N.) of the east (E.) quarter corner of said section.

To Charles W. Boynton, the sum of eleven thousand seven hundred and thirty ($11,730.00) dollars, in full payment for the following described land, to-wit:

The west half (W. ½) of the southwest quarter (S. W. ¼) of the southeast quarter (S. E. ¼) of the northeast quarter (N. E. ¼) of Section thirty-five (35). Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian.

To Joseph A. Sleeper, the sum of thirty thousand seven hundred and eighty ($30,780.00) dollars in full payment for the following described land, to-wit:

That part of the east half (E. ½) of the northeast quarter (N. E. ¼) of the northwest quarter (N. W. ¼) of section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S.) of a line drawn from a point in the west (W.) line of said section, one thousand and ninety and ten one-hundredths (1090.10) feet north (N.) of the west (W.) quarter corner thereof, to a point in the north (N.) line of said section, thirteen hundred and six and fifty-one one-hundredths (1306.51) feet west (W.) of the northeast (N. E.) corner thereof.

To Alpheus C. Badger, the sum of,

one thousand seven hundred and twenty ($1,720.00) dollars, and to William T. Burgess, the sum of one thousand seven hundred and twenty ($1,720.00) dollars, in full payment for their respective undivided one-half parts of the following described land, to-wit:

The south (S.) one hundred (100) feet of the west half (W. ½) of the west half (W. ½) of the southwest quarter (S. W. ¼), (except the west (W.) two hundred and ninety (290) feet thereof taken for a boulevard) of Section thirty (30), Township thirty-nine (39) North, Range fourteen (14), East of the Third Principal Meridian.

All of said lands lying and being situate in the County of Cook, State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
THOMAS KELLY,
WM. BOLDENWECK,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Finance and Engineering."

PAYMENT FOR "CHURCHILL (RIGGS, TRUSTEE)" AND "MORTON" LANDS.

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order, authorizing and directing the Clerk to pay Henry B. Riggs, Trustee, and Levi P. Morton, on the vouchers of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, Illinois, certain sums, as provided in the order, for right of way lands in said county, in full of verdict for said lands in the cases of the Sanitary District of Chicago vs. Marianna A. Ogden, Henry B. Riggs, Trustee, et al., and the Sanitary District of Chicago vs. Isaac H. Price, Levi P. Morton, et al., as provided in the order; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay Henry B. Riggs, Trustee, and Levi P. Morton, on the vouchers of the Attorney, in pursuance of certain orders entered in the Circuit Court of Cook County, Illinois, certain sums, as provided in the order, for right of way lands in said county, in full of verdict for said lands, in the cases of the Sanitary District of Chicago vs. Marianna A. Ogden, Henry B. Riggs, Trustee, et al., and the Sanitary District of Chicago vs. Isaac H. Price, Levi P. Morton, et al., as provided in the order.

The following is

THE ORDER:

Ordered, That the Clerk of this District be authorized and directed to pay, on the vouchers of the Attorney, to Henry B. Riggs, Trustee, represented in Chicago by Charles E. Towne, the sum of thirteen thousand nine hundred and thirty ($13,930.00) dollars, in full payment for the following described lands, to-wit:

That part of the east half (E. ½) of the west half (W. ½) of the northwest quarter (N. W. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying south (S) of a line drawn from a point in the west (W) line of said Section, forty-two (42) feet south (S.) of the west (W.) quarter corner of said section, to a point in the north (N.) and south (S.) center line of said section, one thousand and seventeen (1,017) feet north (N) of the center of said section; said premises lying and being situate in the County of Cook, State of Illinois. Also,

That part of the east half (E. ½) of the west half (W. ½) of the southwest quarter (S. W. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe & California Railway Company; said premises lying and being situate in the County of Cook, State of Illinois.

Said sum being the amount awarded by the verdict and report of the jury, and the order of the judgment entered thereon in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Henry B. Riggs, Trustee, et al. in the Circuit Court of Cook County, Illinois, general number 118,948, on the 17th day of October, A. D. 1893.

To Levi P. Morton, represented in Chicago by B. F. Jacobs, the sum of Twenty-three thousand two hundred and

six ($23,206.00) dollars, in full payment for the following described land, to-wit:

That part of the east half (E. ½) of the northwest quarter (N. W. ¼) of Section four (4), Township thirty-eight (38) North, Range thirteen (13), East of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company and south (S.) of a line drawn from a point in the east (E.) line of said northwest quarter (N. W. ¼), ten hundred and seventeen (1,017) feet north (N.) of the southeast (S. E.) corner thereof, to a point in the west (W) line of said east half (E. ½) of said northwest quarter (N. W. ¼), four hundred and eighty-six (486) feet north (N.) of the south (S.) line of said northwest quarter (N. W. ¼); said premises lying and being situate in the County of Cook, State of Illinois.

Said sum being the amount awarded by the verdict and report of the jury and the order of judgment entered thereon in the case of the Sanitary District of Chicago vs. Isaac H. Price, Levi P. Morton, et al. in the Circuit Court of Cook County, Illinois, general number 115,771, as amended, on the 10th day of October, A. D. 1893."

APPROVAL OF MC'ARTHUR BROS'. SUPPLEMENTAL CONTRACTS AND GILMAN AND COMPANY CONTRACT.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, transmitting, in duplicate, the supplemental contracts with McArthur Brothers on Sections 2 and 4, and the contract with Gilman & Company on Section 3, and recommending that the President and Clerk be authorized and directed to execute the same on the part of the District; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and, with enclosures, placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute, on the part of the District, the contracts transmitted.

On roll call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Kelly—one (1). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and, with enclosures, placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute, on the part of the District, the contracts transmitted.

The following is

THE REPORT:

"CHICAGO, Nov. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—In accordance with the action of your Honorable Body of October 25, 1893, supplemental contracts have been prepared between McArthur Brothers and this District for the completion of the work on Sections two (2) and four (4), and the same have been executed by said McArthur Brothers, and the consent of the sureties upon the bonds for the original contracts has been obtained to the contracts as modified by the supplemental agreements. Said agreements are herewith submitted and we recommend that the President and Clerk be authorized and directed to execute the same on the part of the District.

The contract for the work on Section three (3), let to Gilman and Company by direction of your Honorable Body, has been prepared and has been executed by them together with proper bond, and same is herewith submitted, and we recommend that the President and Clerk be authorized and directed to execute same on the part of the District.

Respectfully submitted,

(Signed) B. A. ECKHART,
WM. BOLDENWECK,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

(Accompanied by three (3) contracts.)

COMPLETION OF RIVER DIVERSION AND LEVEES AT VARIOUS POINTS BETWEEN SUMMIT AND ROMEO ROAD.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to the completion of the River Diversion and levees at various points between the spillway at Summit and the Romeo road, and recommending that the Chief Engineer be authorized and directed to have certain work done, as provided in the report; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter,

moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Chief Engineer authorized and directed to have certain work done, as provided in the report.

On roll call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—seven (7). Excused and not voting—Mr. Boldenweck—one (1). Nays—None

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Chief Engineer authorized and directed to have certain work done, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Nov. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance, in conference with the Chief Engineer, the Superintendent of Construction and the Attorney, have considered various matters required to complete the River Diversion and the levee separating same from the Main Channel between the spillway above Summit and the Romeo road, and submits the following for the consideration of the Board:

The work of excavation is substantially completed, and the water can be turned through the River Diversion throughout its entire length, before the end of the month. The embankment and levee on the southerly side is insufficient in several particulars, and the following recommendations are made:

Section F. That the Chief Engineer be authorized to remove the loose rock and other material as may be necessary above and below the spillway, the work to be done at cost and ten (10) per cent by the agent employed in building the spillway.

Sections A and B. That in view of the probable delay in completing the river levee, that the Chief Engineer be instructed to raise all low places in the canal bank to the probable height of next season's floods, and to raise the road between the canal and river to the height determined for said roadway, so as to answer the purpose of a cross-levee, or in lieu thereof, to build a suitable cross-levee immediately above said highway, all of said work to be done by the contractors for Sections A and B, at cost and ten (10) per cent.

Section 1. That the Chief Engineer be instructed to establish a levee line along he southerly side ot the river, from the tlevee now constructed opposite Columbia Park to the Willow Springs bridge, and to remove the point on the south side above the River Diversion opposite Columbia Park, and place the material excavated in the easterly extension of the levee.

Sections 5, 6 and 7. That the Chief Engineer is hereby instructed to require the contractors for Sections five (5), six (6) and seven (7) to forthwith complete the levee on these sections to the standard height and character as in his judgment may be required, and in the event of their failure to immediately comply with his requirements, to employ the necessary force without delay, to complete the same as soon as practicable.

Section 10. That the Chief Engineer direct the contractor for Section ten (10) to make the embankment on said section water-tight by means of a suitable core, and to raise the same to standard grade as may be required, the same to be done at cost and ten (10) per cent

Section 11. That the Chief Engineer direct the contractor for Section eleven (11) to make the embankment water-tight and of standard height so far as now extended, in the manner provided for in Section ten (10)

Sections 11 and 12. That the Chief Engineer direct that the embankment in Sections eleven (11) and twelve (12) be continued at once to the Romeo road, as provided in the contract, the same to be of the standard grade and proportions, and that he cause to be placed therein a suitable core or filling, so as to make the same water-tight and suitable for the purposes of a levee, the cost of said core or filling to be paid for by the District at actual cost and ten (10) per cent, provided that the core or filling be first constructed and suitably rip-rapped, so as to answer the purpose of a levee, the embankment to be completed as specified, at the cost of the contractor.

That the Chief Engineer be authorized to employ the Western Stone Company to rip-rap and ballast the railway embankment and grade at the county line, the same to be paid for at actual cost.

With the exception of the levee on Section A, the Committee believes that all other matters in connection with the River Diversion levee have been pro-

vided for, and that it only remains for the Engineering Department to see that all the work remaining, as well as that herein recommended, is diligently pushed to completion before the ground shall be frozen and work of this kind rendered impracticable.

It is probable that some minor work of no great extent will be required in clearing up the river bed on Sections three (3) and five (5), and in clearing away timber where the same may obstruct the river, and it is recommended that authority be given the Engineer to do such minor work mentioned herein as in his judgment may be required.

Very respectfully submitted,

(Signed) L. E. COOLEY.
Chairman.
B. A. ECKHART,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

RAISING OF DISTRICT BRIDGES OVER CANAL.

The Clerk presented a communication, addressed to President Wenter by General Superintendent John Ryan, of the Illinois and Michigan Canal, with reference to the raising of the Swift, Griffin & Connelly and Piper bridges over the Canal, which are now owned by the District; and the report was read.

Mr. Boldenweek, seconded by Mr. Cooley, moved that the communication be ordered printed and referred to the Chief Engineer and Attorney, with directions to report back to the Board.

The motion prevailed, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION.

"LOCKPORT, Ill., Nov. 11, 1893.

Hon. Frank Wenter, President Drainage Board, Chicago, Ills.:

DEAR SIR—Will you kindly give your personal attention to having the three (3) bridges raised we notified you about last spring, viz: Swift's, Griffin & Connelly's and Piper's.

They must be raised at a height not less than two and one-half (2½) feet each, and strengthened by placing bents underneath, and generally repaired in a good workmanlike manner so as to not interfere with navigation, and that the work therein meet with my approval.

The Canal Commissioners have ordered me to see that said bridges are raised, etc., without further delay.

Yours truly,

(Signed) JOHN RYAN,
Gen'l Supt."

COMMUNICATION FROM MC'KEOWN, STOWELL & COMPANY.

The Clerk presented a communication from Messrs. McKeown, Stowell & Company, bidders on Sections 2, 3 and 4 of the Main Channel, with reference to the rejection of their bids.

Mr. Boldenweck, seconded by Mr. Altpeter, moved that the communication be referred to the Committee on Judiciary and the Attorney without reading.

The motion prevailed unanimously, and the communication was ordered so referred, without reading.

PAYMENT OF DAMAGES ON DEATH OF JOHN KERN.

Mr. Kelly presented an order, authorizing and directing the Clerk to pay, on the voucher of the Attorney, to Wm. Hass, Administrator for the estate of John Kern, deceased, certain money in full payment of all claims against the District, on account of the death of said John Kern, deceased; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay, on the voucher of the Attorney, to Wm. Haas, Administrator for the estate of John Kern, deceased, certain money in full payment of all claims against the District, on account of the death of said John Kern, deceased.

The following is

THE ORDER:

"WHEREAS, A claim has been made against this District by William Haas, the administrator of the estate of John Kern, deceased, for damages for causing

the death of said deceased, and the Joint Committee on Engineering and Finance, together with the Attorney, have carefully investigated the circumstances attending the death of said Kern and have fully considered the validity of the grounds upon which said claim for damages is based, and have concluded that it would be advantageous for the District to compromise said claim upon the terms finally proposed rather than await the result of an action at law, now therefore be it

Ordered, That the Clerk be and he is hereby authorized and directed to pay, upon the vouchers of the Attorney, to William Haas, Administrator of the estate of John Kern, deceased, the sum of seven hundred and fifty ($750.00) dollars in full payment of all claims for damages against the Sanitary District of Chicago for causing the death of said John Kern."

ADJOURNMENT TO SPECIAL TIME.

Mr. Kelly stated that it had been reported that the McCormick Construction Company had abandoned the work on Section 14 of the Main Channel, and in order to allow the Board to investigate and take action on the same, he moved, seconded by Mr. Boldenweck, that when the Board adjourn, it do adjourn to meet Friday, November 17, 1893, at 2 o'clock P. M.

The motion prevailed unanimously, and it was so ordered.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned, to meet Friday, November 17, 1893, at 2 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

ADJOURNED MEETING.

The adjourned session of the one hundred and ninety-sixth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Friday, November 17, 1893, at 2 o'clock P. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Kelly, Russell and Wenter—six (6) members were present.

RECESS.

Mr. Eckhart, seconded by Mr. Cooley, moved that the Board take a recess, for forty (40) minutes, reassembling at 2:40 o'clock P. M. the same day.

The motion prevailed unanimously, and it was so ordered.

On reassembling at the close of the recess at 2:40 o'clock P. M. the same day, on roll-call Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7) members were present.

REGULAR ORDER OF BUSINESS.

Mr. Cooley, seconded by Mr. Eckhart, moved that the regular order of business be taken up.

The motion prevailed unanimously, and it was so ordered.

ABANDONMENT OF WORK ON SECTION 14.

The Clerk presented two reports from the Chief Engineer, stating that the work on Section 14 of the Main Channel, for which the McCormick Construction Company are contractors, had been abandoned, and the entire outfit was in the possession of the Sheriff, and further stating that the amount due and unpaid the said Company for work done up to November 14, 1893; and the reports were read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the two reports be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following are

THE REPORTS:

"CHICAGO, Nov. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I am advised that work is at a stand still on Section No. 14. The

McCormick Construction Company has given chattel morgages to creditors covering their entire outfit of machinery and appliances. These mortgages have been foreclosed and the property is now in the hands of the Sheriff. Moreover, this is the regular pay day upon the work and there is no provision made for the payment of the men, who have not been paid for the month of October. Mr. McCormick advised the police at Romeo about 2 o'clock last night that he had been held up and robbed of a large sum of money. After consultation with President Wenter about this matter I bring the subject to your attention and recommend that immediate steps be taken to pay the men what is due them, as soon as the amounts can be ascertained.

An estimate for work done up to November 14 will be returned as soon as it can be made up. This estimate will probably foot up $7,000, which may prove a sum sufficient to meet all labor claims.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

'CHICAGO, Nov. 17, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The actual measurements made on Section No. 14 show that up to the night of November 14th, the following quantities of material had been removed:

	Cu. yds.
Glacial Drift	45,300
Solid Rock	118,600
Which at the contract prices amounts to	$95,638 00
Reservation 12½ per cent	11,954 75
	$83,683 25
Previous advances.	74,102 00
Balance unpaid.	$ 9,581 25

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer."

ORDER FOR PAYMENT OF EMPLOYES ON SECTION 14

Mr. Kelly presented an order authorizing and directing the Clerk to pay out of moneys now in his hands as Emergency Fund, the net amounts due the men as shown on the pay-rolls of the McCormick Construction Company for the month month of October, 1893, and up and including November 14, 1893; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay the employes of the McCormick Construction Company, out of emergency fund, as provided in the order.

The following is

THE ORDER:

"*Ordered,* That the Clerk of the District be and he is hereby authorized and directed to pay out of the moneys in his hands, drawn upon his own vouchers as an emergency fund, the net amounts shown upon the pay-rolls for the month of October, 1893, of the McCormick Construction Company for work on contract Section fourteen (14)—said pay-rolls having been prepared by representatives of said McCormick Construction Company, and being now in the hands of said Clerk, and that the Clerk be authorized and directed to have said laborers receipt on said pay rolls for the amount so paid them, and it is also further

Ordered, That the Clerk be and he is hereby authorized and directed to pay out of said emergency fund the net amounts due the laborers on said contract section for the work on said section during the month of November, up to and including November 14, 1893, the amounts shown to be due on pay-rolls to be furnished by said McCormick Construction Company, and that said Clerk be authorized to have said laborers receipt for said amount on said pay-rolls, provided the sum total of the amounts paid out on said pay-rolls shall not exceed $9,581.25, and provided further, that said amounts so paid shall be retained out of any money due or to become due said McCormick Construction Company."

M'CORMICK CONSTRUCTION COMPANY TO BE SERVED WITH NOTICE OF INTENTION TO FORFEIT CONTRACT.

Mr. Cooley presented an order, directing the Clerk to serve on the McCormick Construction Company, contractors on Section 14, notice as provided in the

order, with reference to the forfeiture of its contract for said section; and the order was read.

Mr. Cooley, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the Clerk directed to serve notice on the McCormick Construction Company, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be and he is hereby directed to serve at once upon the McCormick Construction Company, contractors for Section 14, the following notice:

To the McCormick Construction Co.:

You are hereby notified that there has been a substantial failure on your part to comply with the requirements of your contract with the Sanitary District for Contract Section fourteen (14) bearing date the 12th day of July, 1892, as to the progress of the work done by you under said contract, and that this notice is served upon you under the provisions of said contract for the purpose of laying the foundation for the forfeiture of said contract."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

NOVEMBER 22, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-seventh regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 22, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7) members, were present.

MINUTES.

Mr. Cooley, seconded by Mr. Boldenweck, moved that action on the minutes of the regular meeting, held November 15, 1893, and the adjourned meeting, held November 17, 1893, be deferred.

The motion prevailed unanimously, and it was so ordered.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, (half month, ending Nov. 15, 1893).....	$ 2 524 86
Eng. Dept., Div. No. 1, trainmen, (half month, ending Nov. 15, 1893).....	116 00
Eng. Dept., Div. No. 1, tow-path, (half month ending Nov. 15, 1893).	254 50

Eng. Dept., Div. No. 2, (half month, ending Nov. 15, 1893)	$ 795 80	
Eng. Dept., Div. No. 3, (half month, ending Nov. 15, 1893)	829 25	
Eng. Dept., Div. No. 4, (half month, ending Nov. 15, 1893)	107 50	
Eng. Dept., Div. No. 4, Time-keepers, (half month, ending Nov. 15, 1893)	285 07	
		$ 4,912 98
Clerical Dept., office roll, (half month, ending Nov. 15, 1893)		137 50
Law Dept., office roll, (half month, ending Nov. 15, 1893)		102 50
Police Dept., field roll, (half month, ending Nov. 15, 1893)		1,361 64
Total		$ 6,514 62

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 2, Nov. 16, '93)	$ 2,800 00	
McArthur Bros. (Sec 4, Nov. 16, '93)	5,230 75	
Agnew & Co. (Sec. 5, Nov. 16, '93)	5,551 87	
Agnew & Co. (Sec. 6, Nov. 16, '93)	3,898 12	
Agnew & Co. (Sec. 7, Nov. 16, '93)	6,953 62	
Agnew & Co. (Sec. 8, Nov. 16, '93)	4,120 59	
Agnew & Co. (Sec. 9, Nov. 16, '93)	6,095 95	
E. D. Smith & Co. (Sec. 10, Nov. 16, '93)	15,190 00	
Mason, Hoge & Co. (Sec. 11, Nov. 16, '93)	9,638 78	
Mason, Hoge & Co. (Sec. 12, Nov. 16, '93)	8,598 63	
Mason, Hoge & Co. (Sec. 13, Nov. 16, '93)	12,885 03	
Heldmaier & Neu, (Sec. A, Nov. 16, '93)	9 334 69	
Heldmaier & Neu, (Sec. B, Nov. 16, '93)	4,854 70	
Western Dredging and Impt. Co. (Sec. C, Nov. 16, '93)	5 792 25	
E. D. Smith & Co. (Sec. D, Nov. 16, '93)	2 629 73	
Streeter & Kenefick, (Sec. E, Nov. 16, '93)	8,606 55	
Ricker, Lee & Co. (Sec. F, Nov. 16, '93)	7,240 40	
		$118 821 66

ENGINEERING DEPARTMENT.

Cameron, Amberg & Co. (stationery)	$ 97 95	
Geo. E. Marshall & Co. (stationery)	6 00	
Keen & DeLang, (stationery)	5 25	
Chicago Edison Co. (repairs, etc.)	$ 90 29	
Fairbanks, Morse & Co. (cement moulds)	17 50	
		$ 216 99

CLERICAL DEPARTMENT.

C. F. W. Junge, (postage stamps)		25 00

LAW DEPARTMENT.

Wyckoff, Seamans & Benedict, (repairing machine)	$ 3 00	
Orrin N. Carter, (expense)	9 08	
Thos. B. Lantry, (expense)	5 83	
		$ 17 91

GENERAL ACCOUNT.

The Inter Ocean, (advertising Secs. G to M)	$ 11 25	
The Engineering News Pub. Co. (advertising Secs. G to M)	129 60	
Chicago Edison Co. (electric lighting)	86 99	
Steamer "City of Peoria," (expense, Illinois Valley trip)	647 50	
		$ 825 34

POLICE DEPARTMENT.

Marshall Field & Co. (blankets)	$ 54 70	
Edward Williams, (expense)	56 00	
		$ 110 70
Grand total		$126,532 22

Mr. Boldenweck, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

By unanimous consent, Mr. Russell was excused from the meeting.

REQUISITIONS.

The Clerk presented the following requisition:

No. 917, Police Department, (wagon and sundry supplies) $400 00

Mr. Eckhart, seconded by Mr. Kelly, moved that Requisition No. 917, for

the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, and Requisi- and No. 917, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District, with the exception of the Engineering Department, for the week ending November 18, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 22, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending November 18, 1893, as the same have been reported to me:

Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	49

Up to this writing, no report has been received from the Engineering Department as to the force employed therein.

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

PURCHASE OF "LIVINGSTON" AND "BERNDT" LAND.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from Frances Livingston, Robert Berndt, Augusta Berndt, Adolph J. Sabath and the Aurora Brewing Company, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay to said Frances Livingston, Robert Berndt, Augusta Berndt, Adolph J. Sabath and the Aurora Brewing Company, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay to Francis Livingston, Robert Berndt, Augusta Berndt, Adolph J. Sabath and the Aurora Brewing Company, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Nov. 22, 1893,

To the Honorable the Board of Trustees of the Sanitary District of Chicago.

GENTLEMEN—The Joint Committee on Finance and Engineering have reached an agreement with Frances Livingston for the purchase from her for the corporate purposes of this District of the lands hereinafter described for the sum of four thousand eight hundred ($4,800.00) dollars.

With Robert Berndt, Augusta Berndt, Adolph J. Sabath and Aurora Brewing Co. for the purchase from them for the corporate purposes of this District of their respective interests in the lands hereinafter described for the sum of one thousand seven hundred ($1,700.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney to said Frances Livingston the sum of four thousand eight hundred ($4,800.00) dollars, in full payment for the following described lands, to-wit:

Lots six (6), seven (7), eight (8), nine (9), thirty-nine (39), forty (40), forty-one (41), forty-two (42), forty-three (43), forty-four (44), forty-five (45), forty-six (46), forty-seven (47), forty-eight (48), forty-nine (49) and fifty (50) in Block five (5), in Lichty's Subdivision of Blocks four (4)

and five (5), (except Lots one (1) to five (5), inclusive in Block five (5)) of Manchester, in Cook County, Illinois, said Manchester being a subdivision of that part lying north (N.) of the Canal of the east half (E. ½) of the northeast quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian.

To Robert Berndt the sum of one hundred and sixty-two ($162.00) dollars, to Augusta Berndt the sum of five hundred ($500.00) dollars, to Adolph J. Sabath the sum of three hundred and thirty-eight ($338.00) dollars, and to Aurora Brewing Co. the sum of seven hundred ($700.00) dollars, in full payment for their respective interests in and to the following described lands, to-wit:

Lots one (1) and two (2) in Sabath's Resubdivision of Block four (4) in Manchester, in Cook County, Illinois, said Manchester being a subdivision of that part lying north (N.) of the Canal of the east (E. ½) of the northeast quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian.

All of said lands lying and being situate in the County of Cook, State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
L. E. COOLEY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
W. H. RUSSELL,
THOMAS KELLY,

Joint Committee on Finance and Engineering."

PAYMENT OF RIVER DIVERSION EMPLOYES ON SECTIONS 2, 4 AND 5, AND ADVANCE TO E. D. SMITH & CO. OUT OF EMERGENCY FUND.

Mr. Kelly presented an order, authorizing and directing the Clerk to advance to McArthur Brothers' Company, agents, out of the special emergency fund now in his hands, a certain sum, as provided in the order, for the payment of laborers and employes on the River Diversion and levees, on Sections 2, 4 and 5, said money to be paid on the pay-roll of November 15, 1893, and to advance to E. D. Smith & Company certain money from the same fund for the payment for materials used and of the employes on the Western Stone Company, Stephens street and Santa Fe bridges, as provided in the order; and the order was read.

Mr. Kelly, seconded by Mr. Eckhart, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to advance to McArthur Brothers' Company, agents, and to E. D. Smith & Co., certain moneys out of the special emergency fund now in his hands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be and he is hereby authorized and directed to pay out of the moneys in his hands, drawn upon his own vouchers as an emergency fund, the pay-roll of November 15, 1893, of employes working upon the river diversion upon Sections two (2), four (4) and five (5), under the direction of McArthur Brothers Company, agent of this District, to the amount of eighteen thousand ($18,000.00) dollars, and that when said pay-roll has been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall require said McArthur Brothers Company, agents, to pay said employes the amounts found respectively due them on said pay-roll, and to file with him the receipted roll for the same.

Ordered further, That the Clerk be and he is hereby authorized and directed to advance to E. D. Smith & Company, out of said moneys in his hands, to the amount of not to exceed four thousand ($4,000.00) dollars, the same to be applied by them to the payment of the pay-rolls of employes working upon the Western Stone Company railroad bridge on Section ten (10) and on the Stephens street and Santa Fe Railroad bridges upon Section eight (8), and to the payment of bills for material used in said work, receipted pay-rolls and bills for material to be filed with the Clerk by said E. D. Smith & Company."

COMMUNICATION FROM BONDSMEN OF MCCORMICK CONSTRUCTION COMPANY.

The Clerk presented a communication from Michael W. Ryan and Henry McGurren, bondsmen of the McCormick

Construction Company, contractors on Section 14, offering to complete the work under the contract with said Company; and the communication was read.

Mr. Kelly, seconded by Mr. Eckhart, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following is

THE COMMUNICATION:

"*To the Honorable Board of Trustees of the Sanitary District of Chicago:*

The undersigned, Michael W. Ryan and Henry McGurrin, respectfully represent unto your Honorable body that by contract, dated July 12, 1892, by and between the Sanitary District of Chicago and the McCormick Construction Company, a corporation, etc., the said McCormick Construction Company contracted and agreed to do the work necessary to the excavation and removal of material from a portion of the Main Drainage Canal known as Section 14, for the terms of which contract the undersigned refer to the same; that it was required by said contract that said McCormick Construction Company should give to the said Sanitary District of Chicago a penal bond in the sum of $100,000, to secure its compliance with the terms of said contract, and that thereupon the undersigned, Michael W. Ryan and Henry McGurrin, together with John Maloney, under date of July 12, 1892, entered into such bond jointly with the said McCormick Construction Company, which bond was approved on the 14th day of July, 1892, for the particulars of which bond the undersigned refer to the original, on file in the office of this Board.

They further represent unto your Honorable Body that on or about the ——day of ———, 1893, that said McCormick Construction Company abandoned work under said contract, and all its tools, utensils and equipments were seized by the Sheriff of Will County under some writs the exact nature of which are unknown to the undersigned, and they are informed that this Board has taken action looking to the forfeiture of said contract.

The undersigned further represent that they recognize their obligation under said bond, and that they are able, willing and ready to do all work described in said contract and not heretofore performed, at a cost not greater than the proportionate amount which the said work so performed bears to the entire work agreed to be done under said contract, and within the time limited by said original contract, and to save and indemnify the said Drainage District of Chicago and the said Board harmless and indemnified against any loss whatever upon said work, and they further represent that to that end they are ready, willing and able to give further and other bonds if this Board shall so elect, or such other securities as may to this Board seem proper and right in the premises.

They accordingly respectfully submit to your Honorable Board that by reason of the premises, it would be proper and equitable that they be permitted to so protect themselves from loss and damage by reason of the existence of said bond, provided that said bond is so indemnified that no loss can accrue to said Drainage District thereby.

They therefore respectfully ask that this Honorable Board enter into such agreement with the undersigned as will permit them to complete said work and to receive payment therefor on the basis above set forth. They would further invite this Board to make such thorough and searching investigation as to them may seem proper, as to the ability of the undersigned to perform that which they above propose, and also as to the sufficiency of such securities as they may offer, providing this Board shall require them.

(Signed) MICHAEL W. RYAN,
HENRY MCGURREN."

COMMUNICATION FROM AGNEW & CO., ON LEVEE ON SECTIONS 6 AND 7.

The Clerk presented a communication from Agnew & Company, with reference to levee along the River Diversion on Sections 6 and 7, calling the attention of the Board to the composition and condition of the said levee; and the communication was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the communication be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the communication was ordered printed and so referred.

The following ir

THE COMMUNICATION:

"LEMONT, Ill., Nov. 15, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The attention of the Trustees of the Sanitary District of Chicago is respectfully requested to the fact that the levee along the river diversion of our contracts for Sections 6 and 7 is largely composed of organic matter which, in the event of high water or flood conditions of the Desplaines River, is likely to be damaged, and we respectfully suggest to the Trustees the wisdom of providing some protection against such conditions, as we disclaim any responsibility under our contracts to maintain these levees, once we have brought them to grade, whether the injury to these levees arises from the action of freshets, from direct rains, or other like cause. We have noticed on Section 6 that in several places where we had brought the levee to grade it has shrunk because of its character and has been washed away by rains, so that to-day it is nearly three feet below grade. We do not think it is our duty to make good these injuries.

Respectfully yours,

(Signed) AGNEW & CO.

RICARD O'S. BURKE,

Chief Engineer."

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

NOVEMBER 29, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-eighth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, November 29, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Cooley, Eckhart, Russell and Wenter—five (5), and subsequently Mr. Gilmore, making a total of six (6) members, were present.

MINUTES.

The minutes of the regular meeting, held November 15, 1893, of the adjourned session of the same meeting, held November 17, 1893, and of the regular meeting held November 22, 1893, were approved as printed, on motion of Mr. Eckhart, seconded by Mr. Russell.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

E. D. Smith & Co. (Sec. 8, Stephens street and Santa Fe bridges, November 11, 1893).....	$1,183 68
E. D. Smith & Co. (Sec. 8, Stephens street and Santa Fe bridges, November 11, 1893).....	2,428 48
E. D. Smith & Co. (Sec. 10, Western Stone Co.	

Bridge, November 11, 1893)	3,035 47	
E. D. Smith & Co. (Sec. 10, Western Stone Co. Bridge, November 11, 1893)	212 51	
E. D. Smith & Co. (Sec. 10, Western Stone Co. Bridge, November 11, 1893)	808 39	
		$ 7,668 53

CLERICAL DEPARTMENT.

Cameron, Amberg & Co. (stationery)		$ 3 68

LAW DEPARTMENT.

Western Union Telegraph Co. (telegrams, October, 1893)	$ 9 46	
S. D. Childs & Co., (stationery)	1 95	
Jas. H. Gilbert, Sheriff Cook County, Ill., (services)	120 00	
Orrin N. Carter, (postage stamps)	10 00	
Orrin N. Carter, (expense)	16 50	
		$ 157 91

TREASURY DEPARTMENT.

Jacobs, Coles & Co., (rubber stamps)	$ 1 15	
Geo. E. Marshall & Co. (check perforator)	15 00	
		$ 16 15

GENERAL ACCOUNT.

Sharp & Smith, (vaccine points)	$ 67 50	
Postlewait Livery Co. (livery)	55 00	
The Engineering Record, (advertising Sections G to M, Summit to Corwith)	96 00	
The Railway Age, (advertising Sections G to M, Summit to Corwith)	100 00	
The Railway Review, (advertising Sections G to M, Summit to Corwith)	114 24	
		$ 432 74

POLICE DEPARTMENT.

Foley & Bresnigham, (estimate No. 1, sinking wells)		$ 105 83
Grand total		$ 8 384 84

Mr. Eckhart, seconded by Mr. Russell, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 918, Police Department, (horses and wagons) $553 50

Mr. Eckhart, seconded by Mr. Russell, moved that Requisition No. 918, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, and Requisi- and No. 918, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District, for the week ending November 25, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 29, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending November 25, 1893, as the same have been reported to me:

Engineering Department	108
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	157

Respectfully submitted,

(Signed) THOS. F. JUDGE,

Clerk."

REPORT ON RAISING OF DISTRICT BRIDGES OVER CANAL.

The Clerk presented a joint report from the Chief Engineer and Attorney, with reference to and accompanied by the communication from General Superintendent Ryan, of the Illinois and Michigan Canal, concerning the raising of the Swift, Griffin & Connelly and Piper bridges over the Illinois and Michigan Canal, which communication was presented and referred to those officers at the meeting held November 15, 1893, (page 1574 of the Proceedings); and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be ordered printed, and, with enclosure, placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT:

"CHICAGO, Nov. 28, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The communication from General Superintendent Ryan of the Illinois and Michigan Canal with reference to raising certain bridges over the canal which are owned by the District referred to us by this Board on November 15, 1893, has been under consideration since the time of its reference. We have written to Mr. Ryan and have also had a personal interview, and believe everything can be adjusted to his satisfaction.

It being the wish of the Board that the contractors on whose respective sections these bridges are situated should raise the bridges, we are taking steps to make the necessary arrangements with the proper contractors.

We desire to say further with reference to the inference in Mr. Ryan's communication that the District has been derelict in not complying with the request of last March, that when the communications were received by the Board on that date they were referred to the Chief Engineer and Attorney. The then Chief Engineer wished for more specific information as to the way they wished these bridges raised and on April 6, 1893, a letter was written to the Canal Commissioners requesting such information and not receiving an answer, a second letter was written on April 20, 1893. No answer was received to either of these letters, hence nothing further was done in the matter. The District has not been to blame for the delay and we have so informed the Canal Commissioners stating that the Trustees had always stood ready to comply with this request as soon as definite information could be obtained.

Respectfully submitted,

(Signed) ISHAM RANDOLPH,
Chief Engineer.
ORRIN N. CARTER,
Attorney."

(One (1) enclosure.)

VACCINATION OF EMPLOYES.

The Clerk presented a report from the Sanitary Inspector, requesting an order from the Board authorizing him to immediately commence the work of vaccinating the employes working on the Main Channel; and the report was read.

In connection with the report, Mr. Altpeter presented a resolution, requesting the contractors to comply with the requirements of the Sanitary Inspector, with reference to the vaccination of employes; and the resolution was read.

Mr. Altpeter, seconded by Mr. Eckhart, moved that the report and resolution be adopted, ordered printed and placed on file.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Cooley, Eckhart, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, and the report and resolution adopted, ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Nov. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The small-pox having made its appearance in Chicago and at various places throughout the State, I consider it advisable in order to guard against the outbreak of an epidemic in the camps along the Drainage Canal, to make a thorough vaccination of all of the laborers employed on the work. I desire an order from the Board of Trustees authorizing me to do this, when I shall immediately commence the work of vaccination.

Respectfully submitted,

(Signed) WILLIAM MARTIN, M. D.
Sanitary Inspector."

The following is

THE RESOLUTION:

"WHEREAS, As set forth in the communication of the Sanitary Inspector this day received, the public health requires the vaccination of the employes engaged on the works of the Sanitary District, therefor be it

Resolved, That the Board of Trustees request of the several contractors of the District that they have their said employes vaccinated, and in case any of said contractors or their employes refuse to comply willingly with said request, that said Inspector report to the State Board of Health and request their co-operation in securing the vaccination of said employes."

CONGRESSIONAL INSPECTION OF MAIN CHANNEL.

Mr. Russell, for the Committee on Federal Relations, presented a report, recommending that all the members of Congress from Illinois be invited to inspect the Main Channel on Thursday, December 28, 1893, as provided in the report, and that the Clerk be instructed to make the necessary arrangements; and the report was read.

Mr. Russell, seconded by Mr. Altpeter, moved that the report be adopted, ordered printed, and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs Altpeter, Cooley, Eckhart, Russell and Wenter—five (5). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Nov. 29, 1893.

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—Your Committee on Federal Relations beg leave to report that in conformity with their report of November 8, 1893, (page 1547 of the Proceedings) they have had a meeting with Congressmen from Illinois, with a view to inviting them to participate in an inspection of the Main Drainage Channel, in order to familiarize themselves with the work.

Your Committee, as well as the Congressmen are of the opinion that as the time before the convening of Congress is short, such a trip should be arranged for Thursday, December 28, 1893, and would therefore most respectfully recommend that your Committee be empowered to make all the necessary arrangements for said trip, and that the Clerk of the District be instructed to invite all the members of Congress from the State of Illinois, with a view of ascertaining how many will participate in said tour of inspection.

All of which is

Respectfully submitted,

(Signed) WM. BOLDENWECK,
Chairman.
W. H. RUSSELL,
L. E. COOLEY.
JOHN J. ALTPETER,
Committee on Federal Relations."

COMMUNICATION FROM REPRESENTATIVES OF LABOR ORGANIZATIONS.

The Clerk presented a communication from John Beegan, George A. Woodbury and others, with reference to the employment of men by day labor on certain portions of the Main Channel.

Mr. Altpeter, seconded by Mr. Eckhart, moved that the communication be referred to the Joint Committee on Engineering and Finance, with directions to that Committee to inform the signers of the communication when they can have a hearing.

The motion prevailed unanimously, and the communication was ordered so referred.

PRESENTATION OF BIDS ON SECTIONS G TO M, INCLUSIVE, OF THE MAIN CHANNEL BETWEEN SUMMIT AND CORWITH.

The President then announced that in conformity with the advertisement of September 27, 1893, published for sixty days, as provided by the Sanitary District Act, inviting proposals for work on a portion of the Main Channel, between Summit and Corwith, known as Sections G, H, I, K, L and M, the Board would now proceed to open the bids received in response to the said advertisement.

The Clerk then presented bids, as shown by the following

SCHEDULE OF BIDS:

No.	Name.	Place.	Sections bid on.	Checks deposited.
1	Fred. Stafford	Chicago	K	$ 5,000
2	Halvorsen, Richards & Co	Minneapolis	K	5,000
3	Christie & Lowe	Chicago	I and K	10,000
4	Heidenreich Co	Chicago	L and M	10,000
5	W. A. McGillis & Co	Chicago	L	5 000
6	A. J. McBean	Chicago	L and M	10 000
7	Wm. Innes	Chicago	L	5 000
8	C. E. Loss	Chicago	L and M	10,000
9	McCormick & Moran	Pittsburgh	K	5,000
10	Winston Bros.	Minneapolis	G	5 000
11	Mason, Hoge & Co	Frankfort, Ky	All Sections.	30,000
12	John J. McCaughey	Summit, Ill	K	5,000
13	Hayes Bros	Janesville, Wis	H, I, L and M	20 000
14	McMahon & Montgomery Co	Chicago	G	5,000
15	Brodhead & Hickey	Fairview, N. J	All Sections.	30,000
16	Wm. Dolese & Co	Chicago	K	5,000
17	Streeter & Kenefick	Summit, Ill	H	5,000
18	Hoover & Mason	Kansas City, Mo	L	5,000
19	Ryan & McDonald Construction Co.	Baltimore, Md	All Sections.	30,000
20	Casgrain & McDonald	Chicago	G	5 000
21	Dawson, Symmes & Co	Chicago	G, H and I	15,000
22	Gahan & Byrne	Chicago	All Sections.	30,000
23	Patterson & Shipman	Catlettsburg, Ky	K	5,000
24	F. H. Clement	New York City	L	5,000
25	Ricker, Lee & Co	Galveston, Texas	G	5 000

KEY TO SCHEDULE OF BIDS RECEIVED NOV. 29, 1893.

Names of Bidders in the Order in which their Bids were Received.

Bid No.	Name of Bidder.	G	H	I	K	L	M
		Excavation Price Bid.	Excavation Price Bid.	Excavation Price Bid.	Excavation Price Bid.	Excavation Price Bid.	Excavation Price Bid.
1	Fred Stafford	.....	.....	.....	.31	.....	.....
2	Halvorsen, Richards & Co	.....	.....	.....	.29½	.....	.....
3	Christie & Lowe	.....	.....	.25	.25	.....	.....
4	Heidenreich Co	.....	.....	.....	.....	.19 7 10	.21 7 10
5	W. A. McGillis & Co	.....	.....	.....	.....	42	.....
6	A. J. McBean	.....	.....	.....	.....	.34½	.34½
7	Wm. Innes	.....	.....	.....	.....	.22	.....
8	C. E. Loss	.....	.....	.....	.....	.35	.37½
9	McCormick & Moran	.....	.....	.....	.49	.....	.....
10	Winston Bros	.34	.....	.....	.....	.....	.....
11	Mason, Hoge & Co	.41¾	.37¼	.35	.31	.31	.35
12	John J. McCaughey	.....	.....	.....	.32 2 10	.....	.....
13	Hayes Brothers	.....	.31 7 10	.30 4 10	.....	.34 5 10	.35
14	McMahon & Montgomery Co	.28 4 10	.....	.....	.....	.....	.....
15	Brodhead & Hickey	.41	.42	.40	.40	.40	.40
16	Wm. Dolese & Co	.....	.....	.....	.30	.....	.....
17	Streeter & Kenefick	.....	.35	.....	.....	.....	.....
18	Hoover & Mason	.....	.....	.....	.....	.29¾	.....
19	Ryan & McDonald Construction Co	.40	.40	.37	.37	.35	35
20	Casgrain & McDonald	.28	.....	.....	.....	.....	.....
21	Dawson, Symmes & Co	.37	39	.38	.....	.....	.....
22	Gahan & Byrne	.29	.29	.28	.27	.26 9 10	.26 9 10
23	Patterson & Shipman	.....	.....	.....	39	.....	.....
24	F. H. Clement	.....	.....	.....	.....	.34	.....
25	Ricker, Lee & Co	.30	.....	.....	.....	.....	.....

BIDS OF NOVEMBER 29, 1893, IN DETAIL:

TABLE OF BIDS IN ORDER OF MAGNITUDE — LOWEST BIDS FIRST.

ORDER.	Bid No.	SECTION G — 1,330,000 CUBIC YARDS.		
		Bidder.	Price.	Amount.
First	20	Casgrain & McDonald	$ .28	$ 372,400 00
Second	14	McMahon & Montgomery Co	.28 4-10	377,720 00
Third	22	Gahan & Byrne	.29	385,700 00
Fourth	25	Ricker, Lee & Co	.30	399,000 00
Fifth	10	Winston Bros	.34	452,200 00
Sixth	21	Dawson, Symmes & Co	.37	492.100 00
Seventh	19	Ryan & McDonald Construction Co	.40	532,000 00
Eighth	15	Brodhead & Hickey	.41	545,300 00
Ninth	11	Mason, Hoge & Co	.41⅝	554,166 67

ORDER.	Bid No.	SECTION H — 1,100,000 CUBIC YARDS.		
		Bidder.	Price.	Amount.
First	22	Gahan & Byrne	$ .29	$ 319,000 00
Second	13	Hayes Brothers	.31 7-10	348,700 00
Third	17	Streeter & Kenfick	.35	385,000 00
Fourth	11	Mason, Hoge & Co	.37¼	409 750 00
Fifth	21	Dawson, Symmes & Co	.39	429 000 00
Sixth	19	Ryan & McDonald Construction Co	.40	440,000 00
Seventh	15	Brodhead & Hickey	.42	462,000 00

ORDER.	Bid No.	SECTION I — 1,136,000 CUBIC YARDS.		
		Bidder.	Price.	Amount.
First	3	Christie & Lowe	$ .25	$ 284 000 00
Second	22	Gahan & Byrne	.28	318 080 00
Third	13	Hayes Brothers	.30 4-10	345,344 00
Fourth	11	Mason, Hoge & Co	.35	397 600 00
Fifth	19	Ryan & McDonald Construction Co	.37	420,320 00
Sixth	21	Dawson, Symmes & Co	.38	431,680 00
Seventh	15	Brodhead & Hickey	.40	454,400 00

BIDS OF NOVEMBER 29, 1893, IN DETAIL:

TABLE OF BIDS IN ORDER OF MAGNITUDE—LOWEST BIDS FIRST—*Continued.*

SECTION K—1,157,000 CUBIC YARDS.

ORDER.	Bid No.	Bidder.	Price.	Amount.
First	3	Christie & Lowe	$ .25	$ 289,250 00
Second	22	Gahan & Byrne	.27	312,390 00
Third	2	Halvorsen, Richards & Co	.29½	341,315 00
Fourth	16	Wm. Dolese & Co	.30	347,100 00
Fifth	1	Fred Stafford	.31	358,670 00
Sixth	11	Mason, Hoge & Co	.31	358,670 00
Seventh	12	John J. McCaughey	.32 2-10	372,554 00
Eighth	19	Ryan & McDonald Construction Co	.37	428,090 00
Ninth	23	Patterson & Shipman	.39	451,230 00
Tenth	15	Brodhead & Hickey	.40	462,800 00
Eleventh	9	McCormick & Moran	.49	566,930 00

SECTION L—1,092,000 CUBIC YARDS.

ORDER.	Bid No.	Bidder.	Price.	Amount.
First	4	Heidenreich Co	$ .19 7-10	$ 215,124 00
Second	7	Wm. Innes	.22	240,240 00
Third	22	Gahan & Byrne	.26 9-10	293,748 00
Fourth	18	Hoover & Mason	.29¾	324,870 00
Fifth	11	Mason, Hoge & Co	.31	338,520 00
Sixth	24	F. H. Clement	.34	371,280 00
Seventh	6	A. J. McBean	.34½	376,740 00
Eighth	13	Hayes Brothers	.34 5-10	376,740 00
Ninth	8	C. E. Loss	.35	382,200 00
Tenth	19	Ryan & McDonald Construction Co	.35	382,200 00
Eleventh	15	Brodhead & Hickey	.40	436,800 00
Twelfth	5	W. A. McGillis & Co	.42	458,640 00

SECTION M—719,000 CUBIC YARDS.

ORDER.	Bid No.	Bidder.	Price.	Amount.
First	4	Heidenreich Co	$ .21 7-10	$ 156,023 00
Second	22	Gahan & Byrne	.26 9-10	193,411 00
Third	6	A. J. McBean	.34½	248,055 00
Fourth	11	Mason, Hoge & Co	.35	251,650 00
Fifth	13	Hayes Brothers	.35	251,650 00
Sixth	19	Ryan & McDonald Construction Co	.35	251,650 00
Seventh	8	C. E. Loss	.37½	269,625 00
Eighth	15	Brodhead & Hickey	.40	287,600 00

SUMMIT TO CORWITH—BIDS IN DETAIL.

BIDDER.	Section	Bid No.	CLASSIFICATION.	QUANTITIES. Cubic Yds.	PRICE.	AMOUNT.
Fred Stafford	K	1	Excavation	1,157,000	.31	$358,670 00
Halvorsen, Richards & Co	K	2	"	1,157,000	.29½	341,315 00
Christie & Lowe	I	3	"	1,136,000	.25	284,000 00
Christie & Lowe	K	3	"	1,157,000	.25	289,250 00
Heidenreich Company	L	4	"	1,092,000	.19 7-10	215,124 00
Heidenreich Company	M	4	"	719,000	.21 7-10	156,023 00
W. A. McGillis & Co	L	5	"	1,092,000	.42	458,640 00
A. J. McBean	L	6	"	1,092,000	.34½	376,740 00
A. J. McBean	M	6	"	719,000	.34½	248,055 00
W. Innes	L	7	"	1,092,000	.22	240,240 00
C. E. Loss	L	8	"	1,092,000	.35	382,200 00
C. E. Loss	M	8	"	719,000	.37½	269,625 00
McCormick & Moran	K	9	"	1,157,000	.49	566,930 00
Winston Bros	G	10	"	1,330,000	.34	452,200 00
Mason, Hoge & Co	G	11	"	1,330,000	.41⅔	554,166 67
Mason, Hoge & Co	H	11	"	1,100,000	.37¼	409,750 00
Mason, Hoge & Co	I	11	"	1,136,000	.35	397,600 00
Mason, Hoge & Co	K	11	"	1,157,000	.31	358,670 00
Mason, Hoge & Co	L	11	"	1,092,000	.31	338,520 00
Mason, Hoge & Co	M	11	"	719,000	.35	251,650 00
John J. McCaughey	K	12	"	1,157,000	.32 2-10	372,554 00
Hayes Bros	H	13	"	1,100,000	.31 7-10	348,700 00
Hayes Bros	I	13	"	1,136,000	.30 4-10	345,344 00
Hayes Bros	L	13	"	1,092,000	.34 5-10	376,740 00
Hayes Bros	M	13	"	719,000	.35	251,650 00
McMahon & Montgomery Co	G	14	"	1,330,000	.28 4-10	377,720 00
Brodhead & Hickey	G	15	"	1,330,000	.41	545,300 00
Brodhead & Hickey	H	15	"	1,100,000	.42	462,000 00
Brodhead & Hickey	I	15	"	1,136,000	.40	454,400 00
Brodhead & Hickey	K	15	"	1,157,000	.40	462,800 00
Brodhead & Hickey	L	15	"	1,092,000	.40	436,800 00
Brodhead & Hickey	M	15	"	719,000	.40	287,600 00
Wm. Dolese & Co	K	16	"	1,157,000	.30	347,100 00
Streeter & Kenefick	H	17	"	1,100,000	.35	385,000 00
Hoover & Mason	L	18	"	1,092,000	.29¾	324,870 00
Ryan & McDonald Const. Co	G	19	"	1,330,000	.40	532,000 00
Ryan & McDonald Const. Co	H	19	"	1,100,000	.40	440,000 00
Ryan & McDonald Const. Co	I	19	"	1,136,000	.37	420,320 00
Ryan & McDonald Const. Co	K	19	"	1,157,000	.37	428,090 00
Ryan & McDonald Const. Co	L	19	"	1,092,000	.35	382,200 00
Ryan & McDonald Const. Co	M	19	"	719,000	.35	251,650 00
Casgrain & McDonald	G	20	"	1,330,000	.28	372,400 00
Dawson, Symmes & Co	G	21	"	1,330,000	.37	492,100 00
Dawson, Symmes & Co	H	21	"	1,100,000	.39	429,000 00
Dawson, Symmes & Co	I	21	"	1,136,000	.38	431,680 00
Gahan & Byrne	G	22	"	1,330,000	.29	385,700 00
Gahan & Byrne	H	22	"	1,100,000	.29	319,000 00
Gahan & Byrne	I	22	"	1,136,000	.28	318,080 00
Gahan & Byrne	K	22	"	1,157,000	.27	312,390 00
Gahan & Byrne	L	22	"	1,092 000	.26 9-10	293,748 00
Gahan & Byrne	M	22	"	719,000	.26 9-10	193,411 00
Patterson & Shipman	K	23	"	1,157,000	.39	451,230 00
F. H. Clement	L	24	"	1,092.000	.34	371,280 00
Ricker, Lee & Co	G	25	"	1,330.000	.30	399,000 00

During the reading of the bids, the President called Mr. Gilmore to the Chair, and, by unanimous consent, was himself excused from the meeting.

BIDS TO BE TABULATED AND REFERRED TO THE JOINT COMMITTEE ON ENGINEERING AND FINANCE.

Mr. Cooley, seconded by Mr. Eckhart, moved that the bids just presented, as shown above, be compiled, summarized and tabulated by the Chief Engineer and Clerk, and incorporated in the Proceedings, and that the subject matter of the bids be referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and it was so ordered.

OFFICES TO BE CLOSED ON "THANKSGIVING DAY," NOVEMBER 30, 1893.

Mr. Russell presented an order, directing that the offices of the District be closed on Thursday, November 30, 1893, the same being "Thanksgiving Day;" and the order was read.

Mr. Russell, seconded by Mr. Cooley, moved the adoption of the order.

The motion prevailed unanimously, and it was so ordered.

The following is

THE ORDER:

"*Ordered,* That the offices of the District be and they are hereby ordered closed on Thursday, November 30, 1893, the same being 'Thanksgiving Day'—a legal holiday."

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Russell, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 5, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

ANNUAL MEETING.

The fourth annual meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Tuesday, December 5, 1893, at 2 o'clock P. M., pursuant to the Rules.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) members were present.

ANNUAL MESSAGE OF THE PRESIDENT.

The President then presented his annual message, which was read by the Clerk.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the message be ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE MESSAGE:

"CHICAGO, Dec. 4, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Barely fifteen months have passed since the first spadeful of earth was turned up on the Main Channel of the Sanitary District of Chicago, and to-day a mighty furrow is plowed in the earth, reaching down the valley of the Desplaines from Summit for a distance of twenty miles, cutting through the backbone of the deposit of a mighty glacier that once found its way south-

ward, leaving in its path a conglomeration of material as though it had been gathered from the four quarters of the globe.

In the once peaceful valley where quiet reigned till now,—a quiet only disturbed by the puffing and whistle of a locomotive or an occasional plodding canal boat,—what a change has taken place within a short period of time. All along and parallel with the Main Channel hundreds of houses have been erected to shelter and accommodate the employed. Smoke belches out of scores of furnaces which supply the power for the many steam shovels, the drills, the channeling machines, the various hoisting apparatus and the numerous cantilever derricks, which, owing to their height, can be seen from many points in the valley.

It is with the assistance of this great machinery that the six to eight thousand men have cut out and piled up huge mountains of rock and glacial drift.

Actual progress in the work of construction—this is what the Board has accomplished. It has carried out what it promised to the people—to build the channel of the capacity and size under the most liberal interpretation of the Sanitary District Act.

While work on the Main Channel is being pushed with all the vigor possible another channel running parallel with and to the north and west of the Main Channel has been completed. It is designated as the "River Diversion." The importance of this diversion will be appreciated when it is understood that the volume of the flood waters of the river will be confined within certain embankments or levees instead of spreading out all over the valley in a zigzag course. The diversion shortens the length of the former river. Its line is straight as far as possible and its carrying capacity is increased. It protects the main work from the floods and in other words furnishes the key to the Desplaines Valley from Riverside to Romeo.

This work, great in itself, is now completed and all that is yet required is to have its levees strengthened for all possible emergencies. The diversion serves another purpose, which is of inestimable value to Chicago. It will improve the sanitary condition of the Chicago River. The flood waters of the Desplaines have quite frequently (during ordinary floods) found their way through the so called Ogden ditch into the west arm of the South Branch of the Chicago River and out towards the lake. The diversion channel will correct this condition very materially.

Formerly whenever an ordinary flood brought more than 50,000 cubic feet of water past Riverside the excess of this volume spilled over the Ogden Dam into the Chicago River. While the new River Diversion Channel will not entirely and at all times prevent this flow towards Chicago, yet it will minimize the danger to this extent—that 250,000 cubic feet per minute (the gauge of the spillway), instead of 50,000 cubic feet under the old condition, will be the limit of the overflow into the Chicago River.

The danger, however, will not be done away with until the Main Channel is finished and put into use. The Board may well be proud of its achievement in the completion of the Desplaines River Diversion. It means uninterrupted progress of the main work during the winter as far as the weather will permit, and a safeguard against floods in the spring.

Twenty miles of work are under way and in course of construction and five additional miles are about to be contracted for. The right of way from Summit to the Chicago River at Robey street a distance of seven and a half miles is almost entirely secured by mutual agreement on the part of the owners and the Board and the prices paid were in numerous instances below the estimated value put on the property by the most conservative real estate experts.

The total amount paid out to date for construction amounts to $1,969,739.82, (of which $1,875,225.21 was expended since December 1, 1892) for the excavation of 3,119,208 yards of glacial drift and 1,541,239 yards of solid rock. The total number of acres now acquired by the District for right of way amounts to 5,895.43, of which 3,711.93 was acquired by purchase and 2,183.70 by condemnation. Of this land there was acquired 2,673.71 acres since December 1, 1892, of which 1,823.24 was acquired by purchase and 849.87 by condemnation. There remain about 114.22 acres more to be acquired east of Summit, and an acreage largely in the present bed, but yet undetermined below Lockport. There has been expended for the land already secured the sum of $1,762,419.89, ($1,318,651.36 of which was expended since December 1, 1892) and to complete the line will require about $600,000.00 more, making a grand total of about $2,400,000.

The strip of land required for the channel from Summit to Chicago is 800 feet in width, and runs 1,100 feet north

of and parallel to the Illinois and Michigan Canal. The Legal Department, in conjunction with the Joint Committee on Finance and Engineering, may well be credited with the proper handling of the purchase of the right of way. The total outlay for right of way from Robey street to the end of the line under construction, varying in width all the way from 800 to 5,280 feet and containing 5,895.43 acres, to December 1, 1893, amounted to $1,762,419.89, an average price of less than $300 per acre.

During the past year, many questions of importance have arisen, but the Board was able at all times to consider them without prejudice and solve them accordingly.

The last Legislature passed an act empowering the Board to employ and maintain a police force on and adjacent to the right of way of our channel, and under the act a force of thirty-six men with a Marshal in command was organized. It need not be said that the organization of this force was an urgent necessity, and its presence and work had a most beneficial result in maintaining good order on and adjacent to the work.

As the Main Channel is now for the greater distance in course of construction, and the plans are matured for the entire length from Bridgeport to the upper basin of Joliet, it was but a step in the proper direction to inquire into the effect when the water is turned into our channel, on the Illinois River and the valley in general. Accordingly the Trustees, in their official capacity, took a trip down the Illinois River, from Peru to Grafton, to ascertain the true condition. As a result there is but one opinion—an additional amount of water, added to the volume in the Illinois River, will improve the stream as to navigation as well as to cleanness. This brings us to the great question as to what will be done; what preliminary steps will be taken for the improvement of the lower Illinois River from La Salle to Joliet?

It will be but a few years hence when a mighty channel with a greater cross-section than any other ever constructed heretofore, will be ready to receive the pure water of Lake Michigan. The City of Chicago will then be in possession of a navigable channel nearly thirty-five miles in length, with a depth of twenty-two feet of water. What a grand opportunity for the United States Government! For two centuries men have written and dreamed about this great waterway. Surveys have been made time and again. The government has been appealed to to start the great work for which nature has done so much that it requires only a helping hand to completely develop. It remains for the government to act.

I desire to express my appreciation of the work of the officers and their associates, and to the members of the Board my thanks for their many courtesies extended to me during the year, and to say that it is a pleasure to preside over a body of men who labor day in and day out to attain one result—progress.

No false cry can alarm this Board from doing its duty. The business of the District is conducted strictly on a basis of economy. Millions are expended, yet every dollar is accounted for, and I congratulate the Board on the results of the year's work, and express my pleasure at being one of those who are aiding in bringing the work to a successful completion.

Respectfully submitted,

(Signed) FRANK WENTER,

President Board of Trustees."

On the completion of the reading of the President's message, the President called Mr. Eckhart to the Chair.

ELECTION OF PRESIDENT.

The President then announced that the election of a President of the Board of Trustees was in order.

Mr. Kelly nominated Mr. Frank Wenter as President of the Board of Trustees for the ensuing year.

Mr. Boldenweck seconded the nomination.

Mr. Altpeter, seconded by Mr. Kelly, moved that the election of Mr. Frank Wenter as President of the Board of Trustees for the ensuing year be made by acclamation.

The motion prevailed unanimously.

Upon which result the President declared Mr. Frank Wenter duly elected President of the Board of Trustees of the Sanitary District of Chicago for the ensuing year.

Mr. Wenter then thanked the members of the Board.

ADJOURNMENT.

On motion of Mr. Kelly, seconded by Mr. Boldenweck, the fourth annual meeting of the Board of Trustees of the Sanitary District of Chicago then adjourned.

THOS. F. JUDGE,

Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 6, 1893.

OFFICIAL RECORD.

Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The one hundred and ninety-ninth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, December 6, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meeting, held November 29, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Chief Engineer's roll, (November, 1893).....	$ 3,180 00
Eng. Dept., Div. No. 1, (half month, ending Nov. 30, 1893).....	2,615 23
Eng. Dept., Div. No. 1, tow-path, (half month ending Nov. 30, 1893).	96 25
Eng. Dept., Div. No. 2, (half month, ending Nov. 30, 1893).....	795 80
Eng. Dept., Div. No. 3, (half month, ending Nov. 30, 1893).....	829 25
Eng. Dept., Div. No. 4, (half month, ending Nov. 30, 1893).....	107 50

Eng. Dept., Div. No. 4, Time-keepers, (half month, ending Nov. 30, 1893)	124 03	
Eng. Dept., discharged men's roll, (half month, ending November, 1893)	146 73	
	$	7,894 79
Clerical Dept., Clerk's roll, (Nov., 1893)	$ 566 67	
Clerical Dept., office roll, (half month, ending Nov. 30, 1893)	137 50	
	$	704 17
Treasury Dept., Treasurer's roll, (Nov., 1893)	$	166 67
Law Dept., Attorney's roll, (Nov., 1893)	$ 1,331 66	
Law Dept., Joliet roll, (Nov., 1893)	333 33	
Law Dept., office roll, (half month, ending Nov. 30, 1893)	102 50	
	$	1,767 49
General Account, Sanitary Inspector's roll, (Nov., 1893)	$ 200 00	
General Account, Trustees' roll, (Nov., 1893)	2,333 34	
	$	2,533 34
Police Dept., Marshal's roll, (Nov., 1893)	$ 250 00	
Police Dept., field roll, (half month, ending Nov. 30, 1893)	1,374 14	
	$	1,624 14
Total	$	14,690 60

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, Dec. 1, '93)	$ 508 88	
McArthur Bros. (Sec. 2, Dec. 1, '93)	9,362 50	
McArthur Bros. (Sec. 4, Dec. 1, '93)	13,677 13	
Agnew & Co. (Sec. 5, Dec. 1, '93)	2,858 62	
Agnew & Co. (Sec. 6, Dec. 1, '93)	5,670 00	
Agnew & Co. (Sec. 7, Dec. 1, '93)	7,884 63	
Agnew & Co. (Sec. 8, Dec. 1, '93)	8,750 22	
Agnew & Co. (Sec. 9, Dec. 1, '93)	6,130 86	
E. D. Smith & Co. (Sec. 10, Dec. 1, '93)	13,230 00	
Mason, Hoge & Co. (Sec. 11, Dec. 1, '93)	9,777 88	
Mason, Hoge & Co. (Sec. 12, Dec. 1, '93)	5,755 53	
Mason, Hoge & Co. (Sec. 13, Dec. 1, '93)	10,334 19	
Heldmaier & Neu, (Sec. A, Dec. 1, '93)	12,147 56	
Heldmaier & Neu, (Sec. B, Dec. 1, '93)	481 71	
Western Dredging and Impt. Co. (Sec. C, Dec. 1, '93)	7,121 41	
E. D. Smith & Co. (Sec. D, Dec. 1, '93)	8,730 56	
Streeter & Kenefick, (Sec. E, Dec. 1, '93)	4,492 47	
Ricker, Lee & Co. (Sec. F, Dec. 1, '93)	9,247 03	
McArthur Bros. Co. (Sec. 2, River Diversion, Nov. 15, 1893)	5,224 40	
McArthur Bros. Co. (Sec. 4, River Diversion, Nov. 15, 1893)	13,431 71	
McArthur Bros. Co. (Sec. 5, River Diversion, Nov. 15, 1893)	3,004 81	
E. D. Smith & Co. (Sec. 8, Stephens street and Santa Fe bridges, November 18, 1893)	5,463 49	
E. D. Smith & Co. (Sec. 8, Stephens street and Santa Fe bridges, November 25, 1893)	472 21	
E. D. Smith & Co. (Sec. 10, Western Stone Co. Bridge, November 25, 1893)	1,301 49	
		$166,059 29

ENGINEERING DEPARTMENT.

Barnard & Gunthorp, (printing specifications)	$ 110 00	
Fairbanks, Morse & Co. (cement tester)	100 00	
Seelig & Kandler, (repairing instruments)	11 00	
Robt. H. Cowdrey, (postage stamps)	28 00	
Waukesha Hygeia Mineral Springs Co. (water)	15 00	
Robt. W. Hunt Co. (cement sieves, etc.)	29 40	
E. DeClark & Co. (pans)	5 25	
Geo. Brainard, (gauge reading, Nov., 1893)	10 00	
E. Hastings, (gauge reading, Nov., 1893)	10 00	
Wm. Kirkham, (gauge reading, Nov., 1893)	10 00	
P. McGinnis, (gauge reading, Nov., 1893)	10 00	
Mary Rusk, (gauge reading, Nov., 1893)	10 00	
A. M. Munson (rent, Mt. Forest)	20 00	
O. W. Moon, (rent, Lockport)	20 00	
H. S. Norton, (rent, Lemont)	18 00	
D. C. Dunlap, (horse and buggy)	45 00	
Ryan & Sullivan, (coal)	29 68	
D. C. Dunlap, (traveling)	127 94	
D. C. Dunlap, (traveling)	42 20	
A. C. Schrader, (traveling)	17 73	

A. C. Schrader, (traveling)	29 84	
C. L. Harrison, (traveling)	17 08	
	$	716 12

CLERICAL DEPARTMENT.

Jacobs, Coles & Co., (stationery)	$ 4 50	
Warner's Towel Supply, (toweling)	1 50	
	$	6 00

LAW DEPARTMENT.

Joseph Donnersberger, (expert services)	$ 300 00	
The Chicago Legal News Co. (law forms)	46 72	
	$	346 72

GENERAL ACCOUNT.

John F. Higgins, (printing proceedings, Nov., 1893)	$	163 70

POLICE DEPARTMENT

The Kauffman Buggy Co. (buggy)	$ 130 00	
L. H. Manson, (horse)	180 00	
	$	310 00
Grand total		$181,292 43

Mr. Eckhart, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck (*except as to percentage on Construction Vouchers*), Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 469, Law Department (stationery)	$19 00

Mr. Boldenweck, seconded by Mr. Kelly, moved that Requisition No. 469, for the Law Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 469, for the Law Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District, for the week ending December 2, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending December 2, 1893, as the same have been reported to me:

Engineering Department	116
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	165

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

APPOINTMENT OF ASSISTANT ATTORNEY.

The Clerk presented a report from the Attorney, stating that he had appointed Mr. Wm. W. Wheelock as Assistant Attorney, vice Mr. Haynie R. Pearson, resigned, and requesting the confirmation of the appointment; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report be adopted, ordered printed and placed on file, and the appointment of Mr. Wm. W. Wheelock, as Assistant Attorney, vice Mr. Haynie R. Pearson, resigned, confirmed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the appointment of Mr. Wm. W. Wheelock, as Assistant Attorney, vice

Mr. Haynie R Pearson, resigned, confirmed.

The following is

THE REPORT:

"CHICAGO, Dec. 6, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—On account of his appointment as Assistant in the office of the State's Attorney of this county, Mr. Haynie R. Pearson has handed me his resignation as an Assistant Attorney of this Department.

Subject to your confirmation I hereby appoint Mr. William W. Wheelock to fill this vacancy at a salary of fifteen hundred dollars per annum.

Very truly yours,

(Signed) ORRIN N. CARTER,
Attorney."

MONTHLY REPORT FROM SANITARY INSPECTOR.

The Clerk presented a report from the Sanitary Inspector for the month of November, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 5, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Since submitting my last report, the favorable sanitary conditions at that time noted still prevail in the various camps. The slight amount of sickness observed has been of a mild character unattended by fatal results. In consequence of the prevalence of smallpox in the city and at several points throughout the State I have commenced the work of thorough vaccination of all the laborers employed on the drainage channel, and at the end of the present week this work will be completed. This will give us as complete protection from this disease as it is possible to obtain, and will allay all apprehension of danger from this source entertained by residents of Chicago and the various towns adjacent to the Sanitary District.

Most respectfully submitted,

(Signed) WILLIAM MARTIN, M. D.,
Sanitary Inspector."

MONTHLY REPORT FROM TREASURY DEPARTMENT.

The Clerk presented a report from the Treasury Department for the month of November, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"Balance on hand at date of last report.....		$1,218,692.20
Received from Ft. Dearborn National Bank, int. for November....	$ 337 92	
Received from Metropolitan National Bank, int. for November.	372 60	
Received from National Bank of Illinois, interest for November.....	342 47	
Received from American Trust and Savings Bank, interest for November.....	43 13	
Received from Globe National Bank, interest for November.....	318 35	
Received from Chicago National Bank, interest for November....	309 45	
		$ 1,723 92
Total cash received for month.....		$1,220,416 12
Total cash disbursed during month as per annexed schedules, viz:		
Clerical Department....	$ 874 91	
Treasury Department..	166 66	
Engineering Departm't.	16,170 75	
Engineering—Construction—Department....	362,360 18	
Law Department.....	3,924 63	
Law Department—Land Account.....	96,308 00	
General Account.....	4,826 35	
Police Department.....	3,324 30	
Bond Interest and Premium Account.....	50,000 00	
Bond Account.....	100,000 00	
		$637,955 78
Balance this date, in banks as per schedule endorsed hereon		$582,460 34

(Signed) MELVILLE E. STONE,
Treasurer.

Chicago, December 6, 1893."

SCHEDULE:

Fort Dearborn National Bank.....$	106,122 08
National Bank of Illinois.....	106,962 61
Chicago National Bank.....	105,638 08
Metropolitan National Bank.....	108,859 95
American Trust and Savings Bank..	21,003 79
Globe National Bank.....	133,873 83
Total.....	$582,460 34

PAYMENT OF RIVER DIVERSION EMPLOYES ON SECTION 2, 4 AND 5 OUT OF EMERGENCY FUND.

Mr. Eckhart presented an order, authorizing and directing the Clerk to pay out of the special emergency fund in his hands a certain sum, as provided in the order, to McArthur Brothers Company, Agents, for the payment of laborers and employes working on the River Diversion on Sections 2, 4 and 5, said money to be paid on the approved pay-roll of November 30, 1893, as provided in the order; and he order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk directed to pay McArthur Brothers Company, Agents, out of the special emergency fund in his hands, as provided in the order.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be and he is hereby authorized and directed to pay out of the moneys in his hands drawn upon his own vouchers as an emergency fund, the pay-roll of November 30, 1893, of employes working upon the River Diversion upon Sections two (2), four (4) and five (5) under the direction of McArthur Brothers Company, agent of this District, to the amount of ten thousand ($10,000.00) dollars, and that when said pay-roll has been approved by the Chief Engineer, the Clerk, and the Finance Committee of the District, the Clerk shall require said McArthur Brothers Company, Agent, to pay said employes the amounts found respectively due them on said pay-roll and to file with him the receipted roll for the same."

APPOINTMENT OF COMMITTEES 1893-1894.

The President then announced the following Committees of the Board for 1893-1894:

Committee on Judiciary.

Mr. Kelly, Chairman, and Messrs. Boldenweck and Altpeter.

Committee on Finance.

Mr. Eckhart, Chairman, and Messrs. Russell and Kelly.

Committee on Rules.

The President of the Board, and Messrs. Russell and Eckhart.

Committee on Engineering.

Mr. Cooley, Chairman, and Messrs. Kelly, Boldenweck, Altpeter and Russell.

Committee on Health and Public Order.

Mr. Gilmore, Chairman, and Messrs. Altpeter and Prendergast.

Committee on Federal Relations.

Mr. Boldenweck, Chairman, and Messrs. Cooley, Altpeter, Prendergast and Gilmore.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 13, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The two hundredth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, December 13, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9) members, were present.

MINUTES.

The minutes of the fourth annual meeting, held December 5, 1893, and of the regular meeting, held December 6, 1893, were approved as printed, on motion of Mr. Boldenweck, seconded by Mr. Kelly.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

Alfred Harlev, (Sec. 1, River Diversion, October 31, 1893).....	$41,601 55
Alfred Harlev, (Sec. 1, River Diversion, November 16, 1893).....	15,067 97
McArthur Bros. Co. (Sec. 4, River Diversion, December 1, '93)	10,507 22
E. D. Smith & Co. (Sec. 8, Stephens street and Santa Fe bridges)....	4,406 97
E. D. Smith & Co. (Sec. 10, making levee water tight).....	952 29

Mason, Hoge & Co. (Sec. 11 making levee water tight)	$3,190 75	
Mason, Hoge & Co. (Sec. 12, making levee water tight)	1,544 45	
		$ 77,271 20

ENGINEERING DEPARTMENT.

A. H. Abbott & Co. (drafting material)	$ 44 95	
F. Mayer & Co. (blue prints)	216 48	
The Polygraph Print Co. (polygraphs)	13 35	
Chicago Towel Supply Co. (toweling)	5 40	
Henry Gebhardt, (stakes)	27 75	
John T. Allison, (rent, Summit)	20 00	
Wagner Bros. (livery)	45 50	
Wagner Bros. (livery)	36 00	
Ebin J. Ward, (emergency)	3 00	
Ebin J. Ward, (traveling)	2 72	
Thos. T. Johnston, (traveling)	7 02	
Thos. T. Johnston, (traveling)	15 62	
E. R. Shnable, (traveling)	9 40	
E. R. Shnable, (traveling)	3 26	
H. A. Miller, (traveling)	18 61	
F. G. Ewald, (traveling)	21 44	
Gutta Percha & Rubber Mfg. Co. (steam hose, erosive test)	199 91	
National Tube Works Co. (pipe, erosive test)	54 64	
Turner Brass Works, (fittings, erosive test)	88 67	
Jas. P. Marsh Co. (gauges, erosive test)	20 00	
A. M. Farnsworth, (lumber, erosive test)	17 84	
John B. Gavin, (patterns, erosive test)	38 12	
McArthur Bros. Co. (hose, etc., erosive test)	170 98	
C. G. Cutter, (ratline, erosive test)	14 02	
W. R. Stubbs, (board of party, erosive test)	70 40	
		$ 1,165 08

CLERICAL DEPARTMENT.

Trevor Spring Water Co. (ice)		$ 3 00

GENERAL ACCOUNT.

The Chicago Herald Co. (advertising bonds)	$ 18 90	
The Chicago Evening Post Co. (advertising bonds)	12 60	
The Tribune Co. (advertising bonds)	$ 18 90	
The Chicago Times, (advertising bonds)	15 75	
The Chicago Times, (advertising Sections G to M)	326 96	
The Inter Ocean, (advertising bonds)	9 45	
Victor F. Lawson, Publisher, *Record*, (advertising bonds)	12 60	
The Chicago Daily News Co. (advertising bonds)	18 90	
The Mail, (advertising bonds)	12 60	
John R. Wilson, Publisher, *Evening Journal*, (advertising bonds)	9 45	
The Chicago Daily Globe, (advertising bonds)	9 45	
The Chicago Dispatch, (advertising Sections G to M)	27 60	
The Illinois Staats Zeitung Publishing Co. (advertising bonds)	7 88	
Chicago Arbeiter Zeitung Publishing Co. (advertising bonds)	7 00	
Abendpost Co. (advertising bonds)	7 20	
German-American Publishing Co., *Freie Presse*, (advertising bonds)	8 75	
August Geringer, Publisher, *Svornost*, (advertising bonds)	6 50	
		$ 530 49

POLICE DEPARTMENT.

F. P. Smith Wire and Iron Works, (cells)		$ 600 00
Grand total		$ 79,569 77

Mr. Kelly, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck (*except as to percentage on Construction Vouchers*), Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the

number of persons in the employ of the District, for the week ending December 9, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending December 9, 1893, as the same have been reported to me:

Engineering Department	116
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	165

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM CLERICAL DEPARTMENT.

The Clerk presented a report from the Clerical Department for the month of November, 1893.

The same was read and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I have the honor to herewith report that the total amount expended on account of and charged to the Clerical Department during the month of November, 1893, was $902.84, divided as follows:

Salaries	$ 841.66
Stationery	3.68
Furniture	28.00
General expenses	29.50
Total	$902.84

There are no outstanding liabilities, and the expenses for the present month will, from present indications, be about $900.

The total amount expended and charged to the General Account during the month of November, 1893, was $5,228.94, divided as follows:

Salaries	$2,533.33
Advertising	631.89
Printing and Stationery	121.17
Janitor Service	80.00
Illinois Valley Trip	912.20
Damages (Kern's death)	750.00
General expenses	200.35
Total	$5,228 94

There are outstanding liabilities against the General Account to the amount of about $360, for advertising, and the expenses for the present month will be about $5,000.

During the month of November, 1893, there were warrants authorized and drawn against the various accounts as follows:

Engineering Department	$ 15,577.25
Clerical Department	902.84
Law Department	2,709.67
Treasury Department	182.81
General Account	5,228.94
Engineering Department (Construction Account)	340,892 30
Law Department (Land Acc't)	118,430.00
Police Department	3,634.40
Bond, Interest and Premium Account	50,000.00
Bond Account	100,000.00
Total	$637,558.21

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

MONTHLY REPORT FROM ENGINEERING DEPARTMENT.

The Clerk presented a report (accompanied by classified statement) from the Engineering Department for the month of November, 1893.

The same was read, and, by unanimous consent, was ordered printed and, with accompanying classified statement, placed on file.

The following is

THE REPORT:

"CHICAGO, December 8, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I herewith transmit the

reports of Divisions 1, 2 and 3, showing the detailed operations of the Engineering Department for the month of November, including table giving the rate of progress on the several contracts; also a classified statement of expenses in the usual form.

Expenses for the month of November were as follows:

Contractors estimates	$289,219 03
River Diversion estimates	122,748.80
Pay rolls	12,807.77
Material, etc	4,035.10
Total	$428.810.70

I estimate the expenses for December will be $350,000.00, including contractor's estimates.

Yours truly

[Signed] THOS. T. JOHNSTON,
Acting Chief Engineer."

"CHICAGO, December 11, 1893.

Isham Randolph, Esq., Chief Engineer:

DEAR SIR—I transmit herewith report for November, 1893.

Pay rolls	$ 6,684.76
Pay rolls, repair of tow-path	350.75
Contractors estimates	289,219.03
Total	$296,254.54

AMOUNT OF WORK DONE TO DECEMBER 1, 1893.

SEC.	MAIN CHANNEL. Glacial Drift. Cu. Yds.	MAIN CHANNEL. Solid Rock. Cu. Yds.	RIVER DIVERSION. Glacial Drift. Cu. Yds.	RIVER DIVERSION. Solid Rock. Cu. Yds.	RIVER LEVEES AND DITCHES. Glacial Drift. Cu. Yds.	Total value of work done to December 1, 1893, on each Section.	12½ per cent. reserved as per contracts.
A	83,926	.....	104,228	.....	.....	$ 58,234 66	$ 7.279 33
B	.....	.....	203,426	.....	.....	54,925 02	6.865 63
C	128,115	.....	162,537	.....	.....	68.303 22	8.537 90
D	202,756	.....	.....	.....	.....	53,603 62	6,700 45
E	446,370	.....	55,194	.....	28,232	145,693 90	18.211 74
F	233,798	.....	69,700	.....	63,416	87,142 08	10,892 76
1	95,843	.....	5,876	.....	.....	27,464 13	3.433 02
2	55,400	.....	29,500	.....	.....	29.888 00	3.736 00
3	66,800	.....	.....	.....	.....	18,036 00	2,254 50
4	88,300	.....	.....	.....	.....	33,543 00	4,192 87
5	208,900	.....	.....	.....	.....	56.403 00	7,050 38
6	126,400	.....	98.800	.....	.....	60,804 00	7,600 50
7	60,700	60,200	96 700	41,000	.....	115,306 00	14,413 25
8	7,500	66,000	52,900	95,400	.....	136.350 50	17,043 81
9	47 500	72,800	37,700	16 000	.....	90.439 20	11,304 90
10	24,700	185.900	27,400	56,500	.....	206,945 00	25 868 12
11	40,300	249.200	5,756	11,483	.....	220,523 22	27,565 40
12	27,400	277,700	.....	.....	.....	228,365 75	28.545 72
13	32,822	358,000	.....	.....	.....	276,138 72	34,517 34
14	45,300	118,600	.....	.....	.....	95,638 00	11,954 75
Total	2.022,830	1.388 400	951,717	220 383	91.648	$2 063.747 02	$257.968 37

Main Channel, glacial drift	2,022.830	Cu. Yds.
Main Channel, solid rock	1,388,400	"
River Diversion, glacial drift	951,717	"
River Diversion, solid rock	220,383	"
River Levees and Ditches, glacial drift	91,648	"

Total value of work done to December 1st, 1893	$2,063,747 02
Total 12½ per cent reserved as per contracts	257,968 37
Total of vouchers, including those of December 1, 1893	$1,805,778 65

CONDITION OF WORK, DECEMBER 1, 1893.

Sections.	CONTRACTORS.	Total amount done December 1, 1893.	Total amount required to be done December 1, 1893, using new rates for progress for November work.	Amount behind as per contracts December 1, 1893.	Amount ahead as per contracts December 1, 1893.	Average monthly progress necessary November 1, 1893, to April 30, 1896.	Amount of work done during November, 1893.
A	Heldmaier & Neu	$ 58,234.66	$ 129,505.82	$ 71,271.16	$	$ 26,826.14	$ 24,551.15
B	Heldmaier & Neu	54,925.02	66,604.66	11,679 64	.....	12,952.70	6,098.76
C	West'n. Dred'g. & Imp. Co	68,303.22	72,306.21	4,002.99	.....	14,123.61	14,758.46
D	E. D. Smith & Co	53,603.62	76,607.18	23,003.56	.....	15,461.14	12,983.19
E	Streeter & Kenefick	145,693.90	74,847.00	.....	70,846.90	12,696.12	14,284.60
F	Ricker, Lee & Co	87,142.08	55,498.71	.....	80,643.37	10,400.39	18,842.78
1	Alfred Harley	27,464.13	185,820.93	158,356.80	.....	28 451.55	581.58
2	McArthur Bros	29,888.00	199,508.39	169,620 39	.....	25,097.57	13,900.00
3	Gilman & Co	18,036.00	243,437.15	225,401.15	.....	26,367.99	.....
4	McArthur Bros	33,543.00	231,650.19	198,107.19	.....	26,453.49	21,609.00
5	Agnew & Co	56,403.00	142,604.63	86,201.63	.....	16,483.39	9,612.00
6	Agnew & Co	60,804.00	167,295.85	106,491.85	.....	19,101.74	10,935.00
7	Agnew & Co	115,306.00	200,688.46	85,382.46	.....	22,304.68	16,958.00
8	Agnew & Co	136,350.50	285,463.68	149,113.18	.....	27,608.06	14,709.50
9	Agnew & Co	90,439.20	242,625.98	152,186.78	.....	24,454.29	13,973.50
10	E. D. Smith & Co	206,945.00	286,960.82	80,015.82	.....	26,476.09	32,480.00
11	Mason, Hoge & Co	220,523.22	239,158.98	18,630.76	.....	20,349.46	22,190.47
12	Mason, Hoge & Co	228,365.75	230,039 25	1,673.50	.....	19,137.57	16,404.75
13	Mason, Hoge & Co	276,188.72	221,559.55	.....	54,579.17	17,084.40	26,536.25
14	McCormick Cons'n. Co	95,638.00	243,172.58	147,534.58	.....	24,362.56	10,950.00
	Totals	$2,063,747.02	$3,596,351.02	$1,688,673.44	$ 156,069.44	$ 416,192.94	$ 302,358.99

Total amount required to be done December 1, 1893.	$ 3,596,251 02
Total amount done December 1, 1893	2,063,747 02
Amount short as per contracts	$ 1,532.604 00

Note—In addition to the above amounts done December 1, 1893, there has been material excavated at various points by lapor employed by the Sanitary District, which material, if rated at the regular contract prices would reduce the shortage as follows:

Section 1, river diversion—	155,200 cubic yards glacial drift at 27c	$41,904 00
Section 2, river diversion—	79,500 cubic yards glacial drift at 28c	22,260 00
Section 2, river diversion—	8,900 cubic yards glacial drift at 50c	4,450 00
Section 3, river diversion—	304 cubic yards glacial drift at 27c	82 08
Section 4, river diversion—	80,700 cubic yards glacial drift at 27c	21,789 00
Section 4, river diversion—	5,200 cubic yards glacial drift at 49c	2.548 00
Section 4, river diversion—	4,100 cubic yards solid rock at 86c	3,526 00
Section 4, river diversion—	9,254 cubic yards solid rock at 80c	7,403 20
Section 5, river diversion—	12,256 cubic yards glacial drift at 27c	3,309 12
Section 11, river diversion—	3,798 cubic yards glacial drift at 30¼c.	1,148 90
Section 11, river diversion—	2,885 cubic yards solid rock at 79¼c.	2,286 36
Reducing shortage a total of		$110 706 66

FORCE REPORT—DAILY AVERAGE, NOVEMBER, 1893.

SECTION.	Men.	Teams.	Steam Shovels.	Steam and Air Pumps.	Steam and Air Drills.	Steam and Air Hoists.	Channelers.	Air Compressors.	Cableways.	Steam Scrapers.	Cantilever Derricks.	Locomotives.	Steam Derrick.	Cars.	Dredges.
A	100	5	....	1.9	....	....	....	....	....	....	....	....	....	....	....
B	88	62	.3	2.0	....	....	....	....	.6	....	....	....	....	....	....
C	110	73	1	.5	....	.5	....	....	....	....	....	1.5	....	16	....
D	90	1	2	2	....	....	....	....	....	....	....	4	....	....	....
E	139	57	2.6	3	....	....	....	....	....	....	....	5	....	44	....
F	126	55	2.5	3.8	....	....	....	....	....	....	....	3	....	15	....
1	28	5	.4	2	....	.4	....	....	....	....	....	....	....	....	....
2	185	11	....	....	....	....	....	....	....	....	....	....	....	....	....
3	45	7	....	....	....	....	....	....	....	....	....	....	....	....	....
4	286	19	....	.7	....	....	....	....	....	....	....	....	....	....	....
5	105	1	.9	3	....	....	....	....	....	....	....	.9	.5	24	.9
6	120	2	....	.5	....	....	....	....	....	.6	....	....	....	....	....
7	180	9	....	1.6	2.0	.7	2	....	....	....	....	....	.8	14	....
8	219	25	....	.1	6.4	2.4	1	....	....	....	....	....	....	36	....
9	204	14	....	.9	3.8	1.6	2	....	....	....	....	....	.9	36	....
10	434	7	....	4.5	12.6	3	5.9	1	....	....	2.	....	....	38	....
11	152	6	....	3.0	10.5	....	4.8	1	.8	....	1.8	....	....	....	....
12	115	2	....	2	6	....	3.6	1	....	....	1.7	....	....	....	....
13	198	5	....	5	13	....	4.7	1	....	....	3.5	....	....	....	....
Totals	2924	366	9.7	36.5	54.3	8.6	24.0	4	1.4	.6	9.0	14.4	2.2	223	.9

Respectfully submitted,

(Signed) D. C. DUNLAP,

Assistant Superintendent of Construction."

"CHICAGO, December 6, 1893.

Mr. Isham Randolph, Chief Engineer:

DEAR SIR—The work of Division 2 for the month of November was as follows:

The construction of the spillway above Summit was continued. The excavation for the same and all the concrete work was finished. All the masonry in the wings was laid and all but 125 feet on the crest. No surfacing of the sides was done on account of the unsatisfactory state of the weather.

The excavation of the surplus material east and west of the spillway was undertaken. The building of the uncompleted portion of the levee south of the spillway was commenced and is progressing rapidly.

Continued the cross-sectioning of the territory along the line of the River Diversion Channel. The work is now completed from the head of Goose Lake to a point about half a mile above the Willow Springs Road.

The construction of the Santa Fe bridge across the River Diversion Channel at Lemont and approaches thereto was completed and connections made.

The bridge and embankment for Western Stone Co. across the River Diversion Channel in Section 10 is completed and track laid. It will be ready for traffic by the middle of December.

The Stephens street bridge at Lemont across the River Diversion Channel is progressing. The approaches are practically completed. The masonry is about half finished, the framing is completed and two spans are in place.

The Des Plaines river water gauge at the old Stephens street bridge at Lemont was abandoned and new gauges established at the new Santa Fe bridge and the new Stephens street bridge over the River Diversion Channel.

Computations for the final estimate of excavation, concrete and masonry in the spillway were made.

The maintenance and records of water gauges were continued.

The reduction of notes pertaining to Illinois river floods was continued.

The expense for December will approximate to that of November.

Very respectfully,

(Signed) THOS. T. JOHNSTON,

First Assistant Chief Engineer."

"CHICAGO, Dec. 5, 1893.

Isham Randolph, Esq., Chief Engineer.

DEAR SIR—I herewith submit the report of Division 3 for the month of November, 1893.

Finished the contour map of 100 feet scale of the S. E. ¼ of Section 1 and the N. E. ¼ of Section 12, Township 38 North, Range 12 east, showing the location of the spillway and adjoining levees.

On the main triangulation map from Lake Michigan to Joliet, finished platting of the topography on Part 1, Lake Michigan to Summit, and platted topography on parts 2 and 3 from Summit to Joliet.

On the 100 feet scale contour maps, platted the section corners, main channel and river diversion lines on Parts 6, 6 a, 7, 7 a, 8 and 11, and platted topography on Parts 8 a, 13, 19, 22 and 24.

Made tracings of right of way tracts 127, 128 and 157 and the plan of the Summit and Riverside Road.

Completed the original drawings and tracings of the right of way tracts between Western avenue and Robey street and between Lockport and Joliet.

Finished copies for recording of the official profile marked "Proposition 2, Plan 2 b," and the official map marked "Plan 1, Willow Springs to Summit," approved November 23, 1892.

Finished the progress profile of the main channel and river diversion.

The platting and inking of the Sanitary District map was continued during the month.

Colored eighteen prints of the condensed map and profile of the line.

During December it is proposed to continue the platting now on hand, and to mount and color the five sewerage maps.

The expense for December will be practically the same as for the past month.

Yours respectfully,

(Signed) EDGAR WILLIAMS,

Second Assistant Chief Engineer."

(Enclosing classified statement.)

MONTHLY REPORT FROM LAW DEPARTMENT.

The Clerk presented a report from the Law Department for the month of November, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — I submit herewith the monthly report for November, 1893. The total amount paid out by this Department is as follows:

Salaries.

Attorneys	$ 1,525 00	
Office force	320 00	
		$ 1,845 00

General Expenses.

Right of way	$ 372 61	
Court costs	136 50	
Legal services	325 00	
Stationery	5 95	
Sundries	24 61	
		$ 864 67

Land Account.

Right of way	$ 86,408 00	
Taxes (Will Co.)	40 00	
		$ 86,448 00
Total		$ 89,157 67

The completion of the river diversion during the month rendered it no longer necessary to continue the running of workingmen's trains on the Santa Fe Road. They have accordingly been discontinued and settlement made of the ticket account. At the request of the contractors it was arranged that trains should run on the Chicago and Alton Railroad until December 9, 1893.

I have caused a petition to be filed for the condemnation of the lots, streets and alleys in the subdivision known as "Manchester," and including the boulevard and one or two additional tracts for which opinions of title were ready. In this suit summons is made returnable for the third Monday in January, and trials can be had as soon thereafter as may be deemed advisable.

Several land purchases have been closed during the month as will be seen from the above item on land account. There remain but five or six tracts of land west of Manchester not purchased or bargained for, and a suit including three of these has been set for trial for January 9, 1894.

Much of the time of this department has been taken up with the complications arising out of the failure of the McCormick Construction Company and in

the consideration of the questions connected therewith.

The general expenses of the department for the month has been smaller than for any month during the year.

For the coming month the department will be occupied with matters pertaining to the letting of contracts this side of Summit, to the preparation of the case set for trial in January, to further land settlements and with routine work.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

ORDINANCES FOR SUMMIT BRIDGE AND WILLOW SPRINGS ROAD.

The Clerk presented a report from the Attorney, enclosing copies of the ordinances passed by the Boards of Trustees of the Villages of Summit and Spring Forest, Illinois, with reference to the Summit and Riverside bridge across the Desplaines river, and also with reference to the raising to the Willow Springs road between the Canal and Desplaines river; and the report, with enclosures, was read.

Mr. Boldenweck, seconded by Mr. Kelly, moved that the report, with enclosures, be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report, with enclosures, was ordered printed and so referred.

The following is

THE REPORT, WITH ENCLOSURES:

"CHICAGO, Dec. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN:—I enclose herewith a copy of an ordinance passed by the President and Board of Trustees of the Village of Summit, Illinois, on July 10, 1893, with reference to the Summit and Riverside bridge across the Desplaines River. Also a copy of an ordinance passed by the President and Board of Trustees of the Village of Spring Forest, Illinois, on Nov. 23, 1893, with reference to the raising of the Willow Springs Road between the Canal and the Desplaines River.

I would recommend that the Sanitary District accept the conditions provided for in each of these ordinances and that they be printed in our record for the sake of convenience of reference.

Respectfully submitted,

(Signed) ORRIN N. CARTER,
Attorney."

ORDINANCE PASSED JULY 10, 1893.

"*Be it ordained by the President and Board of Trustees of the Village of Summit:*

That permission and authority are hereby granted to the Sanitary District of Chicago to excavate their main channel over and across the Summit and Riverside highway in said Village in accordance with the plans adopted by them and under the direction of the Chief Engineer; provided, however, that said Sanitary District of Chicago shall at all times while such excavation is in progress, at its own expense, provide and maintain a good and sufficient passageway for persons and teams using said highway, so that travel along and upon said highway in each direction shall not be interrupted, and shall provide at their own expense a substantial bridge of first class material and workmanship spanning said main channel when completed;

Also, that permission and authority are hereby granted to the Sanitary District to raise, lengthen and build approaches to the bridge by which said highway now passes over the Desplaines river; provided, that during the progress of the work thereon, such provision shall be made for the crossing of said river by persons using said highway as shall not seriously interrupt travel thereon, and that when the alterations in said bridge hereby authorized are completed, the approaches to the same shall be of an easy and convenient grade and well constructed.

Also, that permission and authority are hereby granted to said Sanitary District of Chicago to lay down, maintain and operate one single railroad track over, upon and across said highway; provided, that said railroad track shall be so graded and constructed and the work carried on in such manner and at such times as shall as little as possible interfere with travel along and upon said highway, and that approaches to the crossing of said railroad track of an easy and accessible grade for travel be constructed, and that the road-bed of said highway at said crossing and the approaches thereto shall be made in all respects as firm and solid as before the

construction of said railroad track across same.

Provided further, that said Sanitary District, after the work of building the channel of said sanitary canal is completed, shall, at their own expense, remove said railroad and level up said railway and leave the same in at least as good condition as the same was before the passage of this ordinance."

ORDINANCE PASSED NOV. 23, 1893.

"*Be it ordained by the President and Board of Trustees of the Village of Spring Forest as follows:*

That the Sanitary District of Chicago be and it is hereby authorized to raise the grade of the Willow Springs Road at the Northwesterly end of the bridge over the Illinois and Michigan Canal to the height of said Northwesterly end of said bridge and extending thence Northwesterly with a uniform grade to a level twenty (20) feet above Chicago datum at or near the Southeasterly end of the bridge over the Desplaines River, and with a suitable approach to said bridge, provided said roadway shall be made thirty (30) feet wide on top with side slopes of one and one-half (1½) to one (1) and top-dressed with gravel to a depth of nine (9) inches at center of said roadway and six (6) inches on the sides, and that the work be carried on in such manner as not unnecessarily to impede or hinder travel along and upon said highway, and provided further that said Sanitary District shall be responsible for all damages occasioned by raising the grades aforesaid.

(Signed) JOHN H. WINTERBURN.
President of Board."

AGREEMENT FOR BUILDING OF SUMMIT SPILLWAY; AND WORK ON SUMMIT HIGHWAY.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to and accompanied by an agreement with McArthur Brothers Company, for the construction of the spillway at Summit, recommending that the President and Clerk be authorized and directed to execute the same on behalf of the District, and further recommending that the Chief Engineer return a voucher for certain improvements on the Summit highway on Section E as "extra" work; and the report and accompanying agreement were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, with accompanying agreement ordered printed and placed on file, the recommendations made in the report concurred in, the President and Clerk authorized and directed to execute the accompanying agreement and the Chief Engineer instructed as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with accompanying agreement ordered printed and placed on file, the recommendations made in the report concurred in, and the President and Clerk authorized and directed to execute the accompanying agreement, and the Chief Engineer instructed as provided in the report.

The following is

THE REPORT AND ACCOMPANYING AGREEMENT:

"CHICAGO, Dec. 13, 1893.

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—The Joint Committee transmits herewith an agreement with McArthur Brothers Company in relation to the construction of a spillway above the Santa Fe Railway as recommended by this Committee and authorized by the Board on October 25th, page 1528 of Proceedings.

The cost will over-run the estimate given, and the amount authorized by about two thousand dollars ($2,000), this excess being due to a sudden dip in the rock at the south end of the spillway by which the amount of excavation and the number of yards of masonry were increased. The expenditure authorized being based on piece prices and quantities, this excess above the estimate due to the above mentioned cause should be approved by the Board, and the Committee recommend that the President and Clerk be directed to execute the agreement on the part of the District.

The Engineer in his discretion has instructed the contractor for Section E. to surface the Summit highway with rock when the same has been raised and changed in crossing the levee adjacent to the river diversion, the cost of the same being about sixty dollars ($60). We recommend that this action be ap-

proved, the cost of the work to be returned under the extra clause of the contract.

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,
JOHN J. ALTPETER,

Joint Committee on Engineering and Finance."

AGREEMENT:

"*This Agreement*, Made and entered into this first day of November, A. D., 1893, by and between the Sanitary District of Chicago, party of the first part, and McArthur Brothers Company, a corporation, party of the second part, Witnesseth:

That the said party of the second part, in consideration of the payments hereinafter provided for, hereby covenants, contracts and agrees with the said party of the first part to act as its agent in superintending the construction of a spillway on the left bank of the Desplaines River, about 1,500 feet north of the Santa Fe bridge, near Summit, Illinois, in accordance with certain plans and specifications made by the Chief Engineer of first party, hereto attached and marked 'Exhibits 1, 2 and 3,' and made part hereof.

Said second party will at once organize such a force of men as shall be sufficient to secure the completion of said work in the shortest time possible consistent with economy, and shall furnish at its own cost and expense all tools, machinery and appliances necessary for the proper and economical execution of said work. First party shall pay for the labor engaged upon said work, and for all materials entering into the construction of said spillway, as hereinafter provided.

Said second party, as such agent of first party, agrees to purchase all the materials of every kind necessary for the construction of said spillway, and render bills therefor, which shall be approved in writing by the Chief Engineer of first party, and payments therefor shall be made when same shall have been so approved by said Chief Engineer. Bills for labor of all foremen and workmen employed upon said work shall be approved by the Chief Engineer in writing, and after same shall have been so approved, shall be paid by first party.

Said second party shall superintend and conduct said work as agent for first party in the usual manner, in consideration of which services and the furnishing of the tools, machinery and appliances aforesaid for the construction of said work, the said party of the first part will pay to the said second party ten (10) per cent upon the cost of work done and materials furnished in the construction of said spillway, in accordance with said plans and specifications, said cost to include amounts paid for wages and for all materials entering into the construction of said spillway, which percentage so received shall be accepted by said second party as full and sole compensation for its services and for the use of its tools during the prosecution of said work until the completion thereof.

Second party, in consideration of such payment by first party, as agent in the construction of said work, hereby guarantees that the total cost of said work, including the ten (10) per cent agreed to be paid to it as its compensation herein, shall not exceed the sum of eighteen thousand two hundred and twenty-seven and ten one-hundredths ($18,227.10) dollars, and it hereby agrees in case the total cost of said work, including the cost of superintendence, shall exceed said sum, it will itself pay whatever amount shall be in excess of said sum of eighteen thousand two hundred and twenty-seven and ten one-hundredths ($18,227.10) dollars.

In witness whereof, on the day and year first above written, the parties hereto have caused these presents to be executed by their respective officers thereunto duly authorized."

(Accompanied by specifications.)

AMENDMENT TO RULE 21.

Mr. Russell, for the Committee on Rules, presented a report amending Rule 21 of the Rules of the Board of Trustees, as provided in the report; and the report and amendment were read.

Under the rules, the report and amendment were ordered printed and laid over.

The following is

THE REPORT:

"CHICAGO, Dec. 13, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Your Committee on

Rules beg leave to submit herewith the following amendment to the Rules of the Board of Trustees, presented by the Committee and adopted at the meeting held May 10, 1893 (page 1220 of the Proceedings), and recommend its adoption by the Board.

In Rule 21, on page 1222 of the printed Proceedings, lines 18 and 19 in the first column, insert "twenty-four hundred ($2,400) dollars" in place of "eighteen hundred ($1,800) dollars."

Very respectfully submitted,

(Signed) FRANK WENTER,
Chairman.
W. H. RUSSELL,
B. A. ECKHART,
Committee on Rules."

ACTION ON FORFEITURE OF M'CORMICK CONSTUCTION COMPANY CONTRACT.

The Clerk presented a communication from Mr. P. J. Sexton, Receiver of the McCormick Construction Company, asking that the Board suspend action, for a time, with reference to the forfeiture of the contract with said Company; and the communication was read.

With reference to the communication, Mr. Kelly presented an order, directing that the communication just received be ordered printed and referred to the Joint Committee on Engineering and Judiciary and the Attorney for consideration, the District to waive none of its rights by such action; and the order was read.

Mr. Kelly, seconded by Mr. Boldenweck, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the communication ordered printed and referred to the Joint Committee on Engineering and Judiciary and the Attorney, as provided in the order.

The following is

THE COMMUNICATION:

"CHICAGO, Dec. 11, 1893.

To the Honorable the Board of Commissioners, Sanitary District of Chicago:

GENTLEMEN—The undersigned, having been appointed by the Hon. Judge Grosscup, of the United States Court, as Receiver of the McCormick Construction Company, who have a contract for Section 14 of the Drainage Canal, and having been notified, as such receiver, that your Honorable Board proposes to lay the foundation for a forfeiture of said contract, the time to expire on the 17th of this month, I desire to represent to your Honorable Board that the books and papers of this company have not as yet come into my possession, consequently I am not prepared to take any action, or make any recommendation in the premises. For this reason I respectfully ask your Honorable Board to suspend action on the forfeiture of this contract until I have sufficient time to get the books in shape, and take the necessary legal steps for the protection of the persons interested in this company.

Hoping your Honorable Board can grant this necessary time, without injury to the trust imposed on you, I am,

Sincerely yours,

(Signed) P. J. SEXTON,

Receiver of the McCormick Construction Company."

The following is

THE ORDER:

"*Ordered*, That the communication of P. J. Sexton, Receiver of the McCormick Construction Company, be referred to the Joint Committee on Judiciary and Engineering together with the Attorney to consider the matter of a forfeiture of the contract of said Company, and report its recommendations; and that pending such consideration and report the District, while waiving none of its rights in respect to said forfeiture take no action therein."

OPENING OF BIDS FOR $3,000,000 BONDS.

The President then announced that in pursuance of the advertisement dated November 20, 1893, inviting bids for the purchase of the issue of the $3,000,000 of 5 per cent bonds of the District, that the Board would now proceed to the opening and consideration of bids received for said bonds up to December 13, 1893, at noon.

The Clerk then presented and opened the four (4) bids received for the said issue of bonds, as shown in the following

SUMMARY OF BIDDERS:

No.	NAME.	LOCATION.	CHECKS DEPOSITED.
1	Greenebaum Sons	Chicago	$ 1,507 50
2	N. W. Harris & Co	Chicago	91,620 00
3	Blair & Co	New York City	90,000 00
4	First National Bank of Chicago	Chicago	30,700 00

SCHEDULE OF BIDS

FOR $3,000,000 BONDS, OPENED DECEMBER 13, 1893:

No.	BIDDERS.	AMOUNT BID FOR.			
		$50,000	$1,000,000	$2,500,000.	$3,000,000.
1	Greenebaum Sons	$250 premium, or 100½			
2	N. W. Harris & Co				$53,817.75 premium, or 101 7 9 5 / 1 0 0 0 +
3	Blair & Co			$15,000 premium or 100½ Balance on conditions.	
4	First National Bank of Chicago		$21,300 premium or 102 1 8 / 1 0 0 Balance on conditions.		

The following are

THE BIDS IN DETAIL:

(1.) "CHICAGO, Dec. 12, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

DEAR SIR—We hereby offer 100.50 ($50,250.00 cash down) for $50,000.00 5 per cent. bonds of the $3,000,000 to be issued January 1 next by the Sanitary District of Chicago. We to receive a pro rate share of long and short bonds.

Enclosed please find check for $1,507 50, being 3 per cent on our bid.

Very respectfully,

(Signed) GREENEBAUM SONS,
Bankers.

83 and 85 Dearborn St., Chicago."

"CHICAGO, Dec. 13, 1873.

To the Honorable Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—Referring to your advertisement offering for sale three million dollars ($3,000,000) of bonds of the Sanitary District of Chicago, bearing date of January 1, 1894, bearing interest at the rate of five per cent. per annum, payable semi-annually; said bonds to be due and payable in from one to twenty years, and further described in your advertisement offering said bonds for sale, we make the following proposition:

We will pay for all of said bonds par and interest and a premium of $53,817.75. Bonds to be legally and regularly issued and delivery and payment of bonds to be arranged hereafter in accordance with the terms of your advertisement.

Yours truly,

(Signed) N. W. HARRIS & CO."

(3.) "CHICAGO, Dec. 13, 1893.

To the Honorable Board of Trustees of the Sanitary District of Chicago: Chicago, Illinois.

DEAR SIRS—We beg to submit the fol-

lowing proposition for the purchase of the Sanitary District of Chicago 5 per cent bonds, as fully described in your notice of proposals:

We will purchase $2,500,000, and give par and half premium and interest as soon as issued, with the option to purchase the balance of the issue at the same price, the option to remain in force so long as we accept and pay for the bonds at the rate of $100,000 per month, delivery to be made on the first day of each month, beginning February 1st. We to have the privilege of accepting all or any of the issue of bonds at our pleasure. Bonds to be legally and regularly issued, and full papers to be furnished us, showing the legality of the same prior to us paying for the bonds.

Respectfully submitted,

(Signed) BLAIR & CO."

(4.) "FIRST NATIONAL BANK, CHICAGO, Dec. 13, 1893.

To the Honorable Board of Trustees, Sanitary District of Chicago:

GENTLEMEN—Referring to your advertisement offering for sale $3,000,000 of bonds of the Sanitary District of Chicago, the First National Bank of Chicago will pay par and twenty-one thousand, three hundred dollars premium for one million dollars in said bonds, to be issued in accordance with said advertisement and maturing—fifty thousand dollars each year from one to twenty years inclusive. delivery to be made on or about January 1, 1894.

This bid to be contingent on the bonds being legally and regularly issued and also upon your Board offering to said bank the remaining $2,000,000 in bonds at the price above mentioned, in sums of $500,000 dollars as the bonds may be required for the uses of the District, ten days' notice to be given said bank of any proposed tender of bonds.

Herewith we hand you our cheques for $30,700 on account of said bid, and said subsequent offerings of bonds. It being expressly understood that should said bank refuse or fail to pay for any installment of bonds so offered, your Board to be released from any obligation to sell or offer said bank any balance of said $3,000,000 in bonds not then delivered.

Respectfully yours,

(Signed) R. J. STREET,

Cashier."

BIDS FOR BONDS REFERRED TO COMMITTEE ON FINANCE.

Mr. Eckhart, seconded by Mr. Kelly, then moved that the bids for bonds as read and shown above, be tabulated, printed and referred to the Committee on Finance, with instructions to report back to the Board at an adjourned meeting to be held on Friday, December 15, 1893, at 1:30 o'clock P. M., and that when the Board adjourn, it do adjourn to that time.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carred, and the bids, as read and shown above, ordered tabulated, printed and so referred, and that when the Board adjourn, it do adjourn to meet Friday, December 15, 1893, at 1:30 o'clock P. M.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned to meet on Friday, December 15, 1893, at 1:30 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,

Clerk.

ADJOURNED MEETING.

The adjourned session of the two hundredth regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Friday, December 15, 1893, at 1:30 o'clock P. M., pursuant to motion.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Russell and Wenter—six (6) and subsequently Mr. Cooley, making a total of seven (7) members, were present.

REPORT ON BIDS FOR $3,000,000 BONDS.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, recommending that the bid of Messrs. N. W. Harris & Company, of Chicago, for the entire issue of $3,000,000 bonds of the District, be accepted, and that the checks of the other bidders and the excess check of Messrs. N. W. Harris & Company be returned to the bidders as pro-

vided in the report, said report being accompanied by all the bids an agreement in duplicate between Messrs. N. W. Harris & Company and the District, and further recommending that the President and Clerk be authorized and directed to execute the said agreement on behalf of the District; and the report and accompanying agreement were read.

Mr. Eckhart, seconded by Mr. Russell moved that the report be adopted, and with the accompanying agreement, ordered printed and with enclosures placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute the said agreement on behalf of the District, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Eckhart, Kelly, Russell and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, and with accompanying agreement, ordered printed and with enclosures placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute the said agreement on behalf of the District, as provided in the report.

The following is

THE REPORT AND ACCOMPANYING AGREEMENT:

"CHICAGO, Dec. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Finance Committee, to whom your Honorable Body at its meeting of December 13, 1893, referred the bids received for the purchase of three million ($3,000,000) dollars of the bonds of this District, has considered the same, and now recommends that as N. W. Harris & Co., of Chicago have made the highest and only unconditional bid for the whole issue of said bonds, their bid therefor be accepted, and that the President and Clerk of the Board be instructed to execute, with said N. W. Harris & Co., the contract hereto attached for the delivery of said bonds.

Your Committee further recommends that the Clerk be instructed to return to the First National Bank of Chicago, Blair & Co., and Greenebaum Sons, the checks deposited by them with their bids for said bonds; also, that the Clerk be instructed to return to said N. W. Harris & Co. their check for $1,620.00, which was in excess of the $90,000.00 required and which was deposited by them with their bid for said bonds, under a misapprehension and was not called for by the advertisement.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance."

AGREEMENT:

"*This agreement*, made and entered into this fifteenth day of December, A. D. 1893, by and between the Sanitary District of Chicago, party of the first part, and N. W. Harris, D. J. Harris, A. G. Farr, and N. W. Halsey, partners, doing business under the firm name and style of N. W. Harris & Co., of the second part.

Witnesseth, That said party of the first part does hereby covenant, contract, and agree, for the consideration hereinafter set forth, to issue and deliver to said party of the second part, three million ($3,000,000) dollars worth of its interest bearing coupon bonds; said bonds to be of the denomination of one thousand ($1,000) dollars each; all of said bonds to bear date, the first day of January, A. D. 1894, and to bear interest at five (5) per cent per annum from date, payable semi-annually; said bonds to be payable at the times, in the sums, and upon the terms and conditions set forth in an ordinance passed by the Board of Trustees of said Sanitary District on November 8th, 1893.

In consideration of the issue and delivery of said bonds, as above set forth, said party of the second part hereby covenants, contracts, and agrees to pay and give for said bonds par, a premium of fifty-three thousand eight hundred and seventeen dollars and seventy-five cents ($53,817.75), and all interest accrued upon said bonds to the date of delivery; and they further agree to receive and pay for said bonds at the above rate on the following dates, and in the following amounts, to-wit:

$1,000,000 on or before January 5th, 1894.

$500,000 and accrued interest on February 1st, 1894.

$500,000 and accrued interest on March 1st, 1894.

$500,000 and accrued interest on April 1st, 1894.

$500,000 and accrued interest on May 1st, 1894.

The party of the second part to have the right to take the bonds faster than the times above specified.

It is understood and agreed by and between the parties hereto that said party of the second part may, at their option, call for and have delivered to them, at the time of any delivery of bonds hereunder, bonds of any maturities, provided the average maturities so called for do not exceed the average maturity of the three million ($3,000,000) dollars of bonds covered by this contract.

It is further agreed by the parties hereto that upon each delivery of said bonds, as aforesaid, said party of the second part shall pay such proportion of said premium of fifty-three thousand eight hundred and seventeen dollars and seventy-five cents ($53,817.75), as the bonds delivered at that particular time bear to the whole amount of bonds to be delivered hereunder.

It is further agreed by the parties hereto, that the ninety thousand ($90,000) dollars certified check which has been deposited with the Clerk of the party of the first part by said party of the second part shall be held by said Clerk until the first delivery of bonds hereunder, and that then and thereafter the proceeds thereof be refunded to said party of the second part in the following manner:

Whenever any of said bonds are delivered to said party of the second part, there shall, also, be delivered to them, by said party of first part, such proportion of said check, or its proceeds, as the amount of bonds then delivered shall bear to the total amount to be delivered hereunder.

It is further covenanted and agreed by said party of the first part that the bonds herein mentioned shall be legally and regularly issued by it. This contract is executed in duplicate.

In witness whereof, on the day and year first above written, the said Sanitary District of Chicago has caused these presents to be signed by the President of its Board of Trustees, and attested by its Clerk, and its corporate seal to be hereunto affixed, and said party of the second part have hereunto set their hands and seals.

SANITARY DISTRICT OF CHICAGO,

By.....,

President.

Attest:

.....,

Clerk.

[SEAL] .....

PURCHASE OF "LE MOYNE" LAND.

Mr Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from John V. Le Moyne of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for said right of way lands, on the voucher of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John V. Le Moyne, on the voucher of the Attorney, for the said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay John V. Le Moyne, on the voucher of the Attorney, for the said right of way lands, as provided in the report.

The following is

THE REPORT:

"*To the Honorable, the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with John V. LeMoyne for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of sum of seventy thousand ($70,000.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the voucher of the Attorney, to said John V. LeMoyne, represented in Chicago

by Frank J. LeMoyne, the sum of seventy thousand ($70,000.00) dollars, in full payment for the following described land, to-wit:

That part of the northwest quarter (N. W. ¼) of Section three (3), Township thirty-eight (38) north, Range thirteen (13), east of the Third Principal Meridian, lying north (N.) of the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company, and south (S.) of a line drawn from a point in the west line of said northwest quarter (N. W. ¼), four hundred and ninety-six and ninety-five one hundredths (495.95) feet south (S) of the northwest (N. W.) corner of said section, to a point in the east line of Section thirty-four (34), Township thirty-nine (39) north, Range thirteen (13), east of the Third Principal Meridian, one thousand and twenty-five and sixty one-hundredths (1025.60) feet south (S.) of the east (E.) quarter corner thereof, subject to an agreement and to such rights, if any, as may exist thereunder made between John V. LeMoyne and the Chicago and Western Indiana Belt Railway Company, dated the 8th day of August, A. D. 1891, being an agreement with reference to the conveyance, under certain conditions therein stated, to said railway company of the use for a right of way of a strip of land across the above described premises and other lands; said LeMoyne assigning to the Sanitary District all his rights in said contract so far as the same applies to above described land; also, that part of the northwest quarter (N. W. ¼) of the northeast (N. E. ¼) of Section three (3), Township thirty-eight (38) north, Range thirteen (13), east of the Third Principal Meridian, bounded and described as follows: Beginning at the northwest (N. W.) corner of the northeast quarter (N. E. ¼) of said Section and running thence east (E.) on the north (N.) line of said Section four hundred and fifty-four (454) feet; thence south (S.) on a line parallel with the west (W.) line of said northeast quarter (N. E. ¼) to its intersection with the northerly boundary line of the right of way of the Chicago, Santa Fe and California Railway Company; thence southwesterly along said northerly boundary line to the west (W.) line of said northeast quarter (N. E. ¼); thence north (N.) on said west (W.) line to the place of beginning; all said premises lying and being situate in the County of Cook, State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,
W. H. RUSSELL,

Joint Commitee on Finance and Engineering."

PAYMENT FOR "WILSHIRE" LAND.

Mr. Eckhart, Chairman of the Joint Committee on Finance and Engineering, presented an order authorizing and directing the Clerk to pay to Wilson, Moore & McIlvaine, solicitors for Frances M. Wilshire, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, Illinois, a certain sum, as provided in the order, for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Frances M. Wilshire, et al.; and the order was read.

Mr. Eckhart, seconded by Mr. Kelly, moved the adoption of the order.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—seven (7). Nays—None.

Upon which result the President declared the motion carried, the order adopted, and the Clerk authorized and directed to pay to Wilson, Moore & McIlvaine, solicitors for Frances M. Wilshire, on the voucher of the Attorney, in pursuance of a certain order entered in the Circuit Court of Cook County, Illinois, a certain sum, as provided in the order, for right of way lands in said County, in full of verdict for said lands, in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Frances M. Wilshire, et al.

The following is

THE ORDER:

"*Ordered*, That the Clerk of this District be authorized and directed to pay, on the voucher of the Attorney, to Wilson, Moore & McIlvaine, solicitors from Frances M. Wilshire, the sum of Forty-two thousand two hundred and forty ($42,240.00) dollars, in full payment for the following described land, to-wit:

That part of the west (W.) seven hun-

dred and twenty-one (721) feet of the northwest quarter (N. W. ¼) of the northeast quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian, lying north of a line parallel with and sixty (60) feet northwesterly at right angles from the center line of the original right of way of the Atchison, Topeka and Santa Fe Railroad Company in Chicago (said center line being a line parallel with and two hundred and sixty (260) feet northwesterly at right angles from the northwesterly Reserve Line of the Illinois and Michigan Canal), and south (S.) of a line drawn from a point in the west (W.) line of said Section, one thousand and ninety and ten one-hundredths (1,090.10) feet north (N.) of the west (W.) quarter corner of said Section, to a point in the north (N.) line of said Section, one thousand three hundred and six and fifty-one, one-hundredths (1,306.51) feet west of the northeast (N. E.) corner of said Section; said premises lying and being situate in the County of Cook, State of Illinois, and containing fourteen and eight one-hundredths (14.08) acres, more or less.

Said sum being the amount awarded by the verdict and report of the jury and the order of judgment entered therein in the case of the Sanitary District of Chicago vs. Marianna A. Ogden, Frances M. Wilshire et al., in the Circuit Court of Cook County, Illinois, General Number 118,948, on the 13th day of December, A. D. 1893, and said payment being so made in accordance with said order entered therein."

OFFICES TO BE CLOSED ON SPECIAL ELECTION DAY, DECEMBER 19, 1893.

Mr. Russell presented an order, directing that the offices of the District be closed on Tuesday, December 19, 1893, the same being Election Day in the City of Chicago—a legal holiday; and the order was read.

Mr. Russell, seconded by Mr. Boldenweck, moved the adoption of the order.

The motion prevailed unanimously, and the President declared the order adopted and the offices of the District ordered closed on Tuesday, December 19, 1893.

The following is

THE ORDER:

"*Ordered*, That the offices of the Sanitary District of Chicago be and they are hereby ordered closed on Tuesday, December 19, 1893, the same being Election Day in the City of Chicago,—a legal holiday."

AGREEMENT WITH JOHN LEHMAN FOR ADDITIONAL RIVER DIVERSION WORK ON SECTION ONE.

The Clerk presented a report from the Chief Engineer, with reference to and accompanied by form of agreement, in duplicate, with John Lehman for additional work on the River Diversion on Section 1, said work being already under progress under order of the Board of November 15, 1893, (page 1573 of the Proceedings;) and the report and accompanying agreement were read.

Mr. Altpeter, seconded by Mr. Boldenweck, moved that the report be ordered printed, and with accompanying agreement, referred to the Joint Committee on Engineering and Finance.

Mr. Kelly, seconded by Mr. Russell, moved as a substitute that the agreement be amended by striking out the paragraph with reference to grubbing and the removal of trees, etc., and that the report and agreement as amended, be adopted, ordered printed and placed on file, and the President and Clerk authorized and directed to execute the said agreement on behalf of the District, and further that the matter of the removal of trees, stumps and other obstructions, be referred to the Joint Committee on Engineering and Finance for consideration.

On roll-call on the substitute, the vote stood: Yeas—Messrs. Boldenweck, Cooley, Eckhart, Kelly, Russell and Wenter—six (6). Nays—Mr. Altpeter—one (1).

Upon which result the President declared the substitute carried, the agreement amended by striking out the paragraph with reference to grubbing and the removal of trees, stumps and other obstructions, the report and agreement, as amended, adopted, ordered printed and placed on file and the President and Clerk authorized and directed to execute the said agreement on behalf of the District, and further, the matter of the removal of trees, stumps and other obstructions, referred to the Joint Committee on Engineering and Finance for consideration.

The following is

THE REPORT, WITH ACCOMPANYING AGREEMENT:

"CHICAGO, Dec. 15, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Board of Trustees, at its meeting November 15th (page 1573 of the Proceedings) in a report submitted by the Joint Committee on Engineering and Finance, instructed the Chief Engineer as follows:

"SECTION 1. That the Chief Engineer be instructed to establish a levee line along the southerly side of the River, from the levee now constructed opposite Columbia Park to the Willow Springs bridge, and to remove the point on the south side above the River Diversion opposite Columbia Park, and place the material excavated in the easterly extension of the levee."

The Chief Engineer, to fully comply with this instruction, has arranged with John Lehman to do the excavation and levee work in accordance with an agreement, copies of which are herewith transmitted, subject to the approval of your Board.

It is respectfully requested that your Board approve the agreement and authorize it.

Very respectfully,

Signed) THOS. T. JOHNSON,

Acting Chief Engineer."

AGREEMENT:

"*This Agreement*, Made and entered this ..... day of ....., A. D. 1893, by and between the Sanitary District of Chicago, party of the first part, and John Lehman, party of the second part, witnesseth:

That the said party of the second part in consideration of the payments hereinafter provided for hereby covenants, contracts and agrees with the said party of the first part to act as its agent in superintending the excavation of not to exceed twelve thousand (12,000) cubic yards of material from the point of land lying to the east of the bend of the river above the River Diversion opposite Columbia Park taking same down to the level of the surface of the river and as far back from the margin thereof as may be necessary and placing the material so excavated in the easterly extension of the levee now constructed opposite Columbia Park to the Willow Springs road, carrying said extension across the bed of the old river; said work to be done under the direction of the Chief Engineer of first party. Second party will also clear the portion of said point of land so excavated of all buildings, trees, cordwood and stumps.

Second party will employ such a force of men as may be necessary and shall at his own expense furnish the necessary tools and appliances for the proper and economical execution of said work.

Said second party shall superintend and conduct said work as agent for first party in the usual manner in consideration of which services and the furnishing of the tools and appliances aforesaid in taking up and removing from said point of land not to exceed twelve thousand (12,000) cubic yards of excavation aforesaid and the placing of said material on the levee extention together with the clearing off of all obstructions from that portion of said point of land excavated, said first party will pay to said second party ten (10) per cent upon the actual cost of executing said work in accordance with the directions of the Chief Engineer of first party, which percentage so received shall be accepted by said second party as full and sole compensation for his services as agent, as aforesaid, and for the use of his tools and appliances in the prosecution of said work.

Second party, in consideration of such payment by first party, as agent in the construction of said work, hereby guarantees that the total cost of said work of excavation, including the ten (10) per cent agreed to be paid to him as his compensation herein, shall not exceed the sum of five thousand and forty ($5,040.00) dollars, or such proposition thereof as the quantity actually excavated bears to 12,000 cubic yards, and he hereby agrees that in case the total cost of said work, including the cost of superintendence, shall exceed said sum or said proportionate amount thereof, he will himself pay whatever amount shall be in excess of said five thousand and forty ($5,040.00) dollars, or the proportionate amount thereof aforesaid.

[*It is further agreed that first party*

shall pay to second party for the removal of all trees, stumps and other obstructions from that portion of said point of land lying between the part excavated and the levee extension, the actual cost of said work, with ten (10) per cent of said cost in addition thereto, as second party's compensation for his services as agent in securing the execution of said last mentioned work.] (NOTE—This clause stricken out by amendment.—*Clerk.*)

In witness whereof, on the day and year first above written, first party has caused these presents to be executed by its President and Clerk, and second party has hereunto set his hand and seal."

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Kelly, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 20, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The two hundred and first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, December 20, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8) and subsequently Mr. Gilmore, making a total of nine (9) members, were present.

MINUTES.

By unanimous consent, action on the minutes of the regular meeting, held December 13, 1893, and of the adjourned session of the same regular meeting, held December 15, 1893, was deferred.

VOUCHERS.

The Clerk presented the following vouchers:

PAY ROLLS.

Eng. Dept., Div. No. 1, (half month, ending Dec. 15, 1893).....	$ 2,709 07
Eng. Dept., Div. No. 1, tow-path, (half month ending Dec. 15, 1893).	78 25
Eng. Dept., Div. No. 2, (half month, ending Dec. 15, 1893).....	795 80
Eng. Dept., Div. No. 3, (half month, ending Dec. 15, 1893).....	829 25
Eng. Dept., Div. No. 4, (half month, ending Dec. 15, 1893).....	107 50
Eng. Dept., Div. No. 4, Time-keepers, (half	

month, ending Dec. 15, 1893).....	86 66	
		$ 4,606 53
Clerical Dept., office roll, (half month, ending Dec. 15, 1893).....		137 50
Law Dept., office roll, (half month, ending Dec. 15, 1893).....		102 50
Police Dept., field roll, (half month, ending Dec. 15, 1893).....		1,374 18
Total.....		$ 6,220 71

ENGINEERING DEPARTMENT.

Construction Account—

The Heidenreich Co., (trestle on Sec. A)..$	2,136 12	
Streeter & Kenefick, (extra work, Sec. E).	61 81	
McArthur Bros. Co., (spillway, Sec. F)...	13,731 39	
		$15,929 32

ENGINEERING DEPARTMENT.

F. Mayer & Co. (blue prints).....$	37 51	
Wagner Bros. (livery)	96 00	
Alex. E. Kastl, (traveling).....	23 15	
Chas. Wink, (traveling)	17 90	
		$174 56

LAW DEPARTMENT.

Western Union Telegraph Co., (telegraph service).....$	6 76	
Orrin N. Carter, (expense).....	21 36	
		$ 28 12

GENERAL ACCOUNT.

The Chicago Deposit Vaul Co., (janitor service), November, 1893.....$	80 00	
Chicago Edison Co., (electric lighting)...	56 90	
Sharp & Smith, (vaccine points)..	45 00	
		$ 181 90

POLICE DEPARTMENT.

Standard Oil Co., (kerosene for stations)....$	19 39	
Frank E. Michaud, (barn)...	235 00	
		$ 254 39
Grand total..		$ 22.789 00

Mr. Eckhart, seconded by Mr. Kelly, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisition:

No. 919, Police Department, (hay and oats).....$149 00

Mr. Boldenweck, seconded by Mr. Eckhart, moved that Requisition No. 919, for the Police Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly, Prendergast, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisition No. 919, for the Police Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District, for the week ending December 16, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending December 16, 1893, as the same have been reported to me:

Engineering Department..... ..	116
Clerical Department.....	4
Treasury Department..	1
Law Department....	8
Police Department.....	36
Total employes.....	165

Respectfully submitted,

(Signed) THOS F. JUDGE,
Clerk."

REPORT OF CHIEF ENGINEER AND SUPERINTENDENT OF CONSTRUCTION ON CONDITION OF WORK.

The Clerk presented a report from the Chief Engineer, transmitting a report (with two (2) tables), from the Superintendent of Construction, with reference to the condition of work on each section up to December 1, 1893; and the report and enclosures were read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report, with enclosure and tables, be ordered printed and referred to the Joint Committee on Engineering and Finance.

The motion prevailed unanimously, and the report, with enclosure and tables, was ordered printed and so referred.

The following is

THE REPORT AND ENCLOSURE:

"CHICAGO, Dec. 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I respectfully transmit herewith the report of the Superintendent of Construction, due at this time, in accordance with the rules.

It appears that while the work of the District is progressing favorably in many of its parts, there are some parts in which it is not.

It appears from the reports of the Superintendent that in some sections the contracts are subject to forfeiture for several of the different causes enumerated in the contracts as being proper for such an event.

It is recommended that your Board take cognizance of this condition of things through its proper Committees and as provided in the rules.

Very respectfully,

(Signed) THOS. T. JOHNSTON,
Acting Chief Engineer."

(Enclosure,)

"CHICAGO, Dec. 18, 1893.

Thomas T. Johnston, Esq., Acting Chief Engineer.

DEAR SIR—I beg to submit the following general report of the condition of the work of the Construction Department, up to the 1st inst.

DESPLAINES RIVER DIVERSION.

The River Diversion is practically completed, which has involved many changes of the bed of the Desplaines River, by means of which this stream has not only been removed from the site of the Main Channel of the Canal, but its course has been straightened as well as deepened and its carrying capacity largely increased thereby. These changes have been made at six different points between Lyons, Cook County, and Romeo Road, Will County, and aggregate about 13 3-10 miles of newly constructed river channel 200 feet wide, requiring the excavation of about 1,600,000 cubic yards of glacial drift and 240,000 cubic yards of solid rock. All along this new river channel and the intervals between these different points of diversion, a continuous levee has been built, with the exception noted on Section A, averaging about 11 feet in height, extending from the high ground near Riverside to Romeo Road, a distance of about 20 miles, which is expected to effectually exclude the flood waters of the Desplaines River from the Main Channel of the Canal and thus prevent same from interfering with the progress of the work thereon. An adequate spillway has also been provided near Riverside, by which the capacity of the new River Channel may be tested and a much larger volume of flood waters carried away through the natural outlet.

MAIN CHANNEL.

The progress on the Main Channel has been much varied, owing in some instances to extenuating conditions, but in most cases where delinquencies occur the fault lies wholly with the contractors themselves. The past season has been remarkably favorable for the execution of the work. The material thus far required to be removed, being most accessible, is more easily and economically handled and there is no reason whatever for any delinquency on most of the sections. Commencing at the upper or Summit end of the work, I will briefly outline the condition of each section consecutively, in which all comparisons are based upon Main Channel quantities.

Section "F."

This is one of the smallest sections and work thereon, on the Main Channel, was commenced about July 1st, and on the 1st inst. the amount done aggregated $55,527.03, being $2,117 98 in excess of the contract requirement, at which rate the section will be completed in about two and one-half years. About one half of the material excavated on this section was done with teams and scrapers and the balance with steam shovels and cars.

The plant now engaged on the section is as follows:

Three steam shovels.

Three locomotives (standard gauge).

Five steam pumps.

Thirty large dump cars.

One hoisting engine.

They also have boarding-houses, machine shop, engine-house, water tank, etc., together with the necessary railroad tracks.

Section "E."

Work on this section was commenced about June 1st. On Dec. 1st, they are credited with $122,751.75, which is $48,106.40 in excess of the amount required by their contract. It is equal to a gain of three and one-fourth months in time, and at a rate that would finish the section in less than two years. Of the 446,370 cubic yards excavated about 400,000 yards were moved with teams and scrapers and the balance with steam shovels.

The plant now on the work consists of

Four steam shovels.

Four locomotives (narrow gauge).

Two locomotives (standard gauge).

One hundred and seventeen dump cars.

Seven pumps.

Together with railroad track, tools, machine shop, boarding houses, etc.

Section "D."

This section should show a progress on December 1st, amounting to $76,432.55. The estimate gives $53,603.62, leaving a deficiency of $22,828.93, a rate that would require nearly four years to complete the section. The contractors account for the deficiency by reason of the delay in getting stronger machinery, the wrecking of one of their locomotives and other mishaps. They have their work well opened, in good shape for winter work and should be able to keep up.

Their plant consists of

Two steam shovels.

Four locomotives (standard gauge).

Forty-six dump cars (standard gauge).

Two steam pumps, and usual camp buildings.

All of the excavation on the section has been done with steam shovels and the material hauled into levees and spoil banks at some distance from the channel.

Section "C,"

In point of time the progress on the Main Channel of this section, up to the 1st inst., should be $66,762.00. It is credited with $30,107.02, leaving a deficiency of $36,654.98, a rate that would defer its completion about six years. But the conditions on this section were such that by the terms of the contract, no work could be done on the Main Channel until the River Diversion collateral thereto had been completed. This delayed the beginning of the work until about September 1st, and in a measure accounts for such deficiency.

Their plant comprises

Three steam shovels.

Two locomotives (standard gauge).

Twenty-nine large flat cars.

Nine large dump cars.

Twelve small dump cars.

One steam hoist.

Three steam pumps.

A part of the material thus far excavated has been wasted in the old Desplaines River-bed and at other convenient places near the Channel and the balance has been hauled on cars and placed in the levee.

Sections "A and B."

These sections belong to the same contractors, and, being subject to the same general conditions, they will be treated as one. Throughout the whole length of Section "B" and the upper half of Section "A," the Main Channel of the Canal is located in the bed of the Desplaines River, which along there is a deep pool of considerable width, bounded on either side by a marshy tract which, through the greater part of Section "A" extends from the I. and M. Canal to the high ground on the westerly side of the river near the Santa Fe railway.

The River Diversion collateral to these sections has been completed, but the necessary levee along the marsh opposite the lower part of Section "A" has not been built, which renders the River Diversion ineffective so far as these two sections are concerned, and leaves the stage of water in its normal condition. In attempting to build the levee above referred to, which must be done to protect these sections from the river, the marsh was found to be too soft and yielding to support the required bank.

Soundings that have been made show that this soft muck extends to an average depth of about fifteen feet for nearly a mile. It has also been estimated that to construct a levee through this swamp will require about 200,000 cubic yards of heavy material, which will be most economically moved by the use of locomotives and cars upon trestle work or piling. The failure to build this levee, owing to such unstable foundation greatly retards the work on these sections and it is doubtful whether anything would have been done but for the use of a hydraulic dredge plant, which commenced operation in October and has, up to the 1st inst., excavated 83,926 cubic yards. Under these circumstances no progress may be expected during freezing weather, which stops the use of the hydraulic process. They have about completed another large hydraulic plant intended for these sections.

Their present plant is composed of

Two hydraulic dredges.

One dipper dredge.

One steam shovel.

One cable way.

One steam hoisting engine.

Two steam pumps.

I regard this levee question as a very serious one, and, as the material through which the Main Channel of the Canal is located is of the same mucky character, I am of the opinion that a firm and substantial levee should be first built along the westerly berm line of the Canal, in order to exclude such muck and permit work to proceed thereon at once as set forth in my letter of the 7th ult.

Section 1

The requirement on this section December 1st is $171,481.44. The amount done is $25,877.61, leaving a delinquency of $145,603.83. The condition of this section is substantially the same as 2, 3 and 4 were last summer, and work on same was practically suspended thereon at about the same time. It is perhaps unnecessary to say that there is no ground whatever for any expectation of improvement under the present circumstances.

The plant consists of

Two steam shovels.

Two steam hoists.

Two steam pumps.

With boarding houses, offices, machine shop, tools, etc.

Sections 2, 3 and 4.

Work on these sections was suspended from May until November. Meantime they were forfeited and relet in October and work resumed about the middle of the following month at a rate largely in excess of the former contract requirements. Present appearances indicate that they will be brought up on time.

Section 5.

On Dec. 1st this section should exhibit a progress amounting to $138,623.73. The estimate, however, gives but $56,403.00, leaving a deficiency of $82,577.08—a rate that will require about nine years to finish the section; but inasmuch as this section has been largely stripped of about all the accessible material on the top of the excavation with scraper, teams and wheelbarrow men there is no kind of prospect that even the present rate of progress will be maintained. In verification of this I will cite the last two estimates which are included in the above estimate and the semi-monthly estimate to Dec. 15, which is just at hand, viz:

Nov. 15th, estimate 12,100 cubic yards.
Nov. 30th, estimate 23,500 cubic yards.
Dec. 15th, estimate 4,800 cubic yards, which is only about 20 per cent of the preceding two weeks' estimate.

The monthly record of work done on this section for November states as follows:

"The clam shell dredge has been at work the entire month and an average of one steam shovel at work at a time. The force of wheelbarrow men has ranged from twenty to eighty. The machinery employed during the month has been

One steam shovel.

One clam shell dredge.

Two large centrifugal pumps.

One small piston pump.

There were also on this section, but idle

Two steam shovels.

Two locomotives.

Twenty-five cars.

One steam hoist.

One medium piston pump.

Two small piston pumps."

It will be remembered that I have repeatedly called attention to the manner

in which this section was being literally skinned of the top material which was deposited in too close proximity to the Main Channel, thus requiring the lower stratas to be hauled over or around this immense spoil bank which extends nearly the entire length of the section. While this method is greatly to the present pecuniary interest of the contractor it is inimical to that of the Sanitary District, and I see no prospect of sufficient improvement under present auspices to warrant any further consideration. All the work thus far done on this section was by sub-contractors to whom the entire section was sub-let, as I am informed.

Section 6.

Progress required on this section up to the 1st inst., is $154,806.44, the amount done $34,128.00, leaving it $120,678.44 in arrears, at which rate its completion will be deferred for about sixteen years. The same objection exists in a greater degree, in regard to the disposition of material as on the preceding section, which I have heretofore alluded to, and is not only unworkmanlike but detrimental. The most favorable feature is that no greater quantity has been excavated. This work is also in the hands of a sub-contractor.

The November record of work done on this section, shows as follows:

"The steam scraper discontinued work on this section on the 10th inst., its boilers and engines being removed to the Bracken Bank road to be used in a small dredge that is in process of construction. The wheel scraper force worked the first day of the month and then were removed, so that since the 10th the only force on this portion of the work (Sec. 6) has been the wheelbarrow force, amounting to fifty men. No pumps or machinery are in use on the section at present."

Section 7.

December 1st this section should show an estimate of $182,759.12, but instead it is $60,029.00 or $122,730.12 behind, a rate that will occupy about eleven years in its completion. Three thousand three hundred feet of this section is sub-let to Mr. L. L. Smith at 64 cents for solid rock and 22 cents for glacial drift. This sub-contract embraces 2,600 feet between stations 1050 and 1076, and 700 feet between stations 1090 and 1097. From the November record on this part of the section I quote as follows:

"Here the wheelbarrow force has been reduced to 25 or 30 and the cart force increased to 8."

The remaining 1,400 feet of the section between stations 1076 and 1090 are retained by the original contractors. Referring to this part of the work the November record says:

"The two steam hoists (with inclines and cars) have discontinued work and have been moved off the section. At the end of the month the only machinery moving rock was one derrick and incline, but a second one is in process of construction. The machinery at work on the section at the end of the month was

One derrick and incline.

Four channellers.

Two steam drills.

One medium centrifugal pump.

One small piston pump."

Section 8.

The contract rating of this section to Dec. 1st is $255,540.96, but it is only credited with $51,285.00, a shortage of $204,255.96, involving a period of more than seventeen years for its completion at the present rate.

This section was also sub-let to a Mr. M. Guilford at about same prices as the preceding section.

After protracted litigation in the United States Court, in which the Sanitary District was involved, the original contractors finally obtained possession last October. I am now advised by the Assistant Engineer in charge that the section was turned over to another contractor on the 11th inst.

The November record of the work says: "Work was resumed on this section on the 10th with three steam hoists (two of which, I believe, were transferred from Section 7). The following machinery has been in use since the 10th:

Three steam hoists with thirty-six cars.

One channeller.

Six steam drills.

One large centrifugal pump.

One medium piston pump.

And the following machinery which is supposed to be the property of M. Guilford was on this section, but idle:

One steam hoist and 26 cars.

One cable way (less one tower).

One channeller.

Nine drills.

One medium piston pump."

Section 9.

The requirements of this section, on the 1st inst., are $230,788.32; the amount done, $68,333.20, and the delinquency $162,455.12, representing nearly twelve years for its completion according to the present average showing. This section is also being operated by sub-contractors. The November record says: "The steam hoist has continued working day and night during the month and the derrick and inclines in the day time only. The following machinery was at work on the section during the month:

One derrick and incline.

One steam hoist and 18 cars.

Four channellers.

Two steam drills.

One medium piston pump.

One small piston pump.

There were also 19 cars not in use and a second derrick and incline in process of construction."

Section 10.

The progress of this section requires $269,667.48 on the 1st inst.; the amount to its credit is $154,895.00, a difference of $114,772.48, requiring nearly six years for its completion at such rate of operation.

The November record says of this Section: "This work has been prosecuted in the same manner as previously. The plant has made a somewhat better record than for the last month. The number of cubic yards moved per day by each cantilever since July 1st has averaged 308, and for each steam hoist 178. The following machinery was in use on the Section:

One air compresser plant.

Three cantilever conveyers.

Four steam hoists.

Thirty-eight cars.

Eight channellers.

Thirteen power drills.

One large piston pump.

One medium piston pump.

One small piston pump.

And the following were idle:

Two drills.

Nine cars.

Two large centrifugal pumps.

One pulsometer."

Section 11.

On Section 11 work to the amount of $233,924.88 is required on the 1st inst.; the amount estimated is $209,681.75, a discrepency of $24,243.13, a rate that would consume nearly four years in its excavation.

The plant in use on this Section during November was:

Two cantilever conveyers.

One cable way.

One air compresser plant, 200 horse power.

Five piston pumps.

One centrifugal pump.

Six channelling machines.

Eleven power drills.

There are also on the section, but not in use:

Three hoisting engines and inclines.

Thirty dump cars and track.

The use of these are prohibited by the provisions of their contract with the operators of the Cantilever system, unless the latter fail to keep up an output equal to the contract requirement.

Section 12.

On the 1st inst. work to the extent of $230,074.56 was due from this Section; the amount done was $228,365.75, showing a deficiency of $1,708.81, being a rate that would finish the Section in less than three and one-half years.

Their plant comprises

Two cantilever conveyors.

Two air compressors, 120 horse power each.

Four channellers.

Fourteen power drills.

One steam derrick.

Five piston pumps.

There are also on the section, but no in use

Four steam hoisting engines and in clines, and

Thirty-four dump cars and track.

The use of which is prohibited under same circumstances as stated on preceding section.

Section 13.

Two hundred and twenty-three thous-

and and sixty-three dollars and eighty cents is the estimate required for this section, the amount returned is $276,-138.72, showing a surplus of $53,074.92, a rate which would complete the section in about two and three-fourths years. Including the two preceding sections with this one there is an average excess of $9,041.00 for each one of them.

The plant consists of

Four cantilever conveyors.

One air compressor, 200 horse power.

Eight channellers.

Seventeen power drills.

Seven piston pumps.

There are also, not in use under conditions named as to the two preceding sections,

Three hoisting engines and inclines and

Forty dump cars and track.

Section 14.

Work on this section was suspended on the 15th ult., and its condition is too well known to require any comment, yet, for the purpose of comparison with other sections, I will state that the work executed up to the 1st inst., should have been $238,701.84; the amount done was $95,638 00, being delinquent in the sum of $143,063.84, requiring more than eight years for its completion at the same average rate.

I enclose herewith a tabulated statement representing the status of the work in a condensed form by which comparison may be more readily made. I also enclose a diagram intended to illustrate the condition of each section.

Respectfully submitted,

(Signed) U. W. WESTON,

Supt. of Construction."

CONDITION OF WORK ON MAIN

Sections.	CONTRACTORS.	Amount of preliminary estimate on Main Channel.	Average monthly progress called for in contracts.	Total amount required to be done by Dec. 1, 1893.
F	Ricker, Lee & Co.	$ 352,499 76	$ 10,681 81	$ 53,409 05
E	Streeter & Keuefick.	492,659 43	14,929 07	74,645 35
D	E. D. Smith & Co.	504,454 73	15,286 51	76,432 55
C	Western Dredging and Improvement Co.	440,629 23	13,352 40	66,762 00
B	Heldmaier & Neu.	388,581 08	11,775 18	58 875 90
A	Heldmaier & Neu.	808,109 78	24,488 17	122,440 85
1	Alfred Harley.	878,842 56	21.435 18	171.481 44
2	McArthur Bros.	760,655 10	18,552 56	185,525 60
3	Gilman & Co.	809,075 76	19,733 56	236,802 72
4	McArthur Bros.	805,538 28	19,647 28	216,120 08
5	Agnew & Co.	541,292 71	13,202 26	138,626 73
6	Agnew & Co.	604,482 10	14,743 47	154,806 44
7	Agnew & Co.	713,631 00	17,405 63	182,759 12
8	Agnew & Co.	873,098 35	21.295 08	255 540 96
9	Agnew & Co.	788,526 70	19,232 36	230,788 32
10	E. D. Smith & Co.	921.364 05	22,472 29	269,667 48
11	Mason. Hoge & Co.	799.243 48	19,493 74	234,924 88
12	Mason. Hoge & Co.	786,088 17	19,172 88	230,074 56
13	Mason. Hoge & Co.	762.134 60	18.588 65	223.063 80
14	McCormick Construction Co.	815,564 69	19,891 82	238,701 84
	Totals	$ 13,846.471 51	$355,379 90	$3,420,446 67

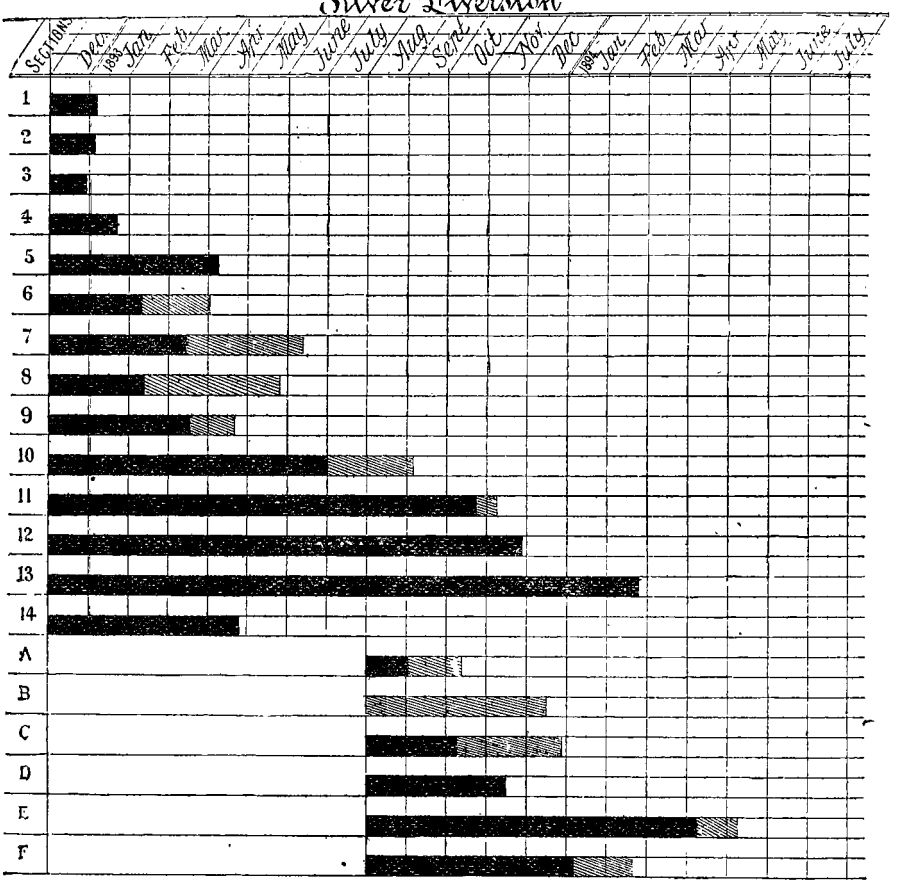
NOTE—The equalized time for completion of Sections "F" to "A"

CHANNEL DECEMBER 1ST. 1893.

Total amount done December 1, 1893.	Amount behind Dec. 1, 1893.	Amount ahead Dec. 1, 1893.	Average amount excavated per month to date.	Average monthly deficiency.	Time required to complete at present rate of progress.	Time since beginning of work.	Date from which progress is calculated in this tabulation.
$ 55,527 03	.....	$ 2,117 98	$ 11,105 41	.....	31 7-10 mo.	5 mo.	April 1, 1893
122,751 75	.....	48,106 40	24,550 35	.....	20 1-10 mo.	5 mo.	April 1, 1893
53,603 62	$ 22,828 93	.....	10,720 72	$ 4,565 79	47 1-10 mo.	5 mo.	April 1, 1893
30,107 02	36,654 98	.....	6,021 40	7,331 00	73 2-10 mo.	5 mo.	April 1, 1893
.....	58,875 90	.....	.....	11,775 18	Not started.	5 mo.	April 1, 1893
25,702 34	96,738 51	.....	5,140 47	19,347 70	157 2 10 mo.	5 mo.	April 1, 1893
25,877 61	145,603 83	.....	3,234 70	18,200 48	271 7-10 mo.	8 mo.	Jan. 1, 1893
21,628 00	163,897 60	.....	2,162 80	16,389 76	351 7-10 mo.	10 mo.	Nov. 1, 1892
18,036 00	218,766 72	.....	1,503 00	18,230 56	538 3-10 mo.	12 mo.	Sept. 1, 1892
33,543 00	182,577 08	.....	3,049 36	16,597 92	264 2-10 mo.	11 mo.	Oct. 1, 1892
56,403 00	82,220 73	.....	5,371 71	7,830 55	100 8-10 mo.	10½ mo.	Oct. 15, 1892
34,128 00	120,678 44	.....	3,250 29	11,493 18	185 9-10 mo.	10½ mo.	Oct. 15, 1892
60,029 00	122,730 12	.....	5,717 05	11,688 58	124 8-10 mo.	10⅝ mo.	Oct. 15, 1892
51,285 00	204,255 96	.....	4,273 75	17,021 33	204 3-10 mo.	12 mo.	Sept. 1, 1892
68,333 20	162,455 12	.....	5,694 43	13,537 93	138 5-10 mo.	12 mo.	Sept. 1, 1892
154,895 00	114,772 48	.....	12,907 92	9,564 37	71 4-10 mo.	12 mo.	Sept. 1, 1892
209,681 75	24,243 13	.....	17,473 48	2,020 26	45 7-10 mo.	12 mo.	Sept. 1, 1892
228,365 75	1,708 81	.....	19,030 48	142 40	41 3-10 mo.	12 mo.	Sept. 1, 1892
276,138 72	.....	53,074 92	23,011 56	.....	33 1-10 mo.	12 mo.	Sept. 1, 1892
95,638 00	143,063 84	.....	7,969 83	11,921 99	102 3-10 mo.	12 mo.	Sept. 1, 1892
$1,621,673 79	$1,902,072 18	$103,299 30	$172,188 71	$197,658 98	80 4-10 mo.	.....	.....

inclusive, is 33 months and for Sections 1 to 14 inclusive it is 41 months.

PROGRESS CHART
OF
MAIN CHANNEL
&
River Diversion



BLACK, Indicates Work done up to DEC 1st 1893. on Main Channel

Indicates River Diversion Quantities, including which progress would be as shown.

able to accompany report of Superintendent of Construction of December 18, 1893.

AGREEMENT FOR REMOVAL OF MATERIAL ABOVE AND BELOW SPILLWAY.

The Clerk presented a report from the Chief Engineer, transmitting a form of agreement in duplicate with McArthur Brothers Company, with reference to the removal of rock and other material above and below the spillway at Summit, as directed by order of the Board at the meeting held November 15, 1893, (page 1573 of the Proceedings); and the report was read.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the report be ordered printed, and with enclosed agreement, referred to the Joint Committee on Engineering and Finance, with instructions to report back as soon as possible.

The motion prevailed unanimously, and the report was ordered printed, and with enclosed agreement, referred to the Joint Committee on Engineering and Finance, with instructions to report back as soon as possible.

The following is

THE REPORT:

"CHICAGO, December 20, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Board of Trustees, at its meeting of Nov. 15 (page 1573 of the proceedings), in a report submitted by the Joint Committee on Engineering and Finance, authorized the Chief Engineer as follows:

"That the Chief Engineer be authorized to remove the loose rock and other material as may be necessary above and below the spillway, the work to be done at the cost of ten (10) per cent by the agent employed in building the spillway."

The Chief Engineer, to fully comply with this instruction, has arranged with the McArthur Brothers Company, as authorized, in accordance with an agreement, copies of which are herewith transmitted, and which are subject to the approval of your Board.

It is respectfully requested that your Board approve the agreement, and authorize it.

Very respectfully,

(Signed) THOS. T. JOHNSTON,
Acting Chief Engineer."

(Enclosing agreement in duplicate).

APPROVAL OF WORK DONE ON TEST PITS ON SECTIONS 2, 3 AND 4.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, with reference to the sinking of test pits on Sections 2, 3 and 4, which work had been completed, and recommending that the expenditure on the same, as provided in the report, be authorized and approved; and the report was read.

Mr. Cooley, seconded by Mr. Russell, moved that the report be adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, and the recommendations made therein concurred in.

The following is

THE REPORT:

"CHICAGO, Dec. 20, 1893.

"*To the Honorable the Board of Trustees of the Sanitary District of Chicago:*

GENTLEMEN—On Aug. 2, 1893 (see page 1360 of the proceedings), a recommendation of the Chief Engineer in regard to the sinking of certain test pits on Sections 2, 3 and 4, was referred to the Joint Committee on Engineering and Finance.

Upon this matter the Committee did not deem it proper to make any recommendation at the time, and the Chief Engineer, in the exercise of his discretion, caused the test pits to be made.

The Committee is of the opinion that the information secured was desirable, and the expenditure therefor was a proper expenditure, and we recommend that the cost thereof, amounting to $1,350.26, be authorized and approved.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
W. H. RUSSELL,
THOMAS KELLY,
WM. BOLDENWECK,
JOHN J. ALTPETER,
Joint Committee on Engineering and Finance."

AMENDMENT TO RULE 21.

Under the head of "Unfinished Business," the report of the Committee on Rules, amending Rule 21, of the Rules of the Board of Trustees, as provided in the report, which report was presented, ordered printed and laid over at the meeting held December 13, 1893, (page 1615 of the Proceedings), was again read, as provided in the rules.

Mr. Russell, seconded by Mr. Cooley, moved that the report and amendment be adopted and placed on file, and the recommendation made in the report concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Prendergast, Russell and Wenter—nine (9). Nays—None.

Upon which result the President declared the motion carried, the report and amendment adopted and placed on file, and the recommendation made in the report concurred in.

The following is

RULE 21 AS AMENDED:

21. "The Clerk shall select, subject to confirmation by the Board, one Assistant Clerk, who shall be Acting Clerk when authorized by the Clerk and in his absence. The salary of said Assistant Clerk shall not exceed the rate of twenty-four hundred dollars per annum."

ADJOURNMENT TO SPECIAL TIME.

Mr. Eckhart, seconded by Mr. Kelly, then moved that when the Board adjourn, it do adjourn to meet Saturday, December 23, 1893, at 1:30 o'clock P. M.

The motion prevailed unanimously, and it was so ordered.

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned to Saturday, December 23, 1893, at 1:30 o'clock P. M., pursuant to motion.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 23, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

ADJOURNED MEETING.

The adjourned session of the two hundred and first regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Saturday, December 23, 1893, at 1:30 o'clock P. M., pursuant to motion.

On roll-call Messrs. Altpeter, Boldenweck, Eckhart, Kelly and Wenter—five (5) members, were present.

RECESS.

Mr. Eckhart, seconded by Mr. Altpeter, moved that the Board then take a recess until 2 o'clock P. M. the same day.

The motion prevailed unanimously, and the Board then took a recess until 2 o'clock P. M. the same day.

On re-assembling at 2 o'clock P. M. the same day, at the close of the recess, on roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6) members, were present.

PURCHASE OF "HORN," "LEDDIN," AND "ENGELKE" LANDS.

Mr. Eckhart, Chairman, presented a report from the Joint Committee on Finance and Engineering, with reference to the purchase from William Horn, August and Ottilie Leddin and August and Auguste Engelke, of certain right of way lands in Cook County, and authorizing and directing the Clerk to pay for the said right of way lands, on the vouchers of the Attorney, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly,

moved that the report be adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said William Horn, August and Ottilie Leddin and August and Auguste Engelke, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and placed on file, the recommendations made therein concurred in, and the Clerk authorized and directed to pay said William Horn, August and Ottilie Leddin and August and Auguste Engelke, on the vouchers of the Attorney, for the said right of way lands, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Dec. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Finance and Engineering has reached an agreement with William Horn for the purchase from him for the corporate purposes of this District of the land hereinafter described for the sum of four thousand ($4,000.00) dollars;

With August Leddin and Ottilie Leddin for the purchase from them for the corporate purposes of this District of the land hereinafter described for the sum of one thousand seven hundred ($1,700.00) dollars;

With August Engelke and Auguste Engelke for the purchase from them for the corporate purposes of this District of the land hereinafter described for the sum of one thousand three hundred ($1,300.00) dollars.

Your Committee recommend that the Clerk of this District be directed to pay, on the vouchers of the Attorney, to said William Horn the sum of four thousand ($4,000.00) dollars, in full payment for the following described land, to-wit:

The north (N.) one hundred and thirty (130) feet of the east (E) one hundred and twenty-five (125) feet of Block five (5) of Pitts & Lichty's Re-subdivision of Blocks three (3), four (4), five (5) and six (6) in Manchester, said Manchester being Subdivision of that part lying north (N) of canal of the east half (E. ½) of the northeast quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian; also formerly known as Lots one (1), two (2), three (3), four (4) and five (5) of said Block five (5) of Pitts & Lichty's Re-subdivision aforesaid; said premises lying and being situated in the County of Cook, State of Illinois.

To said August Leddin and Ottilie Leddin the sum of one thousand seven hundred ($1,700.00) dollars, in full payment for the following described land, to-wit:

Lots seventeen (17) and eighteen (18) in Sabath's Re-subdivision of Block four (4) of Manchester, said Manchester being a Subdivision of that part lying north (N.) of the Illinois and Michigan Canal of the east half (E. ½) of the northeast quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian; said premises lying and being situate in the County of Cook, State of Illinois.

To said August Engelke and Auguste Engelke the sum of one thousand three hundred ($1,300.00) dollars in full payment for the following described land, to-wit:

Lot fifteen (15) in Sabath's Re-subdivision of Block four (4) of Manchester, said Manchester being a Subdivision of that part lying North (N.) of the Illinois and Michigan Canal of the East half (E. ½) of the North-east quarter (N. E. ¼) of Section thirty-six (36), Township thirty-nine (39) North, Range thirteen (13), East of the Third Principal Meridian; said premises lying and being situate in the County of Cook, State of Illinois.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,
L. E. COOLEY.

Joint Committee on Finance and Engineering."

AGREEMENT FOR REMOVAL OF MATERIAL ABOVE AND BELOW SPILLWAY.

Mr. Cooley, Chairman, presented a report from the Joint Committee on En-

gineering and Finance, with reference to and accompanied by the report of the Chief Engineer, transmitting the form of agreement, in duplicate and accompanied by plan, with McArthur Brothers Company for the removal of all rock and other material above and below the spillway at Summit, presented and referred to that Committee at the meeting held December 20, 1893, (page 1636 of the Proceedings); and the report and amended agreement were read.

Mr. Cooley, seconded by Mr. Kelly, moved that the report be adopted, with amended agreement ordered printed and with all enclosures placed on file, and the recommendations made in the report concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, with amended agreement ordered printed and with all enclosures placed on file, and the recommendations made in the report concurred in.

The following is

THE REPORT, WITH ACCOMPANYING AGREEMENT:

"CHICAGO, Dec. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Committee reports back the agreement with McArthur Brothers Company in regard to certain excavation in the approach to and below the spill-way above Summit, submitted to the Board by the Chief Engineer at the meeting held December 20, 1893.

With slight amendments relating to the repair and maintenance of tools and appliances which have been incorporated in said agreement, the Committee recommends that the same be approved.

The agreement and the letter of the Acting Chief Engineer, accompanying same, are returned herewith.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.

B. A. ECKHART,
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,

Joint Committee on Engineering and Finance."

(Two (2) enclosures.)

AGREEMENT:

"*This Agreement*, made and entered into this first (1st) day of December, A. D. 1893 by and between the Sanitary District of Chicago, party of the first part, and McArthur Brothers Company, a corporation, party of the second part, witnesseth:

That the said party of the second part, in consideration of the payment hereinafter agreed to be made, hereby covenants, contracts and agrees with said first party to act as its agent in superintending the excavation and removal of the earth, loose rock and other material above and below the spillway on the left bank of the Desplaines River north of the Santa Fe bridge, near Summit, Illinois, within the boundaries shown on the accompanying plan marked "Exhibit A," and in the disposal of the same on the levees adjacent to the ends of said spillway; said work to be done under the direction of the Chief Engineer of first party, or his authorized agents, and to terminate at such time as said Chief Engineer shall direct.

Second party will, as such agent, employ such a force of men as shall be necessary and furnish and keep in repair at its own cost and expense the necessary tools and appliances for the proper and economical execution of said work; accurate pay-rolls of all foremen and workmen employed upon said work shall be submitted to said Chief Engineer on the 10th and 25th days of each month for his approval and after same shall have been so approved shall be paid by first party.

In consideration of such service as agent, and the furnishing of the tools and appliances as aforesaid, the said party of the first part will pay said second party, upon conclusion of said work, a sum equal to ten (10) per cent of the total actual cost of said work, which percentage so received shall be paid by first party and accepted by second party as full and sole compensation for its service as such agent and for the use of its tools and appliances in the prosecution of said work.

In witness whereof, on the day and year first above written, the parties hereto have caused this agreement to be executed by their respective officers thereunto duly authorized, etc."

(Accompanied by plan marked "Exhibit A.")

AWARDING OF BIDS ON SECTIONS G TO M, SUMMIT TO CORWITH.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, recommending the awarding of contracts to the lowest bidders of November 29, 1893, as provided in the report, for the work on Sections G to M of the Main Channel, between Summit and Corwith, and that the checks of all but the successful bidders be returned, and transmitting a copy of the amended form of contract for said work; and the report was read.

Mr. Cooley, seconded by Mr. Boldenweck, moved that the report be adopted, ordered printed, and with enclosure placed on file, and the recommendations made in the report concurred in.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Kelly and Wenter—six (6). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed, and with enclosure placed on file, and the recommendations made in the report concurred in.

The following is

THE REPORT:

"CHICAGO, Dec. 23, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance has considered the bids on Sections G to M, inclusive, of the Main Channel, received on Nov. 29th and referred to this Committee for consideration, and report as follows;

The Finance Committee, acting as a sub-committee, has received full statements in writing in regard to the resources and experience of all bidders, whose prices were sufficiently low to warrant consideration, and said bidders have been examined orally with great care, in regard to cash capital, proposed methods of work, experience, and all other matters required to form a proper judgment in making awards for the best interests of the District. These examinations have been conducted with the assistance of the Chief Engineer, Superintendent of Construction and Attorney.

The experience of the Board in regard to several of the contract sections, lying between Summit and Lockport, has clearly demonstrated that it is not always wise to let to the lowest bidder, even when said lowest bidder may be able to give the required bond. The Board must exercise a wise discretion and select such bidders as in its opinion will prosecute the work diligently to completion within the limit of time set forth in the contract.

The Committee also concludes that there is a substantial advantage in working the sections in groups of two, and that the bids submitted are such that awards can be made on this basis.

The Committee concludes further that there will be a substantial advantage in executing said work in the dry rather than by dredging and has given this due weight in the consideration of bids.

Considering all the circumstances, the Committee concluded to recommend the award of bids as follows:

Sections G and H to Gahan & Byrne;

Sections I and K to Christie & Lowe;

Sections L and M to the Heidenreich Company;

The same being the lowest bidders except on Section G.

After the conclusion had been reached to let Section G to Gahan & Byrne, other parties whose bids on this section were lower, filed additional statements and requested a further hearing in regard to this section which was granted. After a very full review of the new matter submitted, the Committee has found no sufficient reason to change its conclusion.

In order that the District may have the advantage of the lowest bid on Section G, Gahan & Byrne express a willingness to accept said section at the price of the lowest bid.

The Committee therefore recommends that the several sections be awarded as follows:

	Per yd.
Section G—Gahan & Byrne.....	$0.28
Section H—Gahan & Byrne.....	.29
Section I—Christie & Lowe.....	.25
Section K—Christie & Lowe.....	.25
Section L—Heidenreich Co.....	.197
Section M—Heidenreich Co.....	.217

This award to be subject to certain minor changes in the wording of several clauses of the contract. Said changes being in the nature of clearer of definition on points liable to misconstruction. A copy of the contract with said changes is submitted herewith as a part of this report.

The Committee recommend further that all checks of unsuccessful bidders upon these sections be returned.

The bidders to whom awards are made should be notified to appear and qualify at once, subject to the approval of the Board, and meantime the Finance Committee should be instructed to take under advisement the sufficiency of any bonds that may be presented.

Very respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.

B. A. ECKHART,
JOHN J. ALTPETER,
WM. BOLDENWECK,
THOMAS KELLY,
Joint Committee on Engineering and Finance."

(Enclosing form of amended contract.)

ADJOURNMENT.

On motion of Mr. Eckhart, seconded by Mr. Boldenweck, the Board then adjourned.

THOS. F. JUDGE,
Clerk.

PROCEEDINGS

—OF THE—

BOARD OF TRUSTEES,

—OF THE—

SANITARY DISTRICT OF CHICAGO.

DECEMBER 27, 1893.

OFFICIAL RECORD.

(Published by authority of the Board of Trustees of the Sanitary District of Chicago.)

REGULAR MEETING.

The two hundred and second regular meeting of the Board of Trustees of the Sanitary District of Chicago was held in their rooms, Rialto Building, Wednesday, December 27, 1893, at 2 o'clock P. M.

President Wenter called the Board to order.

On roll-call Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8) members, were present.

MINUTES.

The minutes of the regular meetings held December 13 and 20, 1893, and of the adjourned meeting held December 15, 1893, were approved as printed, on motion of Mr. Kelly, seconded by Mr. Boldenweck.

VOUCHERS.

The Clerk presented the following vouchers:

ENGINEERING DEPARTMENT.

Construction Account—

McArthur Bros. (Sec. 2, Dec. 16, '93)	$3,816 93
McArthur Bros. (Sec. 4, Dec. 16, '93)	4,666 72
Agnew & Co. (Sec. 6, Dec. 16, '93)	2,362 50
E. D. Smith & Co. (Sec. 10, Dec. 16, '93)	669 37
Heldmaier & Neu, (Sec. B, Dec. 16, '93)	283 50
John Lehman, (Sec. 1, special work, River Diversion, Dec. 16, '93)	1,499 82

E. D. Smith & Co. (Sec. 10, making levee water tight, Dec. 9, '93)	6,243 16	
McArthur Bros. Co. (Sec. E., work in vicinity of spillway, Dec. 1, '93)	1,646 78	
		$ 21,188 78

ENGINEERING DEPARTMENT.

Streeter & Kenefick, (test pits)	$1,350 26	
S. D. Childs & Co. (stationery)	15 36	
Keen & DeLang, (stationery)	10 15	
W. A. Olmsted, (mounting maps)	3 41	
Trevor Spring Water Co. (ice)	18 00	
Waukesha Hygeia Mineral Springs Co. (water)	7 50	
Dan H. Hurley, (coal)	34 78	
J. M. Abbitt, (coal, etc.)	7 21	
Mrs. A. M. Munson, (rent, Mt. Forest)	20 00	
H. S. Norton, (rent, Lemont)	18 00	
O. W. Moon, (rent, Lockport)	20 00	
D. C. Dunlap, (horse and buggy)	45 00	
Robt. H. Cowdrey, (expense)	15 03	
		$ 1,564 70

LAW DEPARTMENT.

Orrin N. Carter, (expense, experts)		$ 125 00

GENERAL ACCOUNT.

J. C. Nickson, (engraving resolutions on Mayor Harrison's death)	$ 45 00	
Thos. F. Judge, (payroll and sundry expense)	16 83	
Geo. P. Brown, (second payment, account writing history of District)	300 00	
		$ 361 83

POLICE DEPARTMENT

Harris W. Kettering, (horse shoeing)		$ 8 00
Grand total		$ 23,248 31

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the vouchers, as read and shown above, be approved and ordered paid.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the vouchers, as read and shown above, approved and ordered paid.

REQUISITIONS.

The Clerk presented the following requisitions:

No. 470, Law Department, (postage stamps)	$10 00
No. 1054, Clerical Department, (stationery)	36 90
Total	$46 90

Mr. Boldenweck, seconded by Mr. Russell, moved that Requisitions No. 470, for the Law Department, and No. 1054, for the Clerical Department, as read and shown above, be allowed.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and Requisitions No. 470, for the Law Department, and No. 1054, for the Clerical Department, as read and shown above, allowed.

WEEKLY REPORT ON EMPLOYES.

The Clerk presented a report, in accordance with the rules, showing the number of persons in the employ of the District, for the week ending December 23, 1893.

The same was read, and, by unanimous consent, was ordered printed and placed on file.

The following is

THE REPORT:

"CHICAGO, Dec. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—I beg leave to report herewith the number of employes in each department for the week ending December 23, 1893, as the same have been reported to me:

Engineering Department	(No report)
Clerical Department	4
Treasury Department	1
Law Department	8
Police Department	36
Total employes	49

Up to this writing, no report has been received from the Engineering Department as to the force employed therein.

Respectfully submitted,

(Signed) THOS. F. JUDGE,
Clerk."

DEPOSIT MADE FOR PLANS ON SECTIONS G TO M.

The Clerk presented a report from the Acting Chief Engineer, accompanied by a communication, enclosing a list of contractors who had deposited for, taken out and retained plans of the work on Sections G to M of the Main Channel, between Summit and Corwith, together with check for the amounts deposited for same; and the report was read.

Mr. Boldenweck, seconded by Mr. Eckhart, moved that the report and communication with enclosure be ordered printed and placed on file, and the Clerk directed to deposit the accompanying check ($83.35) with the Treasurer, to the credit of the District.

The motion prevailed unanimously, the report and communication with enclosure were ordered printed and placed on file, and the Clerk directed to deposit the accompanying check ($83.35) with the Treasurer to the credit of the District.

The following is

THE REPORT WITH ENCLOSURES:

"CHICAGO, December 26, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — Herewith please find statement of plans sold to contractors in connection to letting contracts east of Summit, bids for which were opened November 29, 1893: also Mr. Cowdrey's check for the amount of the statement.

Very respectfully,

Signed) THOS. T. JOHNSTON,
Acting Chief Engineer."

(Three (3) enclosures.)

(Enclosure,)

"CHICAGO, Dec. 22, 1893.

Thomas T. Johnston, Esq., Acting Chief Engineer.

DEAR SIR—Enclosed please find my check for $83.35 to cover amount paid by contractors for maps and plans of work between Summit and Corwith, as per statement attached hereto.

Respectfully,

(Signed) R. H. COWDREY,
Record Clerk."

"CHICAGO, December 22, 1893.

Statement of payments made to me by contractors for maps and plans of work between Summit and Corwith on the Main Channel of the Drainage Canal:

C. Brodhead	$ 2 00
Kilpatrick Bros. & Colvin	1 50
S. R. H. Robinson	2 00
Dawson, Symmes & Co	2 00
Linden Bates	2 00
McIntosh Bros	2 00
F. O. Brown	2 00
Christie & Lowe	2 00
Wm. Garland	2 00
Powell & Mitchell	1 50
J. W. King & Co	2 00
W. H. Earle	2 00
Gooch, Rinehart & Co	2 00
Breen & Feely	2 00
E. V. Johnson	3 60
F. C. McDonald	2 00
McKeown, Stowell & Co	2 00
F. W. Jones	2 00
J. W. Smith	2 00
F. Giveners	2 00
Chicago Dredging & Dock Co	2 00
McCormick & Moran	2 00
St. Clair Construction Co	2 00
S. A. Harrison & Co	2 00
J. Bentler	2 00
W. A. McGillis	2 00
J. Wainwright	2 00
Hayes Brothers	2 00
Warren & Malloy	2 00
F. K. Hoover	2 00
Casgrain & McDonald	2 00
W. L. Stebbings	2 00
John Pike	2 00
Alexander, Hill & Enricht	2 00
Kissick & Muir	2 00
A. J. McBean	2 00
B. Flemming	2 00
Winston Bros	2 00
Ryan & McDonald	2 00
J. Gallagher	2 00
M. Dawson	75
1 Polygraph	2 00
Total received	$83 35

(Signed) ROBERT H. COWDREY,
Record Clerk."

(Enclosing check $83.35.)

REPORT ON DELINQUENT CONTRACTORS ON SECTION 1 AND SECTIONS 5 TO 9.

The Clerk presented a report from the Acting Chief Engineer, accompanied by two tables, with reference to the condition of work on Section 1 and Sections 5 to 9 inclusive, which were delinquent and subject to forfeiture; and the report was read.

Mr. Boldenweck, seconded by Mr. Cooley, moved that the report with accompanying tables, be adopted, ordered printed and placed on file.

The motion prevailed unanimously, and it was so ordered.

The following is

THE REPORT, WITH ACCOMPANYING TABLES:

"CHICAGO, Dec. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN — The contracts under which the work in Sections 1, 5, 6, 7, 8 and 9 of the Main Channel is being done provide, in the clause entitled 'Responsibility of Contractors,' third and fourth paragraphs, as follows; 'It being distinctly understood and agreed that the sub-letting of the work covered by this contract, or any part thereof, shall work a forfeiture of the contract at the option of the Sanitary District.' And 'in case the contractor fails to comply with the provisions of this contract, as to progress and character of work, he shall be duly notified in writing, and thirty days after the giving of said notice, the party of the first part may declare this contract forfeited, if there is substantial failure to comply with its provisions.'

Your attention is respectfully directed specifically to the condition of the work in these sections, the nature of which has been stated in general terms in the report of the Superintendent of Construction, transmitted on the 20th inst., and also in accordance with information received by the Engineering Department from time to time.

SECTION 1.

There has been substantial failure to meet the requirements as to progress, as indicated by the reports of Superintendent and Assistant Superintendent of Construction from time to time, as indicated by the accompanying table marked 'Table I.' The contractor has not yet made the progress required in two months, and his recent rate of progress indicates that he has substantially though perhaps not technically, abandoned the work.

SECTIONS 5, 6, 7, 8, AND 9.

Progress—There has been substantial failure to meet the requirements as to progress in all of these sections, culminating during the present month in a state of affairs which hold out no promise that the intention and meaning of the contract is being complied with, the latter assertion being proved by the showing of Table II. accompanying, and the report of the Superintendent of Construction December 20th, which set forth the quantity of effective plant in use.

In Sections 6 and 7, in virtue of an agreement dated July 5th, 1893, provision was made for the execution of certain additional river diversion work of a purely collateral nature. Aided by favorable weather and conditions for progress a considerable amount of work was accomplished during the short period of three months. The rate of progress previous and subsequent to this short period on the other parts of the work, together with the failure of the contractors to provide in the meantime for a proper progress on other parts of the work, proves that the progress during the three months in question was of an accidental nature and in no sense indicative of a bona fide rate of progress within the intent and meaning of the contract. This accidential river diversion work was practically completed in November, and December finds the sections substantially unprovided with the means of making progress materially in excess of that made prior to undertaking the river diversion work.

The contracts make no allowance as to progress required covering the contingencies of unfavorable weather or conditions. The four months ending in the latter part of November were favorable for work in a degree far in excess of what may reasonably be expected during the period through which the contracts run. It might reasonably have been expected that a rate of progress proportionately in excess of requirements would have been made in order that the intent and meaning of the contract should be substantially complied with.

The accompanying Table I. exhibits the rate of progress made during the period of the contract and also during the three months to December 1st. The tables also exhibit the rate of progress made on other sections of the Main Channel in which the requirements of the con-

tracts are being substantially met. It appears from the report of the Superintendent of Construction, December 20, 1893; that the present rate of progress is substantially but one half of that currently required, to say nothing of the additional amount necessary to recover the lost ground.

Plant—Table II accompanying, contains an exhibit of the plant on Sections 7, 8 and 9, which are substantially rock sections. It also contains an exhibit of the plant on Sections 11, 12 and 13; also on Section 10. These latter sections essentially meet the requirements as to progress. It appears that there is on Sections 7, 8 and 9 but one-third the proper plant.

A statement is also made on the face of the table, indicating essentially the capacity of the several plants, as indicated by the recent progress of work.

Sub-letting—It appears from the report of the Superintendent of Construction that all of the sections, with the exception of about 1,400 feet on Section 7, have virtually passed into the hands of third parties. It appears from the report cited that a stipulated price much below that of the principal contract is being paid, thereby involving two profits in place of one, and that the management for practical operations is out of the hands of the principals. The contractors are substantially overriding the provisions of the contract in this respect.

Character of Work—The character of the work in these sections as a whole, is, and has been bad.

(*a*) *River Diversion*—The River Diversion work has been accomplished only after much contention, indicating the intention of the contractor to avoid, if possible, a proper execution of the work. The material excavated has been deposited in an unworkmanlike manner, so as not to properly meet the spirit and intent of the contract in forming an embankment and levee.

(*b*) *Section 6*—The work on the Main Channel has not been conducted in a manner indicating a properly developed plan for the execution of the whole work and consistent with the required rate of progress. The work in this section seems to still be essentially of an experimental nature without any reasonable promise of a successful result as to either progress or profit. Furthermore, the conduct of the work has the appearance of intending the removal of that part of the material easily accessible and yielding a large profit, with the hope that the contract may terminate before the less accessible and less profitable work be required.

(*c*) *Section 6*—The same conditions exist in this section as in Section 5, except that the conditions appear to be a degree worse, or rather more pronounced.

(*d*) *Section 7*—The Main Channel work in this section is principally rock. The character of the work is reflected by the arrangement of rock excavation recently adopted, called the High Power Derrick. It appears that when the capacity of the machine, as now designed, has been exhausted, there will remain a large proportion of rock in the bottom of the channel not excavated. The fact is, the machine is still in an experimental state, as is evidenced by the breakages of parts, by additions to its construction claimed to be needed and by a deficiency of power as stated by the Assistant Engineer in charge.

(*e*) *Section 8*—The Main Channel work in this section, which is essentially rock work, can hardly be said to have developed any character. It has suffered from legal complications arising from the relations between the principal contractor and his so-called agent.

(*f*) *Section 9*—This is a rock section, and the character of the work is similar to that in Section 7.

(*g*) *Promises*—The contractor has from time to time promised and assured the Committees of the Board and the Engineering Department that certain steps looking to better progress would be taken, but these promises have, in the main, not been fulfilled.

(*h*) *Payment of Labor*—Many of the obligations to labor have not been met with cash payments, with the result of many complaints to the officers of the District.

Conclusion—The principal cause for action or complaint with reference to these contracts lies in the failure to substantially comply with the provisions as to progress. That proper progress has not been made is a plain fact, and in my opinion the character of the work done and the spirit shown by the contractors does not indicate an ability or intent to meet the requirements.

Respectfully submitted,

(Signed) THOS. T. JOHNSTON,

Acting Chief Engineer."

TABLE I.

Statement of Progress in Sections 1, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14 of Main Channel and River Diversion Based on Value of Work Done or to be Done.

SECTIONS.	Total dollars of work in Section including River Diversion.	Dollars of work required per month based on 41 months.	Average dollars of work actually done per month for Sept., Oct. & Nov., 1893.	Total dollars of work which should have been done Dec. 1, 1893, or for 12 months.	Total dollars of work actually done to Dec. 1, 1893.
1	$ 921,735	$ 22,481	$ 1,820	$ 269,772	$ 27,464
5	544,312	13,276	11,034	159,312	56,403
6	639,574	15,599	13,869	187,188	60,804
7	769,866	18,777	23,271	225,324	115,306
8	961,098	23,441	18,785	281,292	136,350
9	813,185	19,834	14,406	238,008	90,439
10	970,897	23,680	33,858	284,160	206,945
11	815,544	19,891	31,345	238,692	220,523
12	790,803	19,288	28,883	231,456	228,365
13	762,134	18,589	31,195	223,068	276,138
14	815,564	19,892	12,111	238,704	95,688

NOTE—Retaining Walls are included in this table. Quantities taken from Proceedings November 15, 1893, and from tables furnished by Mr. Weston.

TABLE II.

Comparison of Mainly Rock Excavating Plant on Main Channel of Parts of Sections 7, 8 and 9, with Plant on Main Channel of Parts of Sections 11, 12 and 13, and on Main Channel of Part of Section 10, Together with Recent Excavations in Said Sections.

ITEMS OF PLANT EARLY IN DECEMBER, 1893.	In Use.			Not in Use.			Total Plant.		
	7, 8, 9	11, 12, 13	10	7, 8, 9	11, 12, 13	10	7, 8, 9	11, 12, 13	10
Air Compressors	0	4	1	....	....	....	0	4	1
Conveyor Machines	2	9	3	....	....	....	2	9	3
Channellers	9	18	*8	....	....	....	9	18	8
Drills	10	42	13	....	....	2	10	42	15
Steam Hoists	4	....	4	....	10	....	4	10	4
Cars	54	....	38	19	104	9	73	104	47
Pumps	6	18	3	....	....	3	6	18	6
Derrick	....	1	....	....	....	....	0	1	0

AMOUNT OF ROCK EXCAVATION RECENTLY DONE.

Sections 7, 8 and 9.

Average yards per month required by contract.....29,883
Average of September, October and November, Main Channel.....11,707
Amount for November, Main Channel.....11,500

Sections 11, 12 and 13.

Average yards per month required by contract.....25,409
Average of September, October and November, Main Channel.....38,148
Amount for November, Main Channel.....27,533

Section 10.

Average yards per month required by contract.....30,516
Average of September, October and November, Main Channel.....35,830
Amount for November, Main Channel.....37,900

ARGUMENT—It appears that the plant in Sections 11, 12 and 13 has been about sufficient to meet contract requirements as to quantity of rock excavations, and therefore that the plant in Sections 7, 8 and 9 is inadequate.

NOTE 1—Two more conveyor machines are in process of construction in Sections 7, 8 and 9.

NOTE 2—Effectiveness of plant probably proportional to number of drills.

COMPLETION OF CONTRACTS ON SECTIONS I AND K.

Mr. Eckhart, Chairman, presented a report from the Committee on Finance, returning signed contracts and bonds with Messrs. Christie and Lowe, on Sections I and K of the Main Channel, and recommending that the same be approved, the checks deposited with the bids for same be returned, and further recommending that the President and Clerk be authorized and directed to execute the said contracts on behalf of the District, as provided in the report; and the report was read.

Mr. Eckhart, seconded by Mr. Kelly, moved that the report be adopted, ordered printed and, with enclosures placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute the said contracts on behalf of the District, as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted, ordered printed and with enclosures placed on file, the recommendations made therein concurred in, and the President and Clerk authorized and directed to execute the said contracts on behalf of the District, as provided in the report.

The following is

THE REPORT:

"CHICAGO, Dec. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Committee on Finance presents herewith the contracts of Christie & Lowe, accompanied by approved bonds, for Sections I and K of the work this side of Summit, Ill., awarded by this Board December 23, 1893, and recommends that the President and Clerk be authorized and directed to execute same on the part of the District, and that the Clerk be directed to return the checks deposited by said Christie & Lowe with their bids.

Respectfully submitted,

(Signed) B. A. ECKHART,
Chairman.
W. H. RUSSELL,
THOMAS KELLY,
Committee on Finance."

(Accompanied by two contracts in duplicate.)

NOTICE OF FORFEITURE OF CONTRACTS ON SECTION 1 AND SECTIONS 5 TO 9 INCLUSIVE.

Mr. Cooley, Chairman, presented a report from the Joint Committee on Engineering and Finance, returning eight reports referred to that Committee at various meetings, and recommending the serving of notice of forfeiture of the contracts on the said sections, on Alfred Harley, contractor for Section 1, and on Agnew & Company, contractors for Sections 5 to 9 inclusive, as provided in the report; and the report was read.

Mr. Cooley, seconded by Mr. Altpeter, moved that the report be adopted as the sense of the Board, ordered printed, and, with enclosures, placed on file, and the Clerk directed as provided in the report.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, the report adopted as the sense of the Board, ordered printed, and, with enclosures, placed on file, and the Clerk directed as provided in the report.

The following is

THE REPORT:

"CHICAGO, Dec. 27, 1893.

To the Honorable the Board of Trustees of the Sanitary District of Chicago:

GENTLEMEN—The Joint Committee on Engineering and Finance has considered the progress report of the Superintendent of Construction, presented to the Board on the 20th inst., and referred to this Committee, and also the accompanying letter of the Chief Engineer, and report as follows:

The Committtee has been advised from week to week of the progress of the work over the twenty miles, from the range line near Summit, to Lockport, by verbal reports from the Chief Engineer and the Superintendent of Construction, and has had under consideration several reports and communications bearing upon progress and the conduct of the work.

The Committee has from time to time made such recommendations and submitted for your approval such orders as seemed expedient to insure progress and enforce a compliance with the contracts.

It has for some time seemed evident that certain of the contracts must be placed in new hands, if regard was to be had to the completion of the work within any reasonable period, as required by the contracts, and that certain other contracts would require strict supervision and perhaps a summary course. The Committee has hesitated to recommend a resort to extreme measures, until the difficulties and range of the work were fully developed and the fullest opportunity afforded to meet every requirement.

The past season has been more than ordinarily favorable in respect to weather and freedom from floods, and labor has been plentiful. On January 1st it will be nearly eighteen months since the contracts were signed for the work below Willow Springs, and sixteen months from the date upon which the contractors were notified to begin work, and thirteen of the rated months upon which progress is based out of a total of forty-one, months, or nearly one-third will have past. If, during this time, and under the conditions which have prevailed, any contractor has failed to make the stipulated progress and place his work in condition to insure its future continuance, there is too little likelihood or opportunity for future correction to warrant further consideration.

Works well under way in both rock and earth sections demonstrate beyond question that it is practicable to make the progress called for, and the plant, capital, energy and skill employed insure that these sections will be diligently prosecuted to completion. On others of the contracts all these elements appear to be lacking. The sections are practically in the hands of third parties directly contrary to the spirit of the contracts and regardless of the oft-expressed wish of the Board, and this has led to endless difficulties in prosecuting the work and to scandal in the employment of labor. The work has been prosecuted in a dilatory manner and without proper effort to make the required progress, although this Committee and the officers of the Board have called attention to the matter, advised the course to be taken and mandatory orders have been issued against certain portions of the work. The plant provided for the work has been totally inadequate to insure progress and is insufficient both in character and amount to give any hope of meeting the required progress in the future. The character of the work performed, the skill displayed therein and the manner of managing and carrying on the same, are not such as should be tolerated and the efforts to correct the same do not seem to be received in a proper spirit.

For all the several reasons enumerated, your Committee believes that this Board cannot longer defer action without grave dereliction of duty, and we therefore recommend that the contractor for Sections five (5), six (6), seven (7), eight (8) and nine (9) be served with notice of the intention to forfeit all of said sections.

The lack of progress on Section one (1), and the equipment there provided and the absence of any diligence in prosecuting this work also makes it necessary to follow a similar course and your Committee recommends that notice of forfeiture be also given to Alfred Harlev for that section.

The Chief Engineer should review the specifications for such changes as experience may show to be desirable with a view of re-advertising the several sections subject to forfeiture.

In regard to other sections which are behind the stipulated progress or in which there is a failure to comply with the contract in any particular, your Committee would observe that it is the duty of the Chief Engineer to use every endeavor to secure a full performance of the terms of the contracts as soon as

possible and that if he is unable to secure full compliance with his orders, or there are any requirements that should be modified, the Board should be advised thereof as soon as practicable, so that the proper course may be taken.

A form of notice to be served upon Agnew & Company for each of their contract sections and upon Alfred Harlev for Section one (1) is submitted herewith. It has been prepared by the Attorney and we recommend that the Clerk be directed to serve same, with blanks properly filled, upon Agnew & Company for each of contract Sections five (5), six (6), seven (7), eight (8) and nine (9), and upon Alfred Harlev for contract Section one (1). The form of notice is as follows:

To.....

You are hereby notified that there has been a substantial failure on your part to comply with the requirements of your contract with the Sanitary District of Chicago for contract Section....., bearing date the ..... day of July, 1892, both as to the progress and character of the work done under said contract, and also in not keeping the said work under your control, and that this notice is served upon you under the provisions of said contract for the purpose of laying the foundation for the forfeiture of said contract.

The report of the Superintendent of Construction and the accompanying letter of the Acting Chief Engineer are returned herewith for filing.

There are also returned for filing the following documents:

Report of Chief Engineer of July 19th (p. 1337) calling attention to progress on Sections 5, 6, 7, 8 and 9;

Report of Chief Engineer and Superintendent of Construction of July 26th (p. 1349) on all the contracts;

Reports of notices by Chief Engineer to contractors for Sections 1 and A in regard to progress, August 4th (p. 1381);

Report of Chief Engineer on failure to place hydraulic dredge on Sections 5 and 6, August 9th (page 1389);

Report on progress on all contracts, by Chief Engineer and Superintendent of Construction, August 23rd, (page 1410);

Certificate of Chief Engineer that Sections 5, 6, 7 and 9 are unnecessarily and unreasonably delayed, September 6th (page 1437).

In regard to the several matters in these reports and documents (among which should be included the report of the Chief Engineer, page 1359), the Committee submitted a progress report on September 27th (page 1484).

Respectfully submitted,

(Signed) L. E. COOLEY,
Chairman.
B. A. ECKHART,
THOMAS KELLY,
JOHN J. ALTPETER,
W. H. RUSSELL,
WM. BOLDENWECK,
Joint Committee on Engineering and Finance."

(Eight enclosures.)

POSTPONEMENT OF CONGRESSIONAL INSPECTION TRIP.

Mr. Boldenweck, Chairman, made a verbal report from the Committee on Federal Relations, stating that the Committee had directed the postponement of the trip for the inspection of the Main Channel by the members of Congress from Illinois, which had been set for Thursday, December 28, 1863, owing to inability to secure a full attendance of the delegation at that time.

INQUIRY INTO ALLEGED IMPORTATION OF LABOR.

Mr. Kelly, seconded by Mr. Altpeter, moved that in view of statements in the press in relation to the matter, that the Clerk be directed to correspond with the various contractors on the Main Channel, and inquire if any of the said contractors have at any time authorized or given orders to any labor agency in Chicago, with reference to the importation or furnishing of any men from outside of Chicago for employment on the works of the District or on the sections under their control, and that the clerk report back the result of the inquiry to the Board.

The motion prevailed unanimously, and the Clerk was so directed.

COMMITTEE ON FINANCE TO DISPOSE OF BUILDINGS ON MANCHESTER SUBDIVISION.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the Committee on Finance be instructed and empowered to dispose of all buildings, etc., on the Manchester Subdivision on the right of

way of the District, and report its action to the Board.

On roll-call the vote stood: Yeas—Messrs. Altpeter, Boldenweck, Cooley, Eckhart, Gilmore, Kelly, Russell and Wenter—eight (8). Nays—None.

Upon which result the President declared the motion carried, and the Committee on Finance instructed and empowed to dispose of all buildings, etc. on the Manchester Subdivision on the right of way of the District, and report its action to the Board.

COMMUNICATION.

The Clerk presented a communication from The McMahon & Montgomery Company, with reference to the awarding to them of the contract for the work on Section G of the Main Channel, under their bid of November 29, 1893.

Mr. Eckhart, seconded by Mr. Boldenweck, moved that the communication be ordered placed on file without reading.

The motion prevailed unanimously, and it was so ordered.

ADJOURNMENT.

On motion of Mr. Boldenweck, seconded by Mr. Eckhart, the Board then adjourned.

THOS. F. JUDGE,
Clerk.