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THE CITY RECORD.

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GEORGE B. McCLELLAN, Mayor.

FRANCIS K. PENDLETON, CORPORATION COUNSEL.

HERMAN A. METZ, COMPTROLLER.

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TABLE OF CONTENTS.

Aqueduct Commission—		
Minutes of Meetings of December 3, 5 and 10, 1907.....	1025	
Assessors, Board of—		
Public Notice.....	1157	
Report for the Quarter Ending December 31, 1907.....	1153	
Board Meetings.....	1150	
Bridges, Department of—		
Proposals.....	1158	
Bronx, Borough of—		
Auction Sale.....	1152	
Proposals.....	1152	
Report of the President for the Week Ending January 22, 1908.....	1025	
Brooklyn, Borough of—		
Proposals.....	1151	
Report for the Year Ending December 31, 1906.....	1026	
Change of Grade Damage Commission—		
Public Notice.....	1159	
Changes in Departments, etc.....	1147	
Correction, Department of—		
Proposals.....	1153	
Docks and Ferries, Department of—		
Public Notice.....	1154	
Education, Department of—		
Proposals.....	1154	
Estimate and Apportionment, Board of—		
Extract from Minutes of Meeting of January 24, 1908.....	1142	
Public Notices.....	1151	
Finance, Department of—		
Corporation Sales of Buildings, etc.....	1155	
Notice of Sale of Lands, etc. (Borough of Brooklyn), for Unpaid Taxes and Assessments.....	1157	
Notice of Sale of Lands, etc. (Borough of Richmond), for Unpaid Taxes and Assessments.....	1156	
Notices of Assessments for Opening Streets and Parks.....	1156	
Notices to Property Owners.....	1155	
Sureties Required on Various Classes of Contracts.....	1157	
Fire Department—		
Proposals.....	1154	
Health, Department of—		
Proposals.....	1151	
Manhattan, Borough of—		
Proposals.....	1153	
Meteorological Observatory—		
Abstract of Registers for the Week Ending January 18, 1908.....	1147	
Municipal Civil Service Commission—		
Public Notices.....	1151	
Normal College of The City of New York—		
Notice to Candidates.....	1153	
Notice to Contractors.....	1160	
Official Borough Papers.....	1153	
Official Directory.....	1147	
Official Papers.....	1151	
Parks, Department of—		
Proposals.....	1153	
Police Department—		
Owners Wanted for Lost Property.....	1158	
Proceedings of January 15, 1908.....	1143	
Proposals.....	1158	
Report of Sanitary Company (Boiler Squad) for January 20, 1908.....	1142	
Public Charities, Department of—		
Proposals.....	1153	
Public Service Commission for the First District—		
Proceedings of January 24, 1908.....	1137	
Queens, Borough of—		
Proposals.....	1154	
Richmond, Borough of—		
Proposals.....	1153	
Street Cleaning, Department of—		
Ashes, etc., for Filling in Lands.....	1154	
Proposals.....	1154	
Public Notice.....	1154	
Supreme Court, First Department—		
Acquiring Title to Lands, etc.....	1153	
Supreme Court, Second Department—		
Acquiring Title to Lands, etc.....	1159	
Supreme Court, Third Judicial District—		
Acquiring Title to Lands, etc.....	1160	
Supreme Court, Ninth Judicial District—		
Acquiring Title to Lands, etc.....	1160	
Taxes and Assessments, Department of—		
Public Notice.....	1154	
Water Supply, Board of—		
Minutes of Meeting of December 31, 1907.....	1134	
Water Supply, Gas and Electricity, Department of—		
Report of Transactions for the Week Ending October 26, 1907.....	1142	

AQUEDUCT COMMISSION.

On Tuesday, December 3, 1907, the Commissioners adjourned to meet on Thursday, December 5, 1907, at 11 o'clock a. m.

HARRY W. WALKER, Secretary.

AQUEDUCT COMMISSION.

Minutes of Adjourned Meeting of the Aqueduct Commissioners, Held at Their Office, No. 280 Broadway, New York City, on Thursday, December 5, 1907, at 11 o'clock a. m.

Present—Commissioners Cowan (President), Ten Eyck, Ryan and Windolph, and Chief Engineer Sears.

The Committee of Finance and Audit reported the examination and audit of bills contained in vouchers Nos. 18,710 to 18,722, inclusive, amounting to \$1,153.71, and recommended their payment.

The Committee also recommended the adoption of the following resolution:

Resolved, That the following bills for school taxes for the year 1907 on property taken by The City of New York for the construction of dams, reservoirs, etc., in the Croton watershed, are hereby approved and ordered certified to the Comptroller for payment, under protest, viz.:

School District No. 6, Towns of Lewisboro and Poundridge, N. Y.....	\$116 97
School District No. 9, Town of Bedford, N. Y.....	26 34

The recommendation of the Committee was approved and the resolution adopted by the following vote:

Affirmative—Commissioners Cowan, Ten Eyck, Ryan and Windolph—4.

Report No. 1,657 of the Chief Engineer, dated November 27, 1907, referring to circular letter from Secretary to the Mayor, dated November 18, 1907, for a synopsis of the work of the Commissioners during the year 1907, was received and ordered filed and the President directed to reply thereto in accordance with said report.

Report No. 1,658 of the Chief Engineer, dated December 2, 1907, transmitting communications from Supervisors and Highway Commissioners of the towns of Cortlandt, Bedford, New Castle, North Salem, Lewisboro, Somers and Yorktown, accepting the highways in the respective towns; also communications from N. P. Bushnell, counsel to the Board of Highway Commissioners, Town of Cortlandt, with regard to Road No. 1, etc., was ordered filed, together with Reports Nos. 1,615 and 1,628 on the same subject; and the President was directed to request Mr. Bushnell to attend before the Commissioners at their next stated meeting in reference to said Road No. 1, etc.

Report No. 1,659 of the Chief Engineer, dated December 2, 1907, requesting authority to repair 20-inch tile drain leading from the easterly basin of the Jerome Park Reservoir, at an approximate cost of \$150, was received and ordered filed and the authority requested granted by the following vote:

Affirmative—Commissioners Cowan, Ten Eyck, Ryan and Windolph—4.

Two communications from the Comptroller, dated December 3, stating that the Board of Estimate and Apportionment had authorized the issue of Corporate Stock to the amount of \$2,508.56 and \$30,789.40. Additional Water Fund claims (of John Fox & Co.) were received and ordered filed and the attention of the Secretary directed thereto.

Communication from Julius Kollman, dated November 2, 1907, inquiring of his property is to be condemned and requesting permission to build bridge over Davis Brook, was received and referred to the Chief Engineer.

Communication from Deputy Comptroller McCooley, dated November 30, 1907, requesting to be furnished with a certificate of extension of time for the completion

of the Cross River Reservoir contract, was received and referred to the President for reply.

Application of Commissioner of Public Works Tribus, Borough of Richmond, dated November 25, 1907, for copy of Commissioners' report, was received and referred to the President for reply.

Application of Lidgerwood Manufacturing Company, dated November 30, 1907, for copies of reports of 1905 and 1906, was received and referred to the President for reply.

The Commissioners then adjourned.

HARRY W. WALKER, Secretary.

AQUEDUCT COMMISSION.

Minutes of Stated Meeting of the Aqueduct Commissioners, Held at Their Office, No. 280 Broadway, New York City, on Tuesday, December 10, 1907, at 2 o'clock p. m.

Present—Commissioners Cowan (President), Ten Eyck, Ryan and Windolph, and Chief Engineer Sears.

The minutes of December 5, 1907, were read and approved.

The Committee of Finance and Audit reported the examination and audit of estimates contained in vouchers Nos. 18,715 and 18,716, amounting to \$95,536.91, and of bills contained in vouchers Nos. 18,717 to 18,722, inclusive, amounting to \$236.42, which were approved and ordered certified to the Comptroller for payment by the following vote:

Affirmative—Commissioners Cowan, Ten Eyck, Ryan and Windolph—4.

Progress reports of the Chief Engineer for the weeks ending November 21 and 28, 1907, were received and referred to the Construction Committee.

Report No. 1,660 of the Chief Engineer, dated December 4, 1907, with regard to communication of I. J. Beaudrias, dated September 25, 1907, relative to the title of Parcels Nos. 10½ and 15½, Cornell Dam and Reservoir proceedings, was received and ordered filed and the President directed to reply to said letter in accordance with said report.

Two communications from the Comptroller, dated December 9, 1907, of the deposit of certain moneys to the credit of the "Additional Water Fund," were received and ordered entered on the books and filed.

Communication from the Assistant Secretary, Board of Estimate and Apportionment, dated December 6, 1907, transmitting certified copy of resolution adopted by said Board directing that no new or additional indebtedness payable from the funds provided by the issue of Corporate Stock heretofore authorized be incurred without the approval of said Board, was received and ordered filed.

Communication from the Secretary, Municipal Civil Service Commission, dated December 6, 1907, submitting eligible list of stenographer and typewriter for appointment at Croton Falls, N. Y., was received and referred to the Chief Engineer for report.

Communication from I. J. Beaudrias, dated December 4, 1907, with regard to the removal of the bodies from Parcel 15½, Cross River, First Division, was received and ordered filed.

Communication from A. S. Child, dated December 7, 1907, with regard to claim alleged to be due for salary, was received and referred to the Chief Engineer.

Report No. 1,661 of the Chief Engineer, dated December 10, 1907, recommending that the name of Miles Hardman, Laborer, be dropped from the pay-roll in accordance with the Civil Service rules, on account of absence without leave, was received and ordered filed and the name of said Miles Hardman, Laborer, ordered dropped from the pay-roll.

N. P. Bushnell, Esq., counsel to the Board of Highway Commissioners for the Town of Cortlandt, N. Y.; appeared before the Commissioners in relation to the acceptance by said town of the new highways built by the City, and as to the guard-rails on Road No. 1.

Whereupon, after discussion, Mr. Bushnell stated that he would submit a communication setting forth the position of said Town of Cortlandt relative to the acceptance of the highways and as to the guardrails, for consideration by the Commissioners at their next stated meeting.

The Commissioners then adjourned.

HARRY W. WALKER, Secretary.

BOROUGH OF THE BRONX.

In accordance with the provisions of section 1546, chapter 378, Laws of 1897, as amended by chapter 466, Laws of 1901, section 383, I transmit the following report of the transactions of this office for the week ending January 22, 1908, exclusive of Bureau of Buildings:

Permits Issued.	
Sewer connections and repairs.....	11
Water connections and repairs.....	23
Laying gas mains and repairs.....	26
Placing building material on public highway.....	6
Crossing sidewalk with team.....	6
Miscellaneous permits.....	36
Total.....	108

Number of permits renewed..... 34

Money Received for Permits.	
Sewer connections.....	\$137 60
Restoring and repaving streets.....	382 25
Total deposited with the City Chamberlain.....	\$519 85

LABORING FORCE EMPLOYED DURING THE WEEK ENDING JANUARY 18, 1908.

Bureau of Highways.	
Foremen.....	48
Assistant Foremen.....	42
Teams.....	26
Carts.....	11
Inspectors.....	13
Mechanics.....	61
Laborers.....	591
Drivers.....	22
Total.....	814

Bureau of Sewers.	
Foremen.....	6
Assistant Foremen.....	15
Carts.....	23
Inspector.....	1
Mechanics.....	4
Laborers.....	108
Drivers.....	9
Total.....	166

LOUIS F. HAFEN,
President, Borough of The Bronx.

BOROUGH OF BROOKLYN.

REPORT FOR THE YEAR ENDING DECEMBER 31, 1906.

The City of New York,
Office of the President of the Borough of Brooklyn.
Brooklyn, December 31, 1907.

Hon. GEORGE B. McCLELLAN, Mayor:

Sir—In pursuance of the requirements to that effect in section 383 of the Greater New York Charter, I hereby make to you an annual report of "the business and transactions" of the Borough of Brooklyn for the year ending December 31, 1906.

Under existing arrangements, the official force available for the carrying on of such "business and transactions" of the Borough is organized in and by the following offices, departments and bureaus:

I. The Borough President's Office—

1. The President's Private Office, in charge of Private Secretary John A. Heffernan.
2. The President's Engineering Bureau, in charge of Consulting Engineer R. W. Creuzbaur.
 - (a) Consulting Engineer's General Office (R. W. Creuzbaur).
 - (b) Bureau of Subsurface Construction, in charge of Morton L. Fouquet, Assistant to Consulting Engineer.
3. The President's Administrative Office, in charge of Borough Secretary Charles Frederick Adams (ex officio Secretary to Local Improvement Boards).
 - (a) General Administrative Bureau (Borough Secretary).
 - (b) Local Improvement Bureau (William J. Bierach, Managing Clerk; George J. Bischoff, Engineer Adviser).

II. Department of Public Works, Desmond Dunne, Commissioner—

1. Assistant Commissioner's Office (Bureau of Contracts), in charge of Edward De Forest Candee, Assistant Commissioner of Public Works.
2. Bureau of Highways, Thomas R. Farrell, Superintendent; John C. Sheridan, Chief Engineer.
3. Bureau of Sewers, James Dunne, Superintendent; E. J. Fort, Chief Engineer.
4. Topographical Bureau, Charles R. Ward, Engineer in Charge.
5. Bureau of Public Buildings and Offices, Joseph M. Lawrence, Superintendent.
6. Office of General Bookkeeper, Thomas F. Moran in charge.

III. Department of Buildings, David F. Moore, Superintendent.

The work of each Bureau is described in detail in the annexed statement by its chief, and that of the bureaus under the supervision of the Commissioner of Public Works is very fully and interestingly summarized in his report, which is also annexed.

During the year a central engineering bureau has been established in this office, under the management of R. W. Creuzbaur, Consulting Engineer. As a permanently specialized branch of that bureau, the Division of Subsurface Construction has been organized on the line for the purposes and with the scope described in the accompanying report of Mr. Fouquet, Assistant Engineer in charge.

The Assistant Commissioner of Public Works reports the execution of four hundred and thirty-five new contracts for work, the estimated approximate cost of which was \$3,116,500. The great majority of these, of course, were contracts for the Bureau of Highways and the Bureau of Sewers.

The very great and rapid development and population of the so-called "suburban" sections of the borough have intensified the need of and demand for increased sewerage, transit and highway facilities, far beyond the degree in which, in view of legal, financial and technical obstacles and difficulties, it has been practicable for the administration to respond. Much has been accomplished, however, quite as much, I venture to assert, as was under the conditions properly practicable, and far more, indeed, than is fairly indicated by the statistics of completed work, inasmuch as work has been done which, while not yet matured into recordable results, has amounted to much in the way of preparation for and facilitation of the future attainment of such results.

The detailed report of the Superintendent of Sewers fully justifies the statement of the Commissioner of Public Works that, in the Bureau of Sewers, "the year was one of considerable activity; much was accomplished and much was also done to arrange the forces of the Bureau so as to adapt them to do work to the best advantage."

During the year 19,471 miles of sewers were built by the Department, and 0.969 miles by private contract. These additions brought up the total mileage of recorded sewer construction to 784,512. Deducting the length of sewers removed in the course of the subway operations of the Rapid Transit Commission, we have, as the net mileage for the borough, some 783,615 miles, which total nearly equals the combined aggregate mileage of Manhattan, The Bronx and Richmond, namely, 823.02 miles. Plans and specifications are now under way for work estimated to cost \$3,205,500.

During the year, through the Sewage Purification Disposal Works, nearly 5,714,000 cubic feet of fluid sludge were pumped out. The contract system of sewer cleaning has proved very expensive, and relatively ineffective, and the Chief Engineer of Sewers has been led by the experience in this respect to formulate suggestions (since substantially approved by the Chief Engineer of the Board of Estimate and Apportionment) for the application of the receipts from plumbers' permits to the expense of sewer cleaning by a well organized force employed at day labor and which could be found most usefully available in cases of emergency.

The important work of making up the rolls of assessments for sewer work was in arrears at the beginning of the year to the extent of upwards of four million dollars. The rolls completed during the year comprise nearly twice as many maps, covering nearly twice as many parcels as the work of the year preceding.

Needed revisions and amendments of plans originated by the last administration for the construction of two important systems of relief sewers have been undertaken and successfully accomplished, with great saving in the involved cost, and a large reduction of inconvenience to the public.

The Bureau of Highways reports work carried on under two hundred and forty-five contracts, of which two hundred and nineteen were completed. Including 2.39 miles of pavement laid by the Park Department, 48.46 miles of pavement, of which 41.11 miles were of asphalt, have been laid in this borough during the year.

Of the total laid, 35.38 miles constituted repavement. Of these, 28.13 miles replaced old cobble pavement, thus reducing the total of such cobble pavements in the borough from 78.40 to 50.27. At this rate, two more years would eliminate cobble pavements altogether. Twenty years ago there were 308 miles of such pavement in Brooklyn.

The work of the year brings the total pavement mileage of the Borough to 647.08 miles, an increase of 13.08 miles over 1905. Over 300 miles of this total consist of asphalt and asphalt block pavements.

Approximately 1,484,000 square feet of sidewalk were laid. At a uniform width of 5 feet, this would make 56 miles of sidewalk flagging laid.

In addition to much work done in the preparation of assessment maps and lists, the map room furnished four hundred and ninety-four reports on proposed original improvements, the estimated cost of which is \$4,726,800.

The Division of Street Repairs attended to the maintenance of all roads and pavements not under guarantee. Its repairs of stone pavements covered 148,053 square yards. Six thousand two hundred and eighteen openings made in streets were repaired. Twelve thousand six hundred and thirty-eight defects were remedied, though the complaints received numbered only five thousand seven hundred and ninety-six. One hundred and eighteen thousand nine hundred and seventy yards of macadam pavement were resurfaced.

The Chemical and Physical Testing Laboratory has amply justified its existence by much highly useful and important work.

The work of the Topographical Bureau, as set forth in the accompanying report of the Engineer in charge, has covered and advanced very important improvements, including, among many others, the laying out of Kings Highway at a uniform width, the surveys, soundings and detail plans for the board walk at Coney Island, the extension of Bedford avenue to the Williamsburg Bridge plaza and the revision of the

street lines and grades in the region bounded by Fifth and Ninth avenues and Thirty-sixth and Thirty-ninth streets.

Your attention is respectfully called to the reports of the Bureau of Buildings and of the Consulting Engineer, both of which record much activity and important progress.

The Division of Substructures, covered by the report last named, constitutes a most interesting and promising new departure.

Very respectfully,

BIRD S. COLER,
President of the Borough of Brooklyn.

The City of New York,
Office of the President of the Borough of Brooklyn,
Brooklyn, December 31, 1906.

Hon. BIRD S. COLER, President, Borough of Brooklyn:

Sir—In transmitting report of Mr. Morton L. Fouquet, Assistant Engineer, Division of Substructures, I take this occasion to say that the system under which this work has been progressing has been designed and carried out in a thoroughly intelligent and comprehensive manner, and that even with the short time that has transpired since you secured this authorization for the division (which was to be attached to my office here) the work accomplished has been such as to commend itself in every way.

For many years I have been in a position where I have seen, perhaps more than most City Engineers, where the absence of subsurface records has resulted in loss and actual misuse of City moneys to such an extent that it seemed incomprehensible why a more scientific treatment of the constructions under the surface and on the City's properties should not be recorded. It is a work of the most tiresome detail, and necessarily requires long time in plotting constructions, especially in the business sections of the city, which are the sections first undertaken in Mr. Fouquet's work.

Among the reforms which you are bringing about in this borough I am satisfied that the Division of Substructures will not be the least, and that long before the end of your administration the investment by the City in this labor will be placed on an earning basis through fees paid by the corporations and contractors availing themselves of these surveys and records, aside from the more important economies effected in City constructions, which may hereafter be made intelligently and without conflict and experimental openings throughout the streets, as is the common practice now in laying pipe and other subsurface structures.

So far as the personal efforts of Mr. Fouquet and his staff of assistants are concerned, I take great pleasure in commending the intelligence and diligence with which the work has been handled both in the field and in the office.

Respectfully,

R. W. CREUZBAUR, Consulting Engineer.

The City of New York,
Office of the President of the Borough of Brooklyn,
Brooklyn, December 31, 1906.

R. W. CREUZBAUR, Esq., Consulting Engineer of Public Works, Office of the Borough President, Brooklyn:

Sir—I beg to submit the following report relative to the Division of Substructures, being the first annual report of this division, actually covering about three months' work.

During the latter part of the year 1906 the President of the Borough of Brooklyn secured authorization from the Board of Estimate and the Board of Aldermen to establish a Division of Substructures (to be connected with his office) for the purpose of accumulating accurate data and mapping all information concerning subsurface structures in the borough streets. The urgent need of knowing definitely the locations of the many substructures under our borough streets has been keenly felt for many years. These structures consist of electric conduits, telephone conduits, mail tubes, gas and water pipes, sewers, vaults, tunnels, etc. At the present time when a permit is granted to lay a substructure, the borough authorities are unable to assign any definite location, and in consequence the substructure is located wherever the holder of the permit thinks he can find the necessary space. Feeling his way, as he does, through the street, he not only unnecessarily mutilates the pavement, but often damages seriously the existing substructures.

With information of this character on record the President of the Borough will be able to intelligently regulate the granting of franchises and permits, and exercise the authority vested with him of regulating and controlling all street openings, in which definite locations for new work about to be undertaken can be so determined as not to conflict with the existing substructures; and further than this, space can be reserved in the streets for any contemplated municipal work. At the same time this division, controlling the issuing of permits for street openings, can do much to preserve the integrity of new pavements and to prevent unnecessary openings and "test pits," which are commonly resorted to as a means of determining what is beneath our existing pavements, and are paid for out of the general City funds.

While the work involves an enormous amount of troublesome detail, a number of engineers of great experience in city works have endorsed the Brooklyn project as being a very important step in the right direction, leading to intelligent and scientific control of one of the greatest equities of the City; that is, the use of its streets for the many purposes in departmental works and in the works of public service corporations.

In relation to the organization of this division the first step was to equip the office with the necessary draughting tables, draughting materials, filing cabinets, etc., and the employing of men suitable for work of this type, and I believe the division has been particularly fortunate in obtaining the men that are at present employed, who have proven themselves to be well adapted.

During this time a careful study was made of the methods pursued in other cities in accumulating and mapping subsurface data, and the system is in part the Philadelphia system, where a bureau of this character has been in existence for some years, and the information accumulated has been of great value to the municipality. The division in this borough is now well organized, the work is carried on in a systematic manner and all information obtainable is plotted on cloth-mounted paper, in sheet form, making a durable record. The size of sheets is 32 inches by 42 inches, and the scale is 20 feet to the inch.

To be able to carry on this work in any section, without consequent confusion and possible repetitions, I have divided the borough into twenty large divisions, and am treating each division separately. These divisions are again subdivided into small sections, the sections being the size of the finished sheets. By the use of templates the size of the finished sheet, drawn to a scale adaptable to the City atlas, we are enabled to lay out the sheets for any section in which we desire to carry on subsurface work. This scheme thus far has been extremely successful, and by careful fitting we are able to cover any given area with a minimum number of sheets, thus avoiding duplications, which entail much extra work. In Philadelphia the maps are plotted in sheet form, but individual streets and avenues are followed, making the duplication of street and avenue intersections necessary. By the use of the above system I believe the draughting work will be reduced by at least one-third, and the number of sheets to cover a given area is also greatly reduced.

Field parties are now at work making surveys for layout maps and locating all street openings, such as manholes, electric junction boxes, gas drips and water gates, trolley tracks, hydrants, corner basins, vaults, etc., and the data obtained are constantly being plotted.

I have personally interviewed the heads of the various public service corporations who are maintaining pipes and conduits under the borough streets, and am pleased to report that in every case the value of this work has been greatly appreciated by them, and they are co-operating with this division in every way, and are very prompt in furnishing all the information they possess relative to their structures.

The co-operation of the City and borough departments is greatly appreciated, as they are constantly furnishing us with valuable information, instructions having been issued by the heads of these departments to the construction forces in the field to carefully locate all substructures exposed by them along the lines of construction.

In closing it might be well to add that it is proposed in the near future to charge a moderate fee for furnishing subsurface information, and furthermore that this system will, within a few years, not only make the division self-sustaining but a revenue earner. I believe I am conservative in making this statement, as the Division of Substructures in the City of Philadelphia has since 1899 made a net profit of \$114,000. Of course this division has been in existence for at least twenty years, if not longer, and has practically mapped the entire city.

Respectfully,

M. L. FOUQUET, Assistant Engineer.

The City of New York,
Office of the President of the Borough of Brooklyn,
Brooklyn, December 4, 1907.

Hon. CHARLES FREDERICK ADAMS, Borough Secretary:

Sir—I have the honor to submit herewith a summary of the business transacted by the Civil Service Bureau of this department during the year 1906.

The chief feature during the year was the induction into office of the present administration; and Borough President Coler, on January 1, 1906, announced the following appointments:

Desmond Dunne, Commissioner of Public Works.
Charles Frederick Adams, Borough Secretary.
John A. Heffernan, Private Secretary to the President.
John Muller, Secretary to Commissioner of Public Works.
Durbin Van Vleck, Assistant Commissioner of Public Works.
James Dunne, Superintendent of Sewers.
Joseph M. Lawrence, Superintendent of Public Buildings and Offices.
David F. Moore, Superintendent of Buildings.
Samuel Greenblatt, Assistant Superintendent of Buildings.
John R. Anderson, Secretary to Superintendent of Buildings.
William Walton, Jr., Cashier, Bureau of Highways.

In the early part of the year a new position was created in this department, known by the title of Confidential Inspector, and to which Mr. James Power was appointed.

The position of Superintendent of Bureau of Highways had never been filled previously, but the President of the Borough, recognizing the importance and necessity for the place, appointed Frank J. Ulrich as such after the salary for same had been fixed according to the provisions of section 56 of the Greater New York Charter.

An additional Chief Inspector in the Bureau of Buildings was also granted this department by the State Civil Service Commission, to which Matthew H. O'Neill was appointed.

The only changes occurring in the exempt positions of this department during the year 1906 were the resignations of Mr. Samuel Greenblatt, Assistant Superintendent of the Bureau of Buildings, and the advancement to that position of Mr. John R. Anderson.

The vacancy in the position of Private Secretary to the Superintendent of the Bureau of Buildings, caused by the advancement of Mr. Anderson, was filled by the appointment of Mr. H. Milton Kennedy.

A new position in the competitive class, with the title of Consulting Engineer, was also created for this department during the year 1906 and was filled by the transfer from the Finance Department of Mr. R. W. Cruezbaur.

A new bureau was also established under the title of Division of Sub Structures, with quarters in the Borough Hall, Brooklyn, under the supervision of Mr. Morton L. Fouquet, Assistant Engineer in charge.

Following is a summary of the changes according to bureaus, and by way of explanation I desire to call your attention to the fact that under the heading "Appointed" are included such additions to the force made by transfers from outside departments.

Administrative Office—

Appointed, competitive class.....	9
Promoted, competitive class.....	5
Resigned, competitive class.....	1
Total.....	15

Office of the Commissioner of Public Works—

Appointed, competitive class.....	1
Promoted, competitive class.....	3
Resigned, competitive class.....	1
Total.....	5

Office of Assistant Commissioner of Public Works—

Appointed, competitive class.....	2
Resigned, competitive class.....	1
Total.....	3

Division of Sub Structures—

Appointed, competitive class.....	5
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Bureau of Highways—

Appointed, competitive class.....	38
Promoted, competitive class.....	6
Reinstated, competitive class.....	8
Resigned, competitive class.....	2
Dismissed, competitive class.....	1
Suspended for lack of work, competitive class.....	35
Appointed, labor class.....	433
Reinstated, labor class.....	32
Resigned, labor class.....	6
Dismissed, labor class.....	1
Reassigned, labor class.....	17
Suspended for lack of work, labor class.....	275
Suspended for lack of funds, labor class.....	90
Total.....	1,050

Topographical Bureau—

Appointed, competitive class.....	5
Promoted, competitive class.....	17
Resigned, competitive class.....	2
Appointed, labor class.....	7
Total.....	31

Bureau of Incumbrances and Permits—

Promoted, competitive class.....	7
----------------------------------	---

Bureau of Public Buildings and Offices—

Appointed, competitive class.....	24
Promoted, competitive class.....	7
Resigned, competitive class.....	5
Dismissed, competitive class.....	1
Reinstated, competitive class.....	1
Reassigned, competitive class.....	2
Suspended for lack of work, competitive class.....	7
Appointed, labor class.....	35
Dismissed, labor class.....	1
Reinstated, labor class.....	1
Total.....	84

Bureau of Sewers—

Appointed, competitive class.....	32
Promoted, competitive class.....	12
Dismissed, competitive class.....	8
Resigned, competitive class.....	7
Reinstated, competitive class.....	8
Reassigned, competitive class.....	1
Suspended for lack of work, competitive class.....	14
Appointed, labor class.....	191
Dismissed, labor class.....	10
Resigned, labor class.....	1
Reinstated, labor class.....	3
Reassigned, labor class.....	3
Suspended for lack of work, labor class.....	41
Suspended on account of reduction in force, labor class.....	11
Total.....	342

Bureau of Buildings—

Appointed, competitive class.....	13
Promoted, competitive class.....	2
Reinstated, competitive class.....	2
Reassigned, competitive class.....	1
Resigned, competitive class.....	2
Total.....	20

The increases in salaries granted to the several employees in the different bureaus under the jurisdiction of this department are included under the heading of "Promoted."

I would respectfully call your attention, in concluding, to the large amount of business being done by this department in connection with Civil Service matters and to the utter absence of Civil Service tangles of any character and of freedom from litigation of any character, which is accounted for by the strict observance of all Civil Service rules and regulations by the President of the Borough.

In conclusion, I desire to say that if it were not for the agreeable and efficient assistance of the Stenographers and Typewriters attached to this office it would have been impossible for me to have handled the large volume of business noted above as promptly as I was able to dispose of it.

Respectfully submitted,

EDWARD F. CADLEY, Appointment Clerk.

ANNUAL REPORT OF THE COMMISSIONER OF PUBLIC WORKS, 1906. DEPARTMENT OF PUBLIC WORKS.

Hon. BIRD S. COLER, President, Borough of Brooklyn:

Dear Sir—In presenting the annual report for the year 1906, I cannot fail to state that the year was one of unswerving activity, and much was accomplished. Throughout the Bureau a number of changes and reorganizations were put into effect, the better to adapt them for their work. At the head of the Bureau of Highways was placed a Superintendent, similarly as existed for the Bureau of Sewers. A Consulting Engineer was created for the whole Borough; an Engineer was designated to specialize and act as Engineer to the Local Boards. The Division of Subways was created and placed in charge of an Assistant Engineer. Towards the end of the year the Topographical Bureau was detached from the Bureau of Highways and made a co-ordinate Bureau. These changes have proved beneficial to the service, in that they handle work more expeditiously and produce larger and better results. The year shows a decided advance by all the Bureaus; this applies also most especially to reports and estimates made for use of Local Boards.

For testing sewer pipes, the Bureau of Sewers has installed a modern testing machine. For the other materials used in construction (cements, asphalt, etc.), the tests are made by the Chemical and Physical Testing Laboratory in charge of a Chemist.

The Bureau of Sewers calls attention to the want of uniformity in the different Bureaus—in elevation of street surfaces and grades generally, and further recommends that some Bureau establish a system of permanent bench marks throughout the Borough. In nearly all the Boroughs, this want of uniformity has been found annoying and expensive. At one time, the Municipal Engineers of The City of New York, on report of a special committee, adopted a resolution suggesting that the United States Government might appropriately be requested to establish a system of bench marks for the entire city, similarly as the triangulation work of the city is now being done; points thus established could readily be used by each Borough as a basis for further detail work. Several of our Bureaus have for their own use made extensive surveys in this direction; possibly the latest most accurate work was done by the Bureau of Highways. It would seem that this is strictly a branch of topographical work.

Under the present organization the Bureaus and Offices reporting to me are as follows:

Assistant Commissioner (Contract Bureau),
Bureau of Highways,
Topographical Bureau,
Bureau of Sewers,
Bureau of Public Buildings and Offices, and
Office of General Bookkeeper.

While passing these in a general review, I would refer for more detailed statements to the individual reports transmitted herewith.

Assistant Commissioner's Office.

The report of the Assistant Commissioner indicates unusual activity. Four hundred and thirty-five contracts were consummated, which is twenty-two more than for preceding year. Of these contracts, two hundred and eighty were for the Bureau of Highways, at approximate cost of \$2,155,000, and one hundred and forty-two were for Bureau of Sewers, at approximate cost of \$638,000. Total cost of all the contracts approximately \$3,116,500. First bids received January 24, 1907. Report of Assistant Commissioner gives list in detail of all bids received during the year. At end of year, only fourteen contracts were still pending, as compared to fifty-one contracts left over from preceding year; the office therefore consummated thirty-seven more contracts than came in during the year.

Bureau of Incumbrances reports 1,865 complaints received and 1,328 disposed of. Permits issued number 24,393, an increase of sixty per cent. over 1905. Permits passed for water and sewer pipes (additional to above), 16,160, an increase of thirty per cent. over 1905. Receipts show an increase of nearly \$1,300 over 1905, and amount to \$63,516.02.

Bureau of Highways.

Excepting for streets passed by the Board of Estimate and Apportionment in the latter part of the year, all work was placed under contract, and a larger part completed. Contracts made number 278, at a total approximate cost of \$2,166,000; of these 115 are for sheet asphalt pavements, sixteen for asphalt block pavements and seventy-five for regulating and grading streets; of the total cost, approximately \$809,300 is charged to Street Improvement Funds, and \$1,228,700 is charged to Repaving Bond Fund. 57.95 miles of streets were contracted for, of which 39.54 miles are for pavements and 18.41 miles for regulating, grading, etc. Work has been carried on upon two hundred and forty-five contracts, of which two hundred and nineteen were completed. Including 2.39 miles pavement laid by Park Department, the Chief Engineer reports 48.46 miles of pavement laid, of which 41.11 miles were of asphalt.

The mileage of pavement in the Borough on December 31, 1906, is 647.08 miles, an increase of 13.08 miles over 1905. Cobble pavements were decreased from 78.40 to 50.27 miles, which rate, if continued for two years more, would eliminate cobble pavements; in the year 1888, there were 308 miles of cobble pavements in Brooklyn.

Table of Pavements of the Borough Compared with 1905.

	December 31, 1905.	December 31, 1906.
	Miles.	Miles.
Asphalt and asphalt block.....	263.48	302.41
Granite	140.88	142.12
Cobble	78.40	50.27
Belgian	40.80	40.41
Macadam	99.81	99.53
Brick	3.62	3.36
Trap rock.....	1.24	1.24
Medina	3.61	5.32
Wood	2.16	2.16
Iron slag .....	.....	0.26
Total	634.00	647.08

Total amount of money certified on contracts, approximately \$1,907,000, of which approximately \$640,200 was paid out of Street Improvement Fund. Under petition of property owners, 6.93 miles of asphalt and 0.16 mile of granite pavements were laid. The repaving work reduced materially the cobblestone pavements. Another important work was repaving of Atlantic avenue, from Nostrand avenue to Flatbush avenue, which, with the exception of a small portion at Long Island Railroad depot, is completed. With the additional completion of the contract for repaving between Flatbush avenue and Henry street, Atlantic avenue will have a new modern pavement from South Ferry to Berriman street, in the Twenty-sixth Ward, a distance of 6.45 miles. The importance of this improvement can hardly be overestimated.

Prices paid for pavements were slightly higher than for preceding year. In case of sheet asphalt laid on streets without car tracks, cost was \$1.46 a square yard, or four cents more than last year. For granite laid on concrete, price per square yard was \$3.19, or twelve cents more than preceding year.

Asphalt block pavements are laid on streets where grade exceeds three and one-half to four per cent. One new material, iron slag blocks, used this year, was laid on Nevins street, between Dean street and Flatbush avenue; such blocks have been used to some extent in Philadelphia, and to quite an extent in Canadian cities.

A large amount of work was done under Street Improvement Fund; it included thirty-five contracts for asphalt pavement, one for granite pavement, seventy-three for regulating, grading, curbing, etc., and was done mostly in Twenty-sixth, Twenty-ninth and Thirtieth Wards.

Outside of sidewalks laid in contracts for regulating, grading, etc., it is estimated that by special public contract and by private contract, there were laid approximately 1,484,000 square feet of sidewalks, which, taken at five feet wide, would give a length of fifty-six miles flagging laid.

The map room prepared assessment maps and lists, plans for new work and miscellaneous plans. Four hundred and ninety-four reports were made for original improvements at an estimated cost of \$4,726,800; this is 25 per cent. more estimates than for last year, at an estimated cost of 20 per cent. more.

The Division of Street Repairs has had charge of maintenance of all roads and pavements not in guarantee, under the jurisdiction of the President of the Borough of Brooklyn; also unpaved streets and cleaning of macadam pavements; also supervision of highway bridges. Materials and supplies purchased amount approximately to \$159,000. Amount of work done on stone pavements about same as previous year; it covers 148,053 square yards of pavement, the largest item being granite pavement with 86,587 square yards. Six thousand two hundred and eighteen openings made in streets were repaved. While 5,796 complaints were received, 12,638 defects were remedied, showing the large initiative in this division.

One hundred and eighteen thousand nine hundred and seventy yards of macadam pavements, about same as for preceding year, were resurfaced; nearly all macadam streets are now in first class condition. More sprinkling done to macadam pavements than ever before. Considerable was done to improve condition of unpaved streets in the suburbs; requests are constantly received and are granted wherever practicable.

Repairs to sidewalks have become very extensive and increase with each year in magnitude. These repairs are done on complaints by citizens—as we are unable at present time to put all defective sidewalks in good condition. Fourteen thousand six hundred and twenty-eight loads of ashes were hauled to make crosswalks in suburban districts, which form of temporary relief met with approval.

Repairs to asphalt pavements now extending over an area of 1,424,579 square yards, averaged a cost of 3½ cents per square yard over area maintained. A larger amount of material was used this year than in the past, because of extra work required on older pavements; some of these older streets, paved eighteen or nineteen years ago, are on an old wood foundation, and it seems advisable to repave them.

The various highway bridges were inspected; the bridge over the railroad cut at Eighth avenue and Thirty-ninth street was thoroughly overhauled and put in good condition.

The Bureau of Complaints, which was transferred to the Bureau of Highways, reports 2,167 complaints received and 2,104 disposed of. Of the complaints received, the largest items are street repairs and obstructions (638), sidewalk repairs and obstructions (475).

The Chemical and Physical Testing Laboratory has continued its important work. Two thousand one hundred and sixty-one samples were tested, including 1,427 hydraulic cements. Hydraulic cements tested are sampled directly from each shipment, as delivered on the work for the Bureau of Highways or Bureau of Sewers. Samples of asphalt surface mixtures were taken daily during prosecution of work on each contract. There is apparent need of a specially selected sand for asphalt pavements. Plants of asphalt contractors were inspected during the year and samples of materials were carefully examined; attention is again called to desirability of rigid requirements for ductility of asphalts.

Topographical Bureau.

In the course of the year the work required of the Topographical Bureau has increased considerably, owing largely to increased demands on the Local Boards of Improvement and to the requirements of the new street opening law. With the designation of a new Assistant Engineer in charge of the Bureau, the forces were rearranged and enlarged, and more work was done than previously. It is gratifying to note that with but one exception all street opening maps pending or asked for in the course of the year were furnished. The Bureau is to be commended for the quantity of work accomplished during the year.

A new and much needed work undertaken is the preparation of the map of the borough on a scale of 200 feet to an inch, which will show the original street systems and changes in street lines to date; there is no such complete official record now in existence.

The records of legally opened streets are being perfected as fast as possible, with the intention of giving for each street in this respect its history up to date.

Work was continued on the triangulation of the borough; towers were built, points fixed permanently in the ground and other high points reduced to the ground. An official standard of measurement, 150 feet long, was laid down on the Ocean parkway by the Assistant of the Engineer of the United States Coast and Geodetic Survey in charge of the triangulation; this standard was afterwards subdivided into a 50 and a 100 foot length.

Of the maps furnished, the following deserve especial notice:

Kings Highway, from Twenty-second Avenue to East New York Avenue—This map was to lay out Kings Highway to a uniform width on the map of the City.

The importance of this improvement appeals to many and several meetings and much discussion have been had; no agreement has as yet been reached. Conditions make an early decision desirable.

Board Walk at Coney Island, from Ocean Parkway to Sea Gate—After considerable discussion, public meetings and explanation, the Local Board of the Bay Ridge District passed a resolution favoring construction of the board walk. The necessary preliminary work, embracing surveys, soundings and detail plans of construction is being pushed, and it is hoped this important work will soon be in a shape for construction. The board walk is a very desirable improvement and will enlarge the attractiveness and usefulness of Coney Island in many ways.

Extension of Bedford Avenue, from Heyward Street and Bedford Avenue to the Williamsburg Bridge Plaza—This layout had been approved by the Board of Estimate and Apportionment, opening proceedings initiated and the draught damage map asked for by the Commissioners. A great quantity of field and office work had here been done by the Bureau, when the Board of Estimate and Apportionment rescinded its former action and adopted in its place a connection of Bedford avenue with the Bridge plaza that is much less expensive and does considerably less damage to adjoining property.

Change in Street Lines and Grades in Street System, Bounded by Fifth Avenue, Ninth Avenue, Thirty-sixth Street and Thirty-ninth Street—This embraces the location of the old Union depot, with its subsidiary tracks, turnouts, etc. For some years it has been felt that the condition of this district retarded the improvement of adjoining territory. The matter has not yet been consummated.

Among the more important street opening maps are to be mentioned Ralph avenue, Church avenue, Owl's Head Park and Grand street extension. The draught damage map of Ralph avenue, from Remsen avenue to Avenue N, is a long one, and was attended with especial difficulties because of uncertainties in block dimensions. Ralph avenue opens up an entirely new section. Church avenue, from East Eleventh street to Flatbush avenue, gives a much needed improvement of an old road; here a draught damage map was furnished. Draught damage map of Owl's Head Park hastens the acquisition of what is probably the finest of our newer parks. The final maps of Grand street extension, from Hooper street to Havemeyer and South Fourth streets, complete for this office the work on the acquisition of title to this very important approach to the Williamsburg Bridge.

At the close of the year proceedings are still pending for the opening of 90 streets; since January 1, 1898, 164 street opening proceedings were confirmed.

Bureau of Sewers.

In various ways the year was one of considerable activity. Much was accomplished and much was also done to arrange the forces of the Bureau so as to adapt them to do work to the best advantage.

Contract price of work under contract is for a total sum of approximately \$6,915,000, which is nearly as much as for preceding year. Work authorized by the Board of Estimate and Apportionment is for \$1,353,150; estimated cost of work reported on for action of the Local Boards of Improvement is for a total sum of \$5,122,300, as against \$2,893,190 for the year 1905, or nearly 80 per cent. increase. In 1906 contracts on work for which petitions had been received were entered into for a total of approximately \$631,100; amounts paid on contracts give a total approximately \$783,600; total expenditure, approximately \$1,081,900, of which approximately \$766,300 was paid on Bond accounts. In course of the year 19,471 miles of sewers were built; in addition 0.969 mile was built by private contract. Sewers built varied in size from a 9-inch pipe to a 144-inch reinforced concrete sewer. Present mileage of sewer system, 784,312 miles. Number of sewer basins show a net increase of 268, making present total number 9,549. In the course of the year special attention was given to produce the best quality of work rather than break records by turning out work larger in quantity.

The Rapid Transit Commission reports that its subway work in the Borough has caused a net diminution of 0.617 mile of sewers and of 12 in number of sewer basins. Making these corrections would reduce the present length of sewers to 783,695 miles and number of sewer basins to 9,537.

It may be well to state that the present mileage of the sewer system of Brooklyn—783,615 miles—is nearly as great as the sewerage systems combined of Manhattan, The Bronx and Richmond Boroughs, which totals to 823.02 miles. Brooklyn's sewer system is more than three times as large as the one in The Bronx, and it is more than 50 per cent. larger than the one in Manhattan. It is one of the most extensive in the world, and when work now under way is completed few will exceed it. Plans and specifications are now under way for work estimated to cost \$3,205,500.

Excepting the system of relief sewers, only a few sewers are paid for by the City at large, but the cost is assessed on the property benefited.

Pipe sewers laid total a length of 16,175 miles, for which only double strength vitrified pipe of very good quality was used. Portland cement, mortar or concrete pipes could not meet the requirements. The last administration left us a legacy of contracts for cement concrete pipes that include two outlets for large branches now under contract. A number of the contractors concerned have made overtures to the City for settlement.

The sewage purification disposal works located in the Twenty-sixth Ward, and at three stations in the Thirty-first Ward, pumped together approximately 4,914,400,000 gallons of sewage, of which a little over 3,483,500,000 gallons were pumped at the Twenty-sixth Ward station. Approximately 5,714,000 cubic feet, or approximately 211,630 cubic yards, of fluid sludge were removed. In the middle of the year the President of the Borough asked that a special study be made of the present disposal works, with a view to their improvement. It is found these works should be brought up to date; the station in Twenty-sixth Ward should be extended and the works at Coney Island need betterment.

In cleaning sewers, about fifty miles of large sewers and many smaller ones need to be cleaned regularly to maintain proper efficiency; about 35,000 cubic yards of sludge is to be removed annually from these sewers. Besides its other benefits, this cleaning of the sewers will save much damage from flooding. As is the case in the maintenance of streets, the cleaning of the sewers as well as cleaning the sewer basins should be done regularly and throughout the whole year. The last contract made for cleaning sewers was let in December, 1904, and was carried out in 1905, but it is not settled yet and is an unfortunate experience for the City. In this class of work so many eventualities are to be considered that contractors are bound to make their prices high.

The health and well being of the community depends so very much on the efficiency of its sewers that this alone would be a sufficient reason to make the cost of cleaning the sewers a public charge, defrayed by annual appropriations, just as is now done in maintenance work of our streets, roads and highways. There are good reasons also that moneys received for making sewer connections, now sent to the Sinking Fund, should be credited to a fund for cleaning sewers. Chief Engineer of the Board of Estimate and Apportionment has since made a report showing that the contract system is here expensive, and agreeing with a suggestion by the Chief Engineer of Sewers that receipts from plumbers' permits be made a fund to clean sewers. He recommends that ordinances of the Board of Aldermen be amended to make this arrangement feasible.

A well organized force employed at day labor can do as efficiently and as cheaply the cleaning of sewers as it can be done by contract; besides, in emergency cases, they would be found always available. To this end a number of gangs of men could be organized and provided with tools, wagons, etc., and corporation yards in best locations.

In the course of the year 2,486,000 feet of pipe and brick sewers were examined, and 1,217,000 feet of pipe and brick sewers were cleaned, 49,768 sewer basins were examined and 25,386 were cleaned; this is the greatest number cleaned in the history of the Bureau, and is 8,132, or nearly 50 per cent., more than for the preceding year; average cost, \$1.25 a cubic yard, or \$1.65 per basin, which is 14 cents less than for the preceding year; 33,423 cubic yards of deposits were removed from the basins. In view of the unpleasant and unhealthful conditions of the work and the wages paid, I find this an exceedingly good showing.

The sweeping of street refuse into sewer basins is troublesome and expensive, and cannot be condemned too strongly. Attention is called to congested condition of the North Portland avenue yard and the need of a repair yard in a more central location.

The last administration left over assessment rolls totaling more than \$4,000,000. Work completed comprises nearly twice as many maps and contains nearly twice as

many parcels as for preceding year. With an increase in force of draughtsmen this work can be brought up to date and kept there. The assessment cases completed include cases for twelve private sewers.

A new form of specification was prepared and will be put in use in beginning of year 1907. The existing specifications were simplified, brought up to date and made more conducive to good, substantial work. One new provision is that restoration of flagging, pavement and curbing on streets not under guarantee will be done by the President of the Borough of Brooklyn at the cost of the contractor. A new standard plan of manhole was adopted and a new plan is under way that will permit sewer basin heads to meet any depth of gutter.

Considerable work is needed to be done to redesign sewerage systems of outlying wards, the plans for which were hurriedly prepared after consolidation with the City. Defects are studied, and using the sewer outlets already built, modifications are made to suit changing conditions and so as not to interfere with development of the sections. Where surface elevations are slight, and where sewerage must be treated or pumped through long force mains, a separate system of sewers seems called for.

The basins planned along the southern shore of the Borough are essential to the sewerage of large tracts to the north. The improvement of Jamaica bay, Paerdegat basin and Gravesend ship canal are needed. Of these, the construction of the ship canal should not be long delayed.

The installation of the new Richle machine for testing sewer pipe completes the testing plant of the Borough and permits much more rapid work.

The difference in elevation of bench marks and grades generally in use among the Bureaus now entails much additional surveying, expenditure of time and extreme care in work, which could all be remedied by establishment of uniformity in datums and grades.

By direction of the Borough President, in the early part of the year, a departure was made in the method of laying house drain connections; these are now laid at the same time as the sewer in the street, and extend to a point two feet inside of the curb lines. This method is followed by a number of other American cities; it gives better workmanship, both in laying the drains and in making sewer connections, and avoids besides the tearing up of new pavements.

Among the more extensive pieces of sewer work are the following:

Tunnel for flushing Gowanus canal, outlet sewer in Fourteenth avenue, between Seventy-ninth street and Bath avenue, etc.; Quay street outlet sewer; Flatbush avenue, from Nostrand avenue to East Forty-fifth street, etc.; Seventy-third street, from Fourteenth avenue to Sixteenth avenue, etc.; Nostrand avenue, from Midwood street to Hawthorne street, etc.; Seventh avenue, from Seventy-ninth street to Ninety-second street, etc.

Late in the year, sewer in Scott avenue was authorized, which serves as an outlet for 2,300 acres in the Borough of Queens. This sewer, estimated to cost \$800,000, approximately, will be one of the most notable pieces of sewer construction in Brooklyn, and is exceeded by but few sewers anywhere in size.

The necessity for an adequate system of relief sewers has been felt for some years. These sewers are to relieve overtaxed sewers and do away with present attendant overflows in adjoining basements and cellars. Sewers in older sections of the City were built many years ago, at a time when their designing on scientific principles was not yet much advanced; based on too small a rainfall, and neglecting other essentials, the sewers built were too small. Further increase in ground areas of buildings, density of population and consequent improvement in pavements, conduct the water more quickly than heretofore to the sewers already overtaxed, and further increase the overflows and floodings. Fortunately, during the year, heavy rainfalls were less frequent than usual.

In the course of the year, plans for relief sewers were well advanced. In July, the President of the Borough took steps to hasten this work. The last administration had made plans for two systems of relief sewers, one of which is referred to as the Gold street sewer, and relieved 3.7 square miles. The other system emptied at the Wallabout. These two systems were thoroughly overhauled and material changes made, with a great saving in estimated cost of construction, and a large reduction of inconvenience to the public. Plans and estimates were prepared under the supervision of Mr. R. W. Creuzbaur, Consulting Engineer of the borough.

In July, 1905, the Board of Estimate and Apportionment appropriated \$2,000,000 for construction of relief sewers. It is most important that the construction of relief sewers be expedited, and to this end further appropriations should be made; the present appropriation will not cover all work now contemplated.

In designing relief sewers, we have to be guided by the topographical features of watersheds, so as to intercept and relieve the low areas and pockets. Furthermore, the construction of relief sewers must be attended by a minimum interruption to traffic, especially on streets containing car lines, and must not interfere with projected rapid transit routes. Existing sewers to be made use of add further to the difficulties of the situation, because of the many old sewers, as well as relief sewers heretofore constructed.

In many instances, the subway work outlined by the Rapid Transit Commission complicates the situation and adds materially to the cost of relief sewers. In some cases, large sewers in streets for subways are entirely removed; thus a 15-foot sewer is removed from Fourth avenue, between Flatbush avenue and Degraw street; thus also, a 48-inch sewer is removed from Bedford avenue, between Lafayette avenue and Wallabout street, a distance of about half a mile. In many other ways, the construction of relief sewers will simplify the work of the construction of subways and reduce their cost. Therefore it would seem reasonable to expect the Commission to bear a just proportion of the cost of relief sewers.

Plans for relief sewers are described in detail in report of Chief Engineer of Sewers; also in the same report is described in some detail, the method of designing sewers, and there is given a history of development of present formula. It appears a formula extensively used for designing sewers was made in 1856, and investigations are still being continued for the attainment of further scientific precision in formulas.

The report of Chief Engineer of Sewers also gives cause for increase in cost of construction work; tables are given showing variation in prices of materials for some years past, which show for the last few years an increase in cost. The shortening of the hours of labor from ten hours to eight hours per day, would alone increase this factor twenty-five per cent.

Bureau of Public Buildings and Offices.

New public buildings aggregating a total of \$4,500,000, are now being planned or supervised by this Bureau; in addition, purchases, repairs, etc., amount to over \$500,000 per annum. Considerable improvements were made in the various public offices in the borough; detailed list of buildings is given in the report of the Bureau.

In the Borough Hall, the main corridor was made over entirely new, and most of the offices thoroughly renovated; illumination of the cupola clock was improved and electrolights are planned for the main entrance of the building.

Our intention to add two additional stories to the Kings County Court House to provide additional room to be used by the five new Supreme Court Justices, did not meet with approval. After a special appropriation had been obtained in October, existing rooms were rearranged, and quarters provided; the accommodations are crowded and the building should be enlarged.

The Municipal Building received but few repairs, in view of contemplated construction of a new building; construction of subway caused some cracks to appear in the walls of the building.

For the new Hall of Records, the only unfinished contract was for the installation of metallic furniture, which was completed.

The Kings County Jail buildings were visited by the Superintendent in the first week of his administration; \$17,330 was asked for to improve them, but only \$5,000 was obtained. A number of necessary repairs were made. Best solution is undoubtedly to renovate thoroughly the men's prison, and build a new women's prison and administration building; tentative plans to this end are now under way.

The disciplinary training school for boys, as to its maintenance, was taken care of by this Bureau. The present buildings are inadequate and dilapidated; not succeeding in obtaining a special appropriation, the funds of the Bureau permitted us to keep the building only in reasonable repair.

Within the Wallabout Market, the streets were cleaned as heretofore by this Bureau; there is need of a better arrangement in collection of garbage, which is now under care of Department of Street Cleaning. Two new buildings were planned—a comfort station and an interior bath.

Accommodations for the City Magistrate Courts and Municipal Courts are either in leased buildings, or in public buildings; some of the City Magistrate Court

buildings are not in a satisfactory condition. The Sixth and Seventh District Municipal Courts were created this year; a new building is now being planned for the Sixth District Court.

Five interior baths are in use, and three more are being planned. Attendance approximately, 2,105,000, about two-thirds of whom were males; largest attendance at the Montrose and the Pitkin avenue baths; smallest at Duffield street. Total revenue, \$11,414.61, as compared to \$6,742.11, the total revenue from 1903, when baths were first opened, to January 1, 1906.

Five floating baths were all in use for full time. Excepting Noble street bath, the City pays a rental for berths of baths. Total attendance, approximately, 1,047,000, as compared to 801,000 for preceding year. Of the total attendance, nearly seven-tenths were males. Cost of maintenance, 1½ mills for each bath. Buildings are equipped to give instructions by United States Life Saving Corps.

The six public comfort stations are built under ground and were used throughout the year by 11,735,000 people, of whom 10,058,000 were males; the stations at Lorimer street and at Borough Hall showed the largest attendance; the one at Liberty avenue showed the smallest attendance. Total receipts, \$544.97. These stations are a great convenience to the public, which shows a demand for additional ones at congested points.

One hundred headstones were set on graves of deceased veteran soldiers and sailors; demand is here so large, that it should be covered by a special appropriation.

Plans for projected wholesale market in Eighth Ward were prepared under supervision of Mr. R. W. Creuzbaur, Consulting Engineer. Total estimated cost, over \$2,000,000; estimated net income, \$125,000. For preparation of land an appropriation of \$200,000 was secured. The scheme comprises a market square to accommodate 150 wagons, the construction of 150 buildings, each 20 feet by 60 feet, and a pier 60 feet wide and 600 feet long, with a recreation pier overhead; also erection of administration building, incineration plant, a public bath and a comfort station. Entire property is to be inclosed by a fence. The project is well in hand, and construction work is being expedited.

Attention is called to proposed embellishments of lands about Prospect Park plaza; the scheme submitted by the Architect shows unique treatment of this fine location. Demands are now heard to save to the public the lands on north side of the parkway, opposite Institute Park.

Plans for a new Municipal building are well under way; the building is to be of a simple massive type, about 250 feet by 300 feet, and is to be ten stories high; estimated cost, \$3,000,000, of which \$500,000 are now available.

General Bookkeeper.

The report of the General Bookkeeper shows in detail all financial transactions of the borough. All accounts of the various Bureaus pass through hands of the General Bookkeeper, who examines them and enters them up charged to proper accounts; to this end he keeps sixteen books of permanent entry. The accounts show that the Bureaus kept well within the appropriations, leaving over a total estimated sum of \$17,000, which is available for the General Fund.

The long illness and subsequent death of Mr. William Chambers put much additional work on other members of the office.

The individual reports forwarded herewith, show in detail the results accomplished by the earnest and efficient work of the different Bureaus. In view of the facts, I would extend to the heads of the Bureaus, and to the staff associated with them, my appreciation of the good work they have done to make this first year of the administration such a success.

Respectfully submitted.

DESMOND DUNNE,
Commissioner of Public Works.

REPORT OF THE FINANCIAL OPERATIONS OF THE DEPARTMENT OF PUBLIC WORKS FOR THE YEAR 1906.

Office of the President of the Borough of Brooklyn,
Office of the General Bookkeeper—Department of Public Works,
February 1, 1907.

Hon. DESMOND DUNNE, Commissioner of Public Works, Borough of Brooklyn:

Dear Sir—The following report shows in detail the original appropriations, transfer of funds from and to the several Bureau accounts, the expenditures made, liabilities incurred and net balance available for return to the General Fund; a statement of the number and amounts of the contracts awarded by each Bureau and the fund or appropriation to which they are chargeable.

The number of contracts secured by each contractor or contracting firm is given by Bureaus in detail and the recapitulation presents the total number and amount awarded by the Department.

A statement is made as to the cost of telephone service, carfares and coal, and for payment, also the amount of cash received by the several Bureaus and deposited with the City Chamberlain.

It includes a list of all supplies furnished each office, bureau and public building, together with the building repairs and the total amount expended in the maintenance of each.

A list of merchants supplying labor or materials to the several bureaus and the totals of each individual account.

A statement is made as to the cost of telephone service, carfares and coal and the same apportioned to the several offices and bureaus.

The number of orders, bills, vouchers and other documents forwarded for audit by each Bureau is shown, together with many other details relating to the same.

General Administration.

Salaries	\$63,641 00
To transfers	5,500 00
Total	\$69,141 00
Expenditures	68,390 91

Balance available for General Fund..... \$750 09

Supplies and Contingencies.....	2,500 00
Expenditures	1,846 79

Balance available for General Fund..... \$653 21

Topographical Bureau.

Salaries and Supplies.....	\$50,697 50
To transfers	2,000 00
Total	\$52,697 50
Expenditure	52,695 50

Balance available for General Fund..... \$2 00

Bureau of Highways.

Salaries	\$67,850 00
Expenditures	67,270 00

Balance available for General Fund..... \$579 70

Labor, Maintenance and Supplies.....	\$420,850 00
To transfers	1,000 00

Total	\$421,850 00
Expenditures	419,450 00

Balance available for General Fund..... \$2,400 00

Supplies and Contingencies.....	\$1,500 00
Expenditures	1,500 00
Bureau of Sewers.	
Salaries	\$109,818 75
To transfers	1,500 00
Total.....	\$108,318 75
Expenditures	107,593 86
Balance available for General Fund.....	\$724 89
Sewers, Repairing and Cleaning, Payrolls and Supplies.....	
To transfers	\$95,700 00
Total.....	\$105,700 00
Expenditures	100,154 01
Balance available for General Fund.....	\$5,545 99
Sewers, Repairing and Cleaning—Contracts at Public Letting.....	
By transfers	\$25,000 00
Total.....	\$21,000 00
Expenditures	20,341 28
Balance available for General Fund.....	\$658 72
Thirty-first Ward, Sewage Districts Nos. 1 and 3.....	
To transfers	\$43,710 00
Total.....	\$44,710 00
Expenditures	44,607 09
Balance available for General Fund.....	\$103 41
Thirtieth Ward, Bath Beach District.....	
Expenditures	\$6,242 75
Balance available for General Fund.....	\$6,084 68
Twenty-sixth Ward Disposal Works.....	
By transfers	\$31,926 75
Total.....	\$30,926 75
Expenditures	30,926 75
Balance available for General Fund.....	
Dredging Sewer Outlets.....	
By transfers	\$30,000 00
Total.....	\$16,500 00
Expenditures	15,251 00
Balance available for General Fund.....	\$1,249 00
Horses, Horsekeeping and Supplies.....	
Expenditures	\$2,400 00
Balance available for General Fund.....	
Supplies and Contingencies.....	
Expenditures	\$2,500 00
Balance available for General Fund.....	
Thirty-second Ward Disposal Works.....	
By transfers	\$8,000 00
Total.....	\$3,500 00
Expenditures	3,108 71
Balance available for General Fund.....	\$391 29
Public Buildings and Offices.	
Salaries and Wages.....	\$271,914 75
To transfers	12,000 00
Total.....	\$283,914 75
Expenditures	281,273 98
Balance available for General Fund.....	\$2,640 77
Supplies and Repairs.....	
By transfers	\$156,912 92
Total.....	\$148,912 92
Expenditures	148,912 92
Balance available for General Fund.....	
Salaries and Contingencies.....	
Expenditures	\$1,000 00
Balance available for General Fund.....	843 00
Bureau of Incumbrances and Permits.	
Salaries	\$17,250 00
To transfers	300 00
Total.....	\$17,550 00
Expenditures	17,404 43
Balance available for transfer to General Fund.....	\$145 57
Removal of Incumbrances.....	
To transfers	\$8,000 00
Total.....	\$7,700 00
Expenditures	6,972 37
Balance available for transfer to General Fund.....	\$727 63

Recapitulation.

Title.	Appropriation.	Expenditures.	Balances.
General Administration—			
Salaries	\$69,141 00	\$68,390 91	\$750 00
Supplies and Contingencies.....	2,500 00	1,846 79	653 21
Topographical Bureau—			
Salaries and Supplies.....	52,697 50	52,695 50	2 00
Bureau of Highways—			
Salaries	67,850 00	67,270 50	579 70
Labor, Maintenance and Supplies.....	421,850 00	419,450 00	2,400 00
Supplies and Contingencies.....	1,500 00	1,500 00	
Bureau of Sewers—			
Salaries	108,318 75	107,593 86	724 89
Sewers, Repairing and Cleaning, Payrolls and Supplies	105,700 00	100,154 01	5,545 99
Sewers, Repairing and Cleaning, Contracts at Public Letting	21,000 00	20,341 28	658 72
Thirty-first Ward, Sewage Districts 1 and 3.....	44,710 50	44,607 09	103 41
Thirtieth Ward, Bath Beach District.....	6,242 75	6,084 68	158 07
Twenty-sixth Ward Disposal Works.....	30,926 75	30,926 75	
Dredging Sewer Outlets.....	16,500 00	15,251 00	1,249 00
Horses, Horsekeeping and Supplies.....	2,400 00	2,400 00	
Supplies and Contingencies.....	2,500 00	2,500 00	
Thirty-second Ward Disposal Works.....	3,500 00	3,108 71	391 29
Bureau of Public Buildings and Offices—			
Salaries and Wages.....	283,911 75	281,273 98	2,640 77
Salaries and Repairs.....	148,912 92	148,912 92	
Supplies and Contingencies.....	1,000 00	843 00	157 00
Bureau of Incumbrances and Permits—			
Salaries	17,550 00	17,404 43	145 57
Removal of Incumbrances.....	7,700 00	6,972 37	727 63
Total.....	\$1,416,414 92	\$1,399,527 58	\$16,887 34

Cash Account.

Statement of moneys received by the Bureaus of the Department and deposited with the City Chamberlain to the credit of the following accounts:

Bureau of Incumbrances and Permits—	
Restoring and repaving, special fund, etc.....	\$60,242 37
Bureau of Sewers—	
Knickerbocker avenue assessment fund.....	6,712 11
Third avenue assessment fund.....	7,128 61
Sewer permits	62,994 46
Bureau of Public Buildings and Offices—	
Fees from public baths and comfort stations.....	11,778 90
Assistant Commissioner's Office—	
Sales at auction of City property.....	299 90
Total	\$149,156 35

Contracts.

During the year contracts were awarded by the several Bureaus as follows:

Bureau of Highways.....	275
Bureau of Sewers.....	138
Bureau of Public Buildings and Offices.....	14
Total	427

These contracts were chargeable to the following accounts:

Bureau of Highways.

Appropriation.	Number of Contracts.	Amount.
Labor, Maintenance and Supplies.....	17	\$130,499 02
Bonded Accounts, Corporate Stock.		
Repaving Streets (sections 48 and 169, chapter 466, Laws of 1901)...	99	1,232,493 33
Fund for the Construction of a Municipal Asphalt Repair Plant in the Borough of Brooklyn.....	1	22,485 00
Assessment Fund.		
Street Improvement Fund.....	158	853,553 09
Total.....	275	\$2,239,030 44

Bureau of Sewers.

Appropriations.	Number of Contracts.	Amount.
Sewers, Repairing and Cleaning, Payrolls and Supplies.....	2 1/4	\$3,839 05
Sewers, Repairing and Cleaning, Contracts at Public Letting.....	2	14,039 70
Thirty-first Ward Sewage Districts 1 and 3.....	1 11-12	9,652 68
Twenty-sixth Ward Disposal Works.....	1 3/4	9,306 07
Dredging Sewer Outlets.....	2	14,323 00
Thirty-second Ward Disposal Works.....	11-12	445 00

	Number of Contracts.	Amount.
Bonded Accounts, Corporate Stock.		
Construction of Relief Sewers, Borough of Brooklyn.....	1	14,293 22
Assessment Fund.		
Street Improvement Fund.....	127	558,186 18
Total.....	138	\$624,084 90

Bureau of Public Buildings and Offices.

	Number of Contracts.	Amount.
Appropriation.		
"Supplies and Repairs".....	6	\$57,815 97
Bond Issues.		
Public Bath Fund.....	1	157,200 00
Special Fund for Central Library Building.....	1	15,000 00
Fund for Burial of Veterans and Erection of Headstones.....	1	1,099 00
Fund for Preparation of Plans for New Municipal Building.....	1	10,000 00
Fund for Expenses of Sixth District Municipal Court, 1906.....	1	1,277 13
Fund for Installation of Electric Light and Gas Fixtures, Gates Avenue Court House.....	1	1,425 00
Fund for Expenses of Seventh District Municipal Court, 1906.....	1	1,442 71
Fund for Making Alterations, Repairs, etc., for Additional Rooms in Kings County Court House.....	1	4,900 00
Total.....	14	\$250,159 81

Recapitulation of Contracts.

	Number of Contracts.	Amount.
Bureau of Highways.....	276	\$2,240,831 94
Bureau of Sewers.....	138	624,084 90
Bureau of Public Buildings and Offices.....	14	250,159 81
Grand totals.....	428	\$3,115,076 65

Contracts.

The following lists show the contracts awarded by the several Bureaus to each contractor.

For more ready reference the names of the contractors are arranged in alphabetical order:

BUREAU OF HIGHWAYS.

Bacon & Co.

Labor, Maintenance and Supplies—	
Coal	\$746 25

Barber Asphalt Company.

Labor, Maintenance and Supplies—	
Repairing and maintaining asphalt pavements.....	\$47,885 00

Repaving Streets with Asphalt:

Fifth avenue, from Seventh avenue to Prospect Park.....	\$9,349 95
Kosciusko place, from Kent avenue to easterly terminus.....	1,408 20
Degraw street, from Franklin avenue to Nostrand avenue.....	13,740 80
Hopkinson avenue, from Broadway to Marion street.....	22,808 00
Troutman street, from Evergreen avenue to Hamburg avenue.....	18,888 55
Cornelia street, from Broadway to Central avenue.....	12,058 00
Bleecker street, from Bushwick avenue to Knickerbocker avenue.....	17,153 50
Meserole street, from Guernsey street to Franklin street.....	4,008 35
Jewell street, from Nassau avenue to Norman avenue.....	3,589 60
India street, from West street to Oakland street.....	13,665 10
Hopkinson avenue, from Fulton street to Herkimer street.....	3,704 10
St. Charles place, from St. John's place to Degraw street.....	1,844 50
Vernon avenue, from Sumner avenue to Stuyvesant avenue.....	10,158 80
McDougall street, from Fulton street to Rockaway avenue.....	19,784 25
Sterling place, from Brooklyn avenue to Kingston avenue.....	4,962 25
Pleasant place, from Herkimer street to 295 feet southerly.....	2,118 20
Kosciusko street, from Bedford avenue to Throop avenue.....	26,800 50
Plymouth street, from Hudson avenue to Little street.....	1,606 60
Sumpter street, from Hopkinson avenue to Broadway.....	11,245 80
South Second street, from Havemeyer street to Marcy avenue.....	8,104 40
Freeman street, from Manhattan avenue to Oakland street.....	4,763 30
Himrod street, from Bushwick avenue to Myrtle avenue.....	12,259 30
Chauncey street, from 159 feet east of Saratoga avenue to Rockaway avenue.....	9,243 25
Jefferson avenue, from Central avenue to Knickerbocker avenue.....	7,986 15
Humboldt street, from Engert avenue to Norman avenue.....	13,067 65
Herbert street, from Graham avenue to Kingsland avenue.....	8,010 95
Diamond street, from Driggs avenue to Norman avenue.....	8,466 30
Calyer street, from Manhattan avenue to Newell street.....	5,683 80
Troutman street, from Myrtle avenue to Evergreen avenue.....	5,965 20
Putnam avenue, from Broadway to Hamburg avenue.....	19,333 20
Sandford street, from Flushing avenue to DeKalb avenue.....	17,156 80
Green lane, from Front street to York street.....	1,280 53
Taaffe place, from Park avenue to Flushing avenue.....	4,354 80
Joralemon street, from Clinton street to Court street.....	2,700 00
Spencer street, from Flushing avenue to DeKalb avenue.....	18,526 40
St. Francis place, from Degraw street to St. John's place.....	1,987 15
Total.....	\$6,347,784 23

Street Improvement Fund—

Regulating, grading and paving with asphalt, Folsom place, from Linwood street to Essex street.....	\$999 25
Regulating and paving with asphalt block, Bay Ridge, from First avenue to Second avenue.....	8,004 50
Regulating, grading and paving with asphalt, Degraw street, from Classon avenue to Washington avenue.....	3,832 72
Paving with asphalt:	
Fifty-second street, from Sixth avenue to Seventh avenue.....	4,062 89
Farragut road, from Rogers avenue to 120 feet east of Thirty-fourth street	12,943 09
Total.....	\$29,842 41

Dominick Bonacci.

Street Improvement Fund—

Regulating, grading, curbing and laying sidewalks:	
Eightieth street, from Third avenue to Fifth avenue.....	\$6,041 00
Fifty-fourth street, from Thirteenth avenue to Fourteenth avenue.....	6,169 02
Total.....	\$12,210 02

Bonacci & Vincelli Contracting Company.

Street Improvement Fund—

Regulating, grading and laying sidewalks, church avenue, from Flatbush avenue to East Eleventh street.....	\$8,776 28
Curbing, guttering and laying sidewalks, west side of Seventh avenue, from Bay Ridge avenue to Seventy-fifth street.....	4,734 35
Laying brick gutters, Bay Ridge parkway, etc.....	10,354 95
Total.....	\$23,865 58

Bracken, McAvaney Company.

Street Improvement Fund—

Regulating, grading and curbing Dumont avenue, from 75 feet west of Bristol street to Howard avenue.....	\$13,637 60
Grading lots west side Tenth avenue, between Fifteenth and Sixteenth streets	269 63
Regulating, grading, curbing and sidewalks, Rogers avenue, from Park place to Montgomery street.....	7,202 56
Regulating, grading and curbing Repose place, from Schenck avenue to Jerome street.....	2,490 00
Regulating, Curbing and Sidewalk:	
Martense street, from Rogers avenue to Nostrand avenue.....	2,740 75
Fourteenth avenue, from Seventy-fifth street to Seventy-ninth street	3,677 27
Farragut road, from Rogers avenue to 120 feet east of Thirty-fourth street	9,459 00
Dumont avenue, from Van Sicklen avenue to Schenck avenue.....	1,600 54
Labor, Maintenance and Supplies—Broken trap rock, etc.....	14,190 54
Total.....	\$55,267 83

W. F. Burke.

Street Improvement Fund—

Laying crosswalks, Lott's lane, intersection of Forty-second and Forty-third streets	\$457 92
Regulating, Grading and Sidewalks:	
East Thirty-first street, from Avenue F to Glenmore road.....	2,850 75
East Thirty-first street, from Flatbush avenue to Glenwood road.....	2,585 12
Total.....	\$5,893 79

Cavanagh Brothers & Co.

Labor, Maintenance and Supplies—

Hardware, tools, etc.....	\$2,163 62
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Clinton Construction Company.

Street Improvement Fund—

Grading lots northeast side Irving avenue, between Starr street and Willoughby avenue	\$91 64
Constructing sidewalks, New Utrecht avenue, between Thirty-ninth street and Kowenhoven lane.....	1,877 75
Constructing sidewalks, Thirty-eighth street, from Third avenue to Fifth avenue	5,513 98
Constructing sidewalks, Kenilworth place, from Avenue G to Germania place	2,641 05
Constructing sidewalks, Beverley road, from Flatbush avenue to Bedford avenue	2,610 92
Total.....	\$12,735 34

Jacob E. Conklin.

Labor, Maintenance and Supplies—

Broken trap rock and trap rock screenings.....	\$7,928 76
Broken trap rock and trap rock screenings.....	9,433 37
Broken trap rock and trap rock screenings.....	7,680 00
Total.....	\$25,042 13

John Connor.

Street Improvement Fund—

Grading lots north side Eastern parkway, between Bedford avenue and Franklin avenue.....	\$1,202 04
Grading lots east side Underhill avenue, between Sterling place and St. John's place.....	4,091 50
Total.....	\$5,293 54

Brooklyn Alcatraz Asphalt Company.

Repairing Streets (Sections 48 and 169)—

Regulating and repaving with asphalt block, Livingston street, from Court street to Flatbush avenue.....	\$42,761 00
Regulating and Repaving with Asphalt:	
Bridge road, from Sands street to Navy street.....	12,015 00
Bergen street, from Schenectady avenue to Eastern parkway.....	37,230 00
Duffield street, from Nassau street to 285 feet south of Concord street	4,272 00
Regulating and Repaving with Medina Sandstone:	
Atlantic avenue, from Henry street to Flatbush avenue.....	106,732 06
Regulating and Repaving with Asphalt:	
Third place, from Henry street to Smith street.....	8,724 00
Regulating and Repaving with Medina Sandstone:	
Centre street, from Smith street to Hamilton avenue.....	4,978 25
Richards street, from Beard street to Verona street.....	21,116 50
Regulating and Repaving with Asphalt:	
Vanderbilt avenue, from Park place to Plaza street.....	3,741 00
Hunt's alley, from Henry street to its Easterly terminal.....	1,809 00
Eighth street, from Second avenue to Fifth avenue.....	14,810 10
Washington avenue, from Fulton street to Atlantic avenue.....	4,482 00
South Elliott place, from DeKalb avenue to Hanson place.....	7,687 00
Total.....	\$270,357 85

Street Improvement Fund—

Regulating, grading, curbing and guttering and sidewalks, Eighty-sixth street, from Fifth to Thirteenth avenue.....	\$12,107 79
Regulating and Paving with Asphalt on Concrete:	
West Ninth street, from Clinton street to Henry street.....	1,801 50
East Twenty-fifth street, from Newkirk avenue to Foster avenue.....	3,712 50

Regulating and Paving with Asphalt:

Pitkin avenue, from Linwood street to Lincoln avenue.....	27,466 25
Norwood avenue, from Atlantic avenue to Jamaica avenue.....	11,676 40
Eighth street, from Eighth avenue to Prospect Park West.....	3,417 60
Hopkinson avenue, from Eastern Parkway extension to Blake avenue.....	15,158 00
Seventy-fourth street, from Third avenue to Fourth avenue.....	3,303 50
Sixty-second street, from Fourth avenue to Fifth avenue.....	3,869 50
Forty-seventh street, from Sixth avenue to Seventh avenue.....	4,624 65
Tenth avenue, from Prospect avenue to Twentieth street.....	5,391 50
	<u>\$92,529 19</u>

Cranford Company.

Repairing Streets (Sections 48 and 169)—

Repaving with Asphalt:

Jefferson street, from Bushwick avenue to Central avenue.....	\$5,577 00
Suydam place, from Atlantic avenue to Herkimer street.....	2,540 50
Harrison avenue, from Hewes street to Flushing avenue.....	13,892 20
Windsor place, from Tenth avenue to Fifteenth avenue.....	10,259 50
Rogers avenue, from Bergen street to Park place.....	4,172 60
Tompkins avenue, from Pulaski street to Flushing avenue.....	11,995 80
Prospect place, from Grand avenue to Franklin.....	13,448 20
State and Bond streets.....	267 50
	<u>\$62,153 30</u>

Street Improvement Fund—

Paving with Asphalt:

Hale avenue, from Jamaica avenue to Fulton street.....	\$8,511 50
Fortieth street, from New Utrecht avenue to Fort Hamilton avenue.....	4,292 00
Logan street, from Jamaica avenue to Atlantic avenue.....	13,227 50
Glen street, from Railroad avenue to Euclid avenue.....	5,084 50
Eighty-third street, from Second avenue to Third avenue.....	6,109 10
Newkirk avenue, from Flatbush avenue to East Seventeenth street.....	10,394 00
East Fifteenth street, from Dorchester road to Ditmas avenue.....	3,567 00
East Fifteenth street, from Cortelyou road to Dorchester road.....	3,279 00
East Fifth street, from Fort Hamilton avenue to Albemarle road.....	6,454 30
East Seventeenth street, from Albemarle road to Beverley road.....	4,043 50
East Fifteenth street, from Beverley road to Cortelyou road.....	5,318 00
East Fifth street, from Vanderbilt street to Greenwood avenue.....	3,802 92
Avenue J, from Flatbush avenue to Brooklyn avenue.....	1,050 90
Heyward street, from Wythe avenue to Wallabout street.....	1,361 00
	<u>\$76,495 22</u>

Charles Cranford.

Street Improvement Fund—

Constructing Cement Sidewalks:

Howard avenue, between Dean and Bergen streets.....	\$2,172 60
Cropsey avenue, between Twenty-third avenue and Bay Thirty-fourth street.....	2,451 96
Cropsey avenue, between Twenty-third and Twenty-fourth avenues.....	2,447 76
Degraw street, from Classon avenue to Franklin avenue.....	13,562 05
East Fifteenth street, from Beverley road to Cortelyou road.....	1,075 80
	<u>\$21,710 17</u>

Eugene Dietzgen Company.

Labor, Maintenance and Supplies—

Engineers' and Draughtsmen's supplies.....	\$1,464 36
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Daniel Douglass.

Street Improvement Fund—

Grading lots, southeast side DeSales place, between Bushwick and Evergreen Cemetery.....	\$527 50
Regulating, grading, curbing, etc., Belmont avenue, from Elton street to Chestnut street.....	9,342 07
Regulating, Grading, curbing, etc., Avenue D, from Flatbush avenue to Rogers avenue.....	4,031 70
Regulating, grading, curbing, etc., Dean street, from Saratoga avenue to Rockaway avenue.....	5,354 55
Regulating, grading, curbing, etc., Etna street, from Hale avenue to Norwood avenue.....	1,029 81
Regulating, grading, curbing, etc., Foster avenue, from Coney Island avenue to East Fourteenth street.....	8,799 72
Regulating, grading, curbing, etc., Lott street, from Vernon avenue to Beverley road.....	2,864 05
Regulating, grading, curbing, etc., Prospect place, from Ralph avenue to Eastern Parkway.....	8,645 35
Regulating, grading, curbing, etc., Sutter avenue, from Saratoga avenue to Howard avenue.....	3,613 47
Regulating, grading, curbing, etc., Glenmore avenue, from Eldert lane to Queens County line.....	3,222 90
Regulating, grading, curbing, etc., East Nineteenth street, from Avenue L to Avenue M.....	1,865 25
Regulating, grading, curbing, etc., Park place, from Eastern parkway extension to East New York avenue.....	1,642 30
Regulating, grading, curbing, etc., Alabama avenue, from Belmont avenue to Sutter avenue.....	1,913 82
Regulating, grading, curbing, etc., Linden street, between Bushwick avenue and Evergreen avenue.....	451 50
Regulating, grading, curbing, etc., Myrtle avenue, between Lewis avenue and Broadway.....	213 75
Regulating, grading, curbing, etc., Flatlands avenue, from Mill lane to Lotts lane.....	5,168 30
Regulating, grading, curbing, etc., Lincoln avenue, from Atlantic avenue to Glenmore avenue.....	7,095 30
	<u>\$65,881 34</u>

Fulmoth Donovan, Jr.

Street Improvement Fund—

Grading lots, north side Windsor place, between Eighth avenue and Prospect Park West.....	\$307 00
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J. August Feist.

Labor, Maintenance and Supplies—

Bluestone Curbstone.....	\$3,744 00
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James P. Grahm.

Street Improvement Fund—

Regulating, grading, curbing and sidewalks, Fifth avenue, from Neptune avenue to Sheepshead Bay road.....	\$2,951 89
Regulating and grading and curbing West Sixteenth street, from Mermaid avenue to Neptune avenue.....	4,001 76
	<u>\$6,953 65</u>

George & Farrell.

Street Improvement Fund—

Regulating, grading, curbing and sidewalks, Ashford street, from Pitkin avenue to Livonia avenue.....	\$10,151 58
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Hastings Pavement Company.

Repaving Streets—

Regulating and repaving with asphalt, Hopkinson avenue, from Marion street to Somers street.....	\$9,556 70
Regulating and repaving with asphalt, Rogers avenue, from Malbone street to Montgomery street.....	5,041 20
Regulating and repaving with asphalt, Evergreen avenue, from George street to Flushing avenue.....	9,937 50
Regulating and repaving with asphalt, Forty-ninth street, from Third avenue to Fourth avenue.....	6,318 85
Regulating and repaving with asphalt, Fifty-fifth street, from Fifth avenue to Sixth avenue.....	30,237 60
Regulating and repaving with asphalt, Thirteenth street, from Fourth avenue to Eighth avenue.....	37,615 70
Regulating and repaving with asphalt, Sixteenth street, from Hamilton avenue to Fourth avenue.....	11,781 70
Regulating and repaving with asphalt, Fourth avenue, from Smith street to Hoyt street.....	5,668 80
Regulating and repaving with asphalt, Seventeenth street, from Sixth avenue to Prospect Park West.....	19,555 50
Regulating and repaving with asphalt, Fifty-seventh street, from Third avenue to Sixth avenue.....	18,228 10
Regulating and repaving with asphalt, Fifty-fourth street, from Fifth avenue to Sixth avenue.....	6,393 00
Regulating and repaving with asphalt, Fifty-first street, from Third avenue to Fourth avenue.....	6,124 20
	<u>\$166,468 85</u>

Street Improvement Fund—

Pave with asphalt, Sixtieth street, from Second to Third avenue....	\$7,559 95
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Maurice F. Hickey.

Repaving streets (48 and 169)—

Repaving with Medina sandstone, Fourth street, from Hoyt street to Bond street.....	\$13,626 50
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Street Improvement Fund—

Curbing and sidewalks, Seventy-third street, from New Utrecht avenue to Eighteenth avenue.....	\$2,949 30
Curbing and sidewalks, Sixty-fourth street, from Third avenue to Fourth avenue.....	2,511 65
Curbing and sidewalks, Fifty-fifth street, from Eleventh avenue to Kowenhoven lane.....	5,877 00
Curbing and sidewalks, Tenth avenue, from Bay Ridge avenue to Seventy-fifth street.....	4,830 80
	<u>\$16,168 75</u>

James L. Hickey.

Street Improvement Fund—

Curbing Fifty-fourth street, from Sixth avenue to Seventh avenue..	\$5,171 40
Regulating, grading and sidewalks, Sixty-first street, from Third avenue to Fourth avenue.....	2,555 80
	<u>\$7,727 20</u>

Louis Lilly.

Repaving Streets (48 and 169)—

Repaving with iron slag block, Nevins street, from Flatbush avenue to Dean street.....	\$12,426 20
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Peter F. Lynan.

Labor, Maintenance and Supplies—

Bluestone flagstone.....	\$6,300 00
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Fred Luck.

Street Improvement Fund—

Regulating, grading and sidewalks, East Eighth street, from Avenue C to Avenue E.....	\$6,390 90
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The Manguri Company.

Street Improvement Fund—

Regulating, grading and curbing, Forty-first street, from New Utrecht avenue to old City line.....	\$5,104 00
Regulating, grading and curbing, Sixth avenue, from Bay Ridge avenue to Seventy-first street.....	367 00
Regulating, grading and curbing, Fortieth street, from Sixth avenue to New Utrecht avenue.....	10,369 60
	<u>\$15,840 60</u>

Otto Metz.

Street Improvement Fund—

Fencing Lots:	
Thirty-second street, between Fourth avenue and Fifth avenue..	\$775 20
South Second street, between Keap and Hooper streets.....	690 04
Jefferson avenue, between Ralph avenue and Howard avenue..	554 32
St. Mark's avenue, between Classon avenue and Franklin avenue.....	224 00
Thirty-second street, between Fourth avenue and Fifth avenue....	2,255 40
Fortieth street, between Third avenue and Fourth avenue.....	772 60
	<u>\$5,271 56</u>

D. McCarthy.

Labor, Maintenance and Supplies—

Sand.....	\$3,000 00
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Patrick T. McDermott.

Street Improvement Fund—

Regulating, grading, curbing and sidewalks, Cleveland street, from Pitkin avenue to Livonia avenue.....	\$9,249 16
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Moran & Crowley.

Street Improvement Fund—

Regulating, grading, curbing and sidewalks, East Fifth street, from Glenwood avenue to Fort Hamilton avenue.....	\$2,085 10
Regulating, grading, curbing and sidewalks, Belmont avenue, from Warwick street to Elton street.....	2,238 35

Street Improvement Fund—	
Regulating, grading, curbing and sidewalks, Sutter avenue, from Warwick street to Elton street.....	2,199 42
Regulating, grading, curbing and sidewalks, Huntington street, from Henry street to Hamilton avenue.....	819 60
Regulating, grading, curbing and sidewalks, Hopkinson avenue, from Eastern parkway to Atlantic avenue.....	4,862 93
Regulating, grading, curbing and sidewalks, Kingsland avenue, between Maspeth and Skillman avenues.....	2,295 00
	<u>\$14,500 40</u>
Murphy Brothers.	
Street Improvement Fund—	
Regulating and grading Neptune avenue, from West Thirty-sixth street to West Thirty-seventh street.....	\$4,498 99
Regulating, grading, curbing, etc., Warehouse avenue, from Surf avenue to Neptune avenue.....	5,431 78
	<u>\$9,930 77</u>
National Trading Company.	
Street Improvement Fund—	
Constructing cement sidewalks, Gates avenue, between Evergreen and Central avenues.....	\$1,794 38
Constructing cement sidewalks, Hull street, between Hopkinson avenue and Rockaway avenue.....	2,111 04
Labor, Maintenance and Supplies—	
Paving gravel.....	1,140 00
Cement.....	1,800 00
	<u>\$6,845 42</u>
James I. Newman.	
Street Improvement Fund—	
Fencing Lots:	
Southeast side of Jamaica avenue, between Hendrix street and Schenck avenue.....	\$1,124 71
North side of Dean street, between Fourth avenue and Fifth avenue.....	400 82
	<u>\$1,525 53</u>
Henry Newman.	
Street Improvement Fund—	
Grading Meeker avenue, between Stewart and Gardner avenue.....	\$744 14
Norton & Gorman Contracting Company.	
Repaying Streets—Repairing and Repaving with Asphalt:	
Johnson street, from Gold street to Raymond street.....	\$11,608 00
Mack place, from Bridge street to Gold street.....	2,918 75
	<u>\$14,526 75</u>
O'Grady Brothers.	
Repairing Streets (Sections 48, 7, 169)—Repaving with Granite:	
Nilson street, from Wythe avenue to Kent avenue.....	\$7,162 70
Clay street, from Manhattan avenue to Commercial street.....	10,499 50
	<u>\$17,662 20</u>
Street Improvement Fund—Paving with Granite:	
Engert avenue, from Graham avenue to Leonard street.....	\$5,089 15
O'Hara Brothers.	
Street Improvement Fund—Regulating, Grading and Curbing:	
East Fifth street, from Vanderbilt avenue to Greenwood avenue....	\$1,463 16
Grading Lots:	
Eighty-third street, between Tenth and Eleventh avenues.....	782 74
Regulating, Grading, Curbing, Etc.:	
Eighty-fifth street, from Fourth avenue to Seventh avenue.....	11,556 83
	<u>\$13,802 73</u>
Owen O'Keeffe.	
Street Improvement Fund—Grading Lots:	
North side Eighth street, from Eighth avenue to Prospect Park West.	\$5,986 72
W. K. Putnam Company.	
Street Improvement Fund—Regulating, Grading, Curbing, Etc.:	
Eleventh avenue, from Sixty-fifth street to Sixty-ninth street.....	\$5,161 53
M. H. Phillips.	
Labor, Maintenance and Supplies—	
150,000 pounds paving pitch.....	\$1,215 00
Phoenix Towing and Transportation Company.	
Labor, Maintenance and Supplies—	
Sand.....	\$3,120 00
Edward J. Powers.	
Street Improvement Fund—Regulating and Paving with Granite:	
New Jersey avenue, from Jamaica avenue to Highland boulevard....	\$3,632 80
John E. Quinn.	
Repairing Streets (Sections 48 and 169)—Repaving with Medina Sandstone:	
Sullivan street, from Dwight street to Ferris street.....	\$26,402 60
Repaving with Granite Pavement:	
Johnson street, from Duffield street to Pearl street.....	9,125 40
Richardson street, from Union avenue to Leonard street.....	16,725 00
	<u>\$52,253 00</u>
James Quinn, Jr.	
Repairing Streets (Sections 48 and 169)—Repaving with Granite:	
Park avenue, from Classon avenue to Broadway.....	\$53,253 10
Reasner & Henning.	
Repairing Streets (Sections 48 and 169)—Repaving with Granite Pavement:	
Broadway, from Patchen avenue to Monroe street.....	\$26,539 50
John Reilly.	
Street Improvement Fund—Constructing Cement Sidewalks:	
East side Troy avenue, between Prospect place and Park place.....	\$903 67
St. Mark's avenue, between Hopkinson avenue and Rockaway avenue	4,233 05
Himrod street, between Wyckoff street and St. Nicholas avenue....	2,316 48
	<u>\$7,453 20</u>

John B. Reimer.	
Street Improvement Fund—Regulating, Grading, Curbing and Sidewalks:	
Grant avenue, from Jamaica avenue to Liberty avenue.....	\$15,528 90
Robertson & Gerthart.	
Labor, Maintenance and Supplies—	
Broken trap rock and screenings.....	\$10,770 83
Broken trap rock and screenings.....	7,917 29
	<u>\$18,688 12</u>
James Riely.	
Street Improvement Fund—Grading Lots:	
North side Sixteenth street, between Prospect Park West and Tenth avenue.....	\$163 35
William F. Riely.	
Street Improvement Fund—Grading Lots:	
South side Sixteenth street, between Third avenue and Fourth avenue	\$467 95
Josiah T. Rutan & Co.	
Street Improvement Fund—Regulating, Grading, Curbing and Sidewalks:	
East Fifteenth street, from Cortelyou road to Dorchester road.....	\$1,747 82
Newkirk avenue, from Flatbush avenue to East Seventeenth street....	4,623 00
East Fifth street, from Fort Hamilton avenue to Albemarle road.....	4,072 67
New York avenue, from Clarkson street to Church avenue.....	3,951 75
Dean street, from Troy avenue to Schenectady avenue.....	3,355 50
	<u>\$17,750 74</u>
N. Schneider's Sons.	
Street Improvement Fund—Constructing Sidewalks:	
Howard avenue, between Decatur street and Bainbridge street.....	\$4,736 25
Albany avenue, between Degraw street and Eastern parkway.....	1,655 64
Forty-sixth street, between Sixth avenue and Seventh avenue.....	2,117 88
Bath avenue, between Bay Eleventh street and Sixteenth avenue.....	2,067 95
	<u>\$10,577 72</u>
Seaboard Construction Company.	
Street Improvement Fund—Regulating, Grading and Sidewalks:	
New Jersey avenue, from Jamaica avenue to Highland boulevard....	\$1,573 06
Elmore place, from Farragut road to Glenmore road.....	1,315 50
Rockaway avenue, from Hegeman avenue to Stanley place.....	4,073 90
Utica avenue, from East New York avenue to Church avenue.....	19,951 36
	<u>\$26,913 82</u>
Uvalde Asphalt Paving Company.	
Repaying Streets with Asphalt—	
Lexington avenue, from Throop avenue to Broadway.....	\$42,945 00
Evergreen avenue, from Willoughby avenue to George street.....	6,234 80
Junius street, from East New York avenue to Pitkin avenue.....	9,534 50
Chester street, from East New York avenue to Hunterfly road.....	13,726 00
South Tenth street, from Kent avenue to Bedford avenue.....	7,018 80
Hewes street, from Marcy avenue to Broadway.....	5,471 00
Sumpter street, from Fulton street to Hopkinson avenue.....	24,652 20
Grove street, from Hamburg avenue to Myrtle avenue.....	8,039 10
Humboldt street, from Grand street to Meeker avenue.....	19,392 50
North Tenth street, from Driggs avenue to Union avenue.....	5,801 60
Linden street, from Broadway to Bushwick avenue.....	4,054 60
Throop avenue, from Macon street to McDonough street.....	1,707 00
Marcy avenue, from Willoughby avenue to Flushing avenue.....	10,048 50
Marcy avenue, from Broadway to South Third street.....	8,123 00
Willoughby street, from Bridge street to Gold street.....	11,792 50
Classon avenue, from Madison street to Monroe street.....	2,078 60
Fort Greene place, from Fulton street to DeKalb avenue.....	5,516 50
St. John's place, from Rogers avenue to Nostrand avenue.....	4,060 50
Throop avenue, from Halsey street to Macon street.....	1,492 15
Prospect place, from Troy avenue to Schenectady avenue.....	5,584 50
	<u>\$197,273 35</u>
Street Improvement Fund—Paving with Asphalt:	
Dumont avenue, from Rockaway avenue to Powell street.....	\$8,383 80
East Thirty-first street, from Avenue F to Glenwood road.....	3,941 40
Glenwood road, from Flatbush avenue to Brooklyn avenue.....	8,547 40
Church avenue, from Flatbush avenue to East Eleventh street.....	10,960 00
Caton avenue, from St. Paul's place to Parade place.....	4,169 35
Bath avenue, from Fourteenth avenue to Bay Eighteenth street.....	42,218 05
Prescott place, from Herkimer street to Atlantic avenue.....	1,655 25
Elton street, from Atlantic avenue to Blake avenue.....	21,553 04
Bay Eleventh street, from Eighty-sixth street to Cropsey avenue.....	66,570 75
Beverly road, from Flatbush avenue to Bedford place.....	6,480 60
Kenilworth place, from Avenue G to Germania place.....	4,105 50
East Thirty-first street, from Flatbush avenue to Glenwood road....	4,160 00
Van Sicklen avenue, from Pitkin avenue to Dumont avenue.....	11,244 78
East Fifth street, from Greenwood avenue to Fort Hamilton avenue.	3,353 50
Radde place, from 115 feet north of Atlantic avenue to Atlantic avenue	962 50
Milford street, from Atlantic avenue to Glenmore avenue.....	6,758 55
	<u>\$145,064 47</u>
Warren Asphalt Paving Company.	
Fund for Construction Municipal Asphalt Repair Plant—	
Erecting one asphalt plant.....	\$22,485 00
Vofrie & O'Hearn.	
Street Improvement Fund—	
Regulating and grading First avenue, from Fifty-seventh street to Sixtieth street.....	\$785 74
Grading lots, Fifty-eighth street, south side, between Sixth and Seventh avenues.....	294 78
Grading, curbing, etc., Sixty-first street, from Fifth avenue to Sixth avenue.....	5,702 60
Regulating, guttering, etc., Sixty-second street, from Fifth avenue to Sixth avenue.....	5,478 40
Regulating, grading, curbing and sidewalks, Seventy-second street, from Second avenue to Shore road.....	9,749 76
	<u>\$22,011 28</u>
BUREAU OF SEWERS.	
Borough Construction Company.	
Street Improvement Fund—	
Seventy-third street, between Fourteenth and Fifteenth avenues, etc...	\$54,477 75
Flatbush avenue, from Nostrand avenue to Avenue N.....	53,015 00
	<u>\$107,492 75</u>

Howard S. Bownes.		Hammond & Sloane, Inc.	
Thirty-first Ward Sewage Districts Nos. 1 and 3, coal.....	\$6,405 00	Street Improvement Fund—	
Twenty-sixth Ward Disposal Works, coal.....	4,368 00	Eighty-fifth street, between Sixteenth avenue and Seventeenth avenue.....	\$28,432 18
	<u>\$10,773 00</u>		
J. L. Carey.		Philip Hayes.	
Street Improvement Fund—		Street Improvement Fund—	
Eighth avenue, from Seventieth to Seventy-second street.....	\$975 70	Sutter avenue, from Rockaway avenue to Chester street.....	\$537 47
Avenue D. from East Twenty-third street to Rogers avenue.....	4,386 10	Newman avenue and Russell street.....	474 00
East Twenty-fifth street, from Clarendon road to Avenue D.....	2,051 60	Junius street, from Pitkin avenue to Blake avenue.....	3,923 29
Senator street, from Fourth avenue to Fifth avenue.....	6,455 55	Decatur street, from Knickerbocker avenue to borough line.....	2,533 86
Congress street, between Columbia street and East river.....	3,927 19	Weirfield street, between Knickerbocker avenue and boundary line of Queens.....	1,951 01
Stratford road and Slocum place (sewer basin).....	194 00	Hausman street and Nassau avenue (basin).....	175 00
Gates and Reid avenues (sewer basins).....	249 00	Norman avenue and Russell street (basin).....	192 00
Beverly road and Flatbush avenue (sewer basin).....	652 00		<u>9,786 63</u>
Madison street and Stuyvesant avenue (sewer basin).....	204 00		
East Eighteenth street and Albemarle road (sewer basin).....	194 00	Abram L. Hirsch.	
Schenck avenue and Atlantic avenue (sewer basin).....	214 00	Thirty-first Ward Sewer Districts Nos. 1 and 3, chemicals, disinfectants.....	\$688 00
East Thirty-second street and Avenue D (sewer basin).....	308 00	Twenty-sixth Ward Disposal Works, chemicals, disinfectants.....	731 00
Lott street, from Tilden avenue to Beverly road.....	1,540 41		<u>\$1,419 00</u>
Seventh avenue and Beverly road (sewer basin).....	2,102 90		
Brooklyn avenue, from Avenue C to Canarsie lane.....	1,253 16	Leo E. Kelly.	
Etna street, between Forcetube avenue and Hale avenue.....	3,200 46	Street Improvement Fund—	
East Fourth street, between Avenue C and Church avenue.....	8,088 20	Avenue G and Brighton Beach Railroad (basin).....	\$319 00
East Twenty-sixth street, from Clarendon road to Avenue D.....	2,131 25	Bushwick avenue, between Garden and Beaver streets.....	2,150 25
	<u>\$38,027 61</u>		<u>\$2,469 25</u>
Cavanagh Brothers.		P. J. McCauley.	
Twenty-sixth Ward Disposal Works, hardware, tools, etc.....	\$202 07	Street Improvement Fund—	
Thirty-first Ward Sewer Districts Nos. 1 and 3, hardware, tools, etc.....	375 73	Webster avenue, from Ocean parkway to Gravesend avenue.....	\$3,397 40
Sewers, Repairing and Cleaning, Payrolls and Supplies, hardware, tools, etc.....	1,051 63	First avenue, from Bay Ridge avenue to Wakeman place.....	7,228 65
	<u>\$1,629 43</u>	Imlay street, four corners, Verona street.....	2,040 00
Audley Clarke.		Fountain avenue, between Sixty-fifth street and Seventy-fifth street.....	18,400 00
Thirty-first Ward Sewer Districts Nos. 1 and 3, lime, cement, etc.....	\$1,886 25		<u>\$31,066 05</u>
Twenty-sixth Ward Disposal Works, lime, cement, etc.....	4,005 00	Murphy Brothers.	
Thirty-second Ward Disposal Works, lime, cement, etc.....	445 00	Street Improvement Fund—	
Sewers, Repairing and Cleaning, Payrolls and supplies, lime, cement, etc.....	530 00	East Twenty-first street, from Emmons avenue to end of existing sewer.....	\$1,185 48
	<u>\$6,866 25</u>	Sixtieth street, from Second avenue to Third avenue.....	8,362 12
John J. Clarke.		Eightieth street, from First avenue to Second avenue.....	1,556 52
Dredging Sewer Outlets—Dredging Newtown Creek Canal.....	\$2,983 00	Thirteenth avenue, from Seventy-ninth street to Eighty-second street.....	3,603 47
	<u>\$2,983 00</u>	Forty-first street, from summit west of Seventh avenue to Seventh avenue.....	1,072 05
Clinton Construction Company.		East Fortieth street, from Avenue C to Ditmas avenue.....	4,116 35
Street Improvement Fund—		Warehouse avenue, from Surf avenue to Neptune avenue.....	9,782 30
Forty-eighth street, from Thirteenth avenue to summit between Thirteenth avenue and Fourteenth avenue.....	3,075 15	Seventy-ninth street, from Sixteenth avenue to Eighteenth avenue.....	5,659 05
President street, from Bedford avenue to Rogers avenue.....	3,722 30		<u>\$35,337 34</u>
	<u>\$6,797 45</u>	Henry Newman.	
John J. Creem.		Contracts at Public Letting—	
Street Improvement Fund—		Excavation in Paerdegat Basin, from Flatlands avenue to Avenue M.....	\$4,100 00
Jerome street and Belmont avenue (basin).....	\$1,776 00	Street Improvement Fund—	
Eighty-fourth street, from Twentieth avenue to Twenty-first avenue.....	34,440 00	Clinton place, from Crescent street to a point 275 feet west.....	\$803 90
Fifty-first street, from Fourteenth avenue to Fifteenth avenue.....	36,547 00	Irving avenue, from Halsey street to Putnam avenue.....	7,115 80
East Thirty-first street, from Church avenue to Snyder avenue.....	14,589 00	Forty-first street, from Seventh avenue to New Utrecht avenue.....	6,411 48
	<u>\$87,352 00</u>	Dean street, from Saratoga avenue to summit east of Saratoga avenue.....	1,940 40
E. M. Culp.			<u>\$20,371 58</u>
Street Improvement Fund—		Newman Construction Company.	
Fourth avenue, west side, between Eighty-second and Eighty-sixth streets.....	\$4,226 12	Constructing Relief Sewers, Borough of Brooklyn—	
Brooklyn avenue, from Avenue G to Avenue H.....	1,642 15	Carroll street, from Third avenue to Gowanus canal.....	\$14,293 22
East Thirty-fourth street, from Flatbush Water Works to Avenue F.....	1,477 25		<u>\$14,293 22</u>
Eighty-second street, from Sixth avenue to Fort Hamilton avenue.....	955 50	Christopher Nally.	
	<u>\$8,301 02</u>	Street Improvement Fund—	
Donegan & Redmond.		Bowery, from Jones' walk to Steeplechase walk.....	\$7,885 00
Street Improvement Fund—			<u>\$7,885 00</u>
Eighth avenue and Sixtieth street.....	\$492 00	O'Grady Brothers.	
Fifty-seventh street, from Fourteenth avenue to Fifteenth avenue.....	1,586 25	Street Improvement Fund—	
Fifty-third street, from Thirteenth avenue to Fifteenth avenue.....	9,388 30	Bay Eighth street, between Benson avenue and Bath avenue.....	\$7,774 03
Eighteenth avenue, from East Fourth street to Old New Utrecht town line.....	17,895 75		<u>\$7,774 03</u>
Eighty-seventh street, from Narrows avenue to Second avenue.....	4,007 00	R. G. Packard.	
	<u>\$33,369 30</u>	Dredging Sewer Outlets—	
Donlon Contracting Company.		Dredging Gowanus canal.....	\$11,340 00
Street Improvement Fund—			<u>\$11,340 00</u>
Newkirk avenue, from East Eighteenth street to Flatbush avenue.....	\$9,939 70	Pasquale Porzio.	
East Nineteenth street, from Newkirk avenue to Foster avenue.....	1,401 75	Street Improvement Fund—	
Huntington street, from Henry street to Hamilton avenue.....	837 25	Pitkin avenue, south side, from Powell street to Van Sinderen avenue.....	\$1,443 00
	<u>\$12,178 70</u>	East Twenty-second street, from Avenue G north to end of existing sewer.....	1,114 07
Escola Manufacturing Company.		Park place, between Hopkinson avenue and Eastern parkway extension.....	801 05
Sewers, Repairing and Cleaning, Payrolls and Supplies, manhole heads and covers.....	\$1,522 42	Pitkin avenue and Osborn street, basin.....	190 00
	<u>\$1,522 42</u>	Fenimore street and Rogers avenue, basin.....	145 00
Gasteiger & Schaefer.		Lexington avenue, south side, from Ralph avenue west to existing sewer.....	368 77
Sewers, Repairing and Cleaning, Payrolls and Supplies, forage.....	\$735 00	Barrett street, between Pitkin avenue and Sutter avenue.....	2,766 45
Thirty-first Ward Sewer Districts Nos. 1 and 3, forage.....	297 70	Blake avenue, from Powell street to Junius street.....	1,181 85
	<u>\$1,032 70</u>	East Fifteenth street and Dorchester road, basin.....	310 00
James P. Graham.			<u>\$9,320 19</u>
Street Improvement Fund—		James Riley.	
Bay Eleventh street, from Eighty-sixth street to Benson avenue.....	\$1,767 65	Street Improvement Fund—	
Benson avenue, between Bay Twenty-sixth street and Twenty-first avenue.....	1,470 36	Caton avenue, from Parade place to East Seventeenth street.....	\$385 14
Eighth avenue, from Seventieth street to Seventy-second street.....	1,198 48	Grant avenue and Union avenue, basin.....	378 00
Kenmore place, from Avenue G to end of existing sewer.....	676 34	Atlantic avenue and Russell place.....	215 00
Sixty-seventh street, from Fourth avenue to Fifth avenue.....	2,696 20		<u>\$978 14</u>
Dean street, from Ralph avenue to Howard avenue.....	1,527 87	William F. Riley.	
Neptune avenue and West Fifth street (basin).....	380 00	Street Improvement Fund—	
East Third street, between Ditmas avenue and Avenue F.....	10,575 95	East Twenty-third street and Foster avenue, basin.....	\$358 00
New York avenue, between Beverly road and Clarendon road.....	2,120 00	East Sixteenth street and Cortelvou road.....	358 00
Hemlock street, between Glenmore avenue and Pitkin avenue.....	1,162 75	Seventeenth avenue and Benson avenue, basin.....	596 00
Huntington street, from Henry street to Hicks street.....	1,123 92	Eighth street, between Second avenue and Third avenue.....	602 20
	<u>\$24,699 52</u>	East Eighteenth street, Dorchester road and Ditmas avenue.....	537 00
		Newkirk avenue and East Eighteenth street.....	869 88
			<u>\$3,321 08</u>

Sigretto & Mannino.	
Street Improvement Fund—	
Fifteenth avenue, from Sixtieth street to Sixty-sixth street.....	\$8,359 42
Rogers avenue, from Clarendon road to Flatbush avenue.....	7,836 16
Fifty-fourth street, from Sixth avenue to Seventh avenue.....	1,597 50
Prospect street, from Vernon avenue to Beverley road.....	1,399 16
Ninety-seventh street, from Shore road to Marine avenue.....	1,784 66
Forty-fourth street, from Fifth avenue to Sixth avenue.....	1,708 74
Eleventh avenue, from Eighteenth street to Terrace place.....	1,055 27
Fourth avenue, from Ninety-fifth street to Ninety-seventh street.....	954 92
Eighty-fourth street, from First avenue to Second avenue.....	1,547 54
Third avenue, from Sixtieth street to Sixty-first street.....	20,506 99
North side of Parkside avenue, from St. Paul's place to Ocean avenue.....	2,611 66
Forty-second street, from Seventh avenue to Eighth avenue.....	2,792 10
Fifty-ninth street, from Seventh avenue to Eighth avenue.....	2,646 90
Fifty-second street, between Thirteenth avenue and Fourteenth avenue.....	2,726 00
Fourth avenue, west side, between Ninety-second street and Ninety-fifth street.....	4,427 00
Eighty-fifth street, from Fort Hamilton avenue to Seventh avenue.....	2,487 50
Fifty-first street, from First avenue to Second avenue.....	1,907 75
Eighty-fourth street, from Fort Hamilton avenue to Seventh avenue.....	1,801 44
Sixty-first street, between Fifth and Sixth avenues.....	2,235 00
Fortieth street, between Seventh avenue and New Utrecht avenue.....	6,226 00
Battery avenue and Dahlgren place, between Eighty-eighth and Ninety-fifth streets.....	6,442 81
Martense street, between Flatbush and Bedford avenues.....	3,245 00
West Twenty-third street, from Mermaid avenue to Neptune avenue.....	6,301 75
	<u>\$92,661 27</u>

Charles F. Vachris.	
Street Improvement Fund—	
East Fifteenth street and Ditmas avenue, basin.....	\$306 00
Bay Thirteenth street and Cropsey avenue, basin.....	318 00
Fourth avenue and Ninety-ninth street, basin.....	200 00
Bath avenue and Fourteenth street, basin.....	162 00
St. Marks avenue and Rogers avenue, basin.....	249 00
New Jersey avenue and Highland boulevard, basin.....	379 00
Winthrop street and Rogers avenue, basin.....	288 00
Farragut road and East Twenty-eighth street, basin.....	1,651 00
Bond street and Third street, basin.....	157 00
Sutter avenue and Van Sicklen avenue, basin.....	411 00
	<u>\$4,121 00</u>

BUREAU OF PUBLIC BUILDINGS AND OFFICES.

American Ice Company.	
Supplies and Repairs—	
Ice Supply, 1906.....	<u>\$1,547 99</u>
Cavanagh Brothers.	
Supplies and Repairs—	
Janitors' Supplies.....	<u>\$6,333 24</u>

Otto Metz.	
Supplies and Repairs—	
Tiling first floor, Borough Hall.....	<u>\$2,133 00</u>
Mouquin, Offerman, Wells Coal Company.	
Supplies and Repairs—	
Coal Supply, 1906.....	<u>\$41,760 00</u>
Taafé, J. P.	
Supplies and Repairs—	
Relaunders towels.....	<u>\$1,468 74</u>
Walsh, John J., Jr.	
Supplies and Repairs—	
Repairing, etc., five floating baths.....	<u>\$4,573 00</u>
Almirall, Raymond F.	
Central Library Building, Erecting of, Borough of Brooklyn—	
Architects' fees, Central Library Building.....	<u>\$15,000 00</u>
Rufus H. Brown.	
Fund for Making Alterations in the Kings County Court House—	
Alterations, etc., Kings County Court House.....	<u>\$4,900 00</u>
Clarke & Stone.	
Public Bath Fund—	
Interior Bath Building, Fourth avenue and President street.....	<u>\$157,200 00</u>
P. H. Haron.	
Revenue Bond Fund for Burial of Deceased Veterans and Erection of	
Headstones—	
Headstones for deceased veterans.....	<u>\$1,099 00</u>
Alexander Pearson.	
Revenue Bond Fund for expense of Sixth District Municipal Court,	
1906—	
Furniture.....	<u>\$1,340 99</u>
Alexander Pearson.	
Revenue Bond Fund for Expenses of Seventh District Municipal Court—	
Furniture.....	<u>\$1,514 85</u>
Lord & Hewlett.	
Fund for the Erection of a New Municipal Building, Borough of Brook-	
lyn—	
Architects' fees, new Municipal Building.....	<u>\$10,000 00</u>
Nichols Gas Fixture Manufacturing Company.	
Fund for the Installation of Gas and Electric Fixtures in Gates Avenue	
Court House—	
Furnishing lighting fixtures, Gates Avenue Court House.....	<u>\$1,425 00</u>

Recapitulation of List of Contractors and Contracts.

Contractor.	Highways.		Sewers.		Public Buildings and Offices.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Almirall, Raymond T.....	..	.....	..	.....	1	\$15,000 00	1	\$15,000 00
American Ice Company.....	..	.....	..	.....	1	1,547 99	1	1,547 99
Bacon & Co.....	1	\$746 25	..	.....	..	.....	1	746 25
Barber Asphalt Paving Company.....	42	425,511 64	..	.....	..	.....	42	425,511 64
Borough Construction Company.....	..	.....	2	\$107,492 75	..	.....	2	107,492 75
Bowns, H. S.....	..	.....	1	10,773 00	..	.....	1	10,773 00
Bonacci, Dominick.....	2	12,210 02	..	.....	..	.....	2	12,210 02
Bonacci & Vincelli Construction Company.....	3	23,865 58	..	.....	..	.....	3	23,865 58
Bracken, McAveney Company.....	9	55,267 83	..	.....	..	.....	9	55,267 83
Burke, W. T.....	3	5,893 79	..	.....	..	.....	3	5,893 79
Brown, Rufus H.....	24	362,887 04	..	.....	1	4,900 00	1	4,900 00
Brooklyn Alcatraz Asphalt Company.....	24	362,887 04	..	.....	..	.....	24	362,887 04
Cavanagh Brothers.....	1	2,163 62	1	1,629 43	1	6,333 24	3	10,126 29
Carey, J. L.....	..	.....	18	38,027 61	..	.....	18	38,027 61
Clarke, Audley.....	..	.....	1	6,866 25	..	.....	1	6,866 25
Clarke, John F.....	..	.....	1	2,983 00	..	.....	1	2,983 00
Clarke & Stone.....	..	.....	..	.....	1	157,200 00	1	157,200 00
Clinton Construction Company.....	5	12,735 34	2	6,797 45	..	.....	7	19,532 79
Conklin, Jacob E.....	3	25,042 13	..	.....	..	.....	3	25,042 13
Connor, John.....	2	5,293 54	..	.....	..	.....	2	5,293 54
Cranford Company.....	22	138,648 52	..	.....	..	.....	22	138,648 52
Cranford, Chas.....	5	21,710 17	..	.....	..	.....	5	21,710 17
Creem, John J.....	..	.....	4	87,352 00	..	.....	4	87,352 00
Culp, E. M.....	..	.....	4	8,301 02	..	.....	4	8,301 02
Dietzgen, E., & Co.....	1	1,464 36	..	.....	..	.....	1	1,464 36
Donegan & Redmond.....	..	.....	5	33,853 09	..	.....	5	33,853 09
Donlon Contracting Company.....	..	.....	3	12,178 70	..	.....	3	12,178 70
Douglass, Daniel.....	17	65,881 34	..	.....	..	.....	17	65,881 34
Donovan, Fulmoth, Jr.....	1	3 07	..	.....	..	.....	1	3 07
Escola Manufacturing Company.....	..	.....	1	1,522 42	..	.....	1	1,522 42
Feist, J. August.....	1	3,744 00	..	.....	..	.....	1	1,744 00
Gasteiger & Schaefer.....	..	.....	1	1,032 70	..	.....	1	1,032 70
George & Farrell.....	1	10,151 58	..	.....	..	.....	1	10,151 58
Graham, Jas. P.....	2	6,953 65	11	24,699 52	..	.....	13	31,653 17
Hastings Pavement Company.....	13	174,018 80	..	.....	..	.....	13	174,018 80
Hammond & Sloane (Incorporated).....	..	.....	1	28,432 18	..	.....	1	28,432 18
Haran, P. M.....	..	.....	..	.....	1	1,099 00	1	1,099 00
Hayes, Philip.....	..	.....	7	9,786 63	..	.....	7	9,786 63
Hickey, M. F.....	5	29,795 25	..	.....	..	.....	5	29,795 25
Hickey, Jas. L.....	2	7,727 20	..	.....	..	.....	2	7,727 20

Contractor.	Highways.		Sewers.		Public Buildings and Offices.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Hirsch, Abram L.	1	1,419 00	1	1,419 00	1	1,419 00	1	1,419 00
Kelly, Leo E.	2	2,469 25	2	2,469 25	2	2,469 25	2	2,469 25
Louis, Lilly	1	12,426 20	1	12,426 20	1	12,426 20	1	12,426 20
Lyman, Peter F.	1	6,300 80	1	6,300 80	1	6,300 80	1	6,300 80
Luck, Fred	1	6,390 90	1	6,390 90	1	6,390 90	1	6,390 90
Mangieri Company	3	15,840 60	3	15,840 60	3	15,840 60	3	15,840 60
Metz, Otto	6	5,271 56	1	2,133 00	7	7,404 56	7	7,404 56
McCauley, P. J.	4	31,066 05	4	31,066 05	4	31,066 05	4	31,066 05
McCarthy, D.	1	3,000 00	1	3,000 00	1	3,000 00	1	3,000 00
McDermott, P. T.	1	9,249 16	1	9,249 16	1	9,249 16	1	9,249 16
Moran & Crowley	6	14,500 40	6	14,500 40	6	14,500 40	6	14,500 40
Murphy Brothers	2	9,930 77	8	35,337 34	10	45,268 11	10	45,268 11
Mouquin-Offerman-Wells Coal Company	1	41,760 00	1	41,760 00	1	41,760 00	1	41,760 00
Lord & Hewlett	1	10,000 00	1	10,000 00	1	10,000 00	1	10,000 00
National Trading Company	2	6,845 42	4	6,845 42	4	6,845 42	4	6,845 42
Nally, Chris.	1	7,885 00	1	7,885 00	1	7,885 00	1	7,885 00
Newman, Henry	1	74,414 00	5	20,371 58	6	94,785 58	6	94,785 58
Newman, Jas. I.	2	1,525 53	2	1,525 53	2	1,525 53	2	1,525 53
Newman Construction Company	1	14,293 22	1	14,293 22	1	14,293 22	1	14,293 22
Nicholas Gas Fixture Company	1	1,425 00	1	1,425 00	1	1,425 00	1	1,425 00
Norton & Gorman Contracting Company	2	14,526 75	2	14,526 75	2	14,526 75	2	14,526 75
O'Grady Brothers	3	22,751 35	1	7,774 03	4	30,525 38	4	30,525 38
O'Hara Brothers	3	13,802 73	3	13,802 73	3	13,802 73	3	13,802 73
O'Keefe, Owen	1	5,986 72	1	5,986 72	1	5,986 72	1	5,986 72
Packard, R. G.	1	11,340 00	1	11,340 00	1	11,340 00	1	11,340 00
Pearson, Alex.	2	2,719 84	2	2,719 84	2	2,719 84	2	2,719 84
Phillips, M. H.	1	1,215 00	1	1,215 00	1	1,215 00	1	1,215 00
Phoenix Towing and Transportation Company	1	3,120 00	1	3,120 00	1	3,120 00	1	3,120 00
Powers, E. J.	1	3,632 80	1	3,632 80	1	3,632 80	1	3,632 80
Porzio, Pasquale	9	9,320 19	9	9,320 19	9	9,320 19	9	9,320 19
Quinn, John E.	3	52,253 00	3	52,253 00	3	52,253 00	3	52,253 00
Quinn, Jas., Jr.	1	53,253 10	1	53,253 10	1	53,253 10	1	53,253 10
Reasner & Henning	1	26,539 50	1	26,539 50	1	26,539 50	1	26,539 50
Reilly, John	3	7,453 20	3	7,453 20	3	7,453 20	3	7,453 20
Reimer, John B.	1	15,528 90	1	15,528 90	1	15,528 90	1	15,528 90
Robertson & Gerehart	2	18,688 12	2	18,688 12	2	18,688 12	2	18,688 12
Riley, James	1	163 35	3	978 14	4	1,141 49	4	1,141 49
Riley, Wm. F.	1	467 95	6	3,321 08	7	3,789 03	7	3,789 03
Rutan, Josiah T.	5	17,750 74	5	17,750 74	5	17,750 74	5	17,750 74
Schneider's Sons	4	10,577 72	4	10,577 72	4	10,577 72	4	10,577 72
Seaboard Construction Company	4	26,913 82	4	26,913 82	4	26,913 82	4	26,913 82
Sigretto & Mannino	23	92,661 27	23	92,661 27	23	92,661 27	23	92,661 27
Taafé, J. P.	1	1,468 74	1	1,468 74	1	1,468 74	1	1,468 74
Uvalde Asphalt Paving Company	36	342,337 82	36	342,337 82	36	342,337 82	36	342,337 82
Vofie & O'Hearn	5	22,011 28	5	22,011 28	5	22,011 28	5	22,011 28
Vachris, Chas. F.	10	4,121 00	10	4,121 00	10	4,121 00	10	4,121 00
Walsh, J. J., Jr.	1	4,573 00	1	4,573 00	1	4,573 00	1	4,573 00
Warren Asphalt Paving Company	1	22,485 00	1	22,485 00	1	22,485 00	1	22,485 00
Putnam W. K. Company	1	5,161 53	1	5,161 53	1	5,161 53	1	5,161 53
	275	\$2,244,030 44	138	\$624,084 90	14	\$250,159 81	427	\$3,118,275 15

Goods Purchased on Department Orders.

There were issued during the year 4,711 orders for merchandise and repairs to buildings, of which 546 were from the Bureau of Highways and 4,165 from the Bureau of Public Buildings and Offices.

Of these 3,276 were for supplies and 1,435 for repairs.

The goods ordered on requisition from the several offices and bureaus are shown in alphabetical order under their respective titles.

General Administration.

Automobile, rent of	\$60 00
Carfare tickets	210 00
Contingent expenses	500 00
Investigating services	403 20
Newspapers	41 26
Postage	326 00
Reportorial services	100 00
Stenographic services	471 45
Subscription to "Municipal Journal"	3 00

Topographical Bureau

Blue prints	\$158 70
Cards	27 12
Carfare tickets	1,380 00
Carpenter's work	1,870 00
Draughtmen's supplies	900 00
Engineer's supplies	5 75
Furniture and carpet	1,689 60
Hardware	15 37
Lumber	59 02
Maps and corrections	405 16
Masons' materials	187 50
Monument covers	165 00
Personal expenses	29 58
Rent of boats	182 50
Rent of land for timber tower	300 00
Rubber boots	54 00

Bureau of Incumbrances and Permits.

Board of horses	\$300 00
Carfare tickets	555 00

Electric work	7 70
Harness and repairs	28 40
Horseshoeing	117 50
Postage	18 00
Repairing automobile tire	7 75
Rubber stamps	5 40
Stationery	25 60
Telephone coupons	24 00
Tools and repairing	128 42
Truck hire	7 00
Veterinary services	3 00
Wagon and automobile repairs	133 10

Supplies, Bureau of Highways.

Ashes	\$40 00
Asphalt	965 00
Asphalt thermometer	58 00
Axle grease	9 00
Auto cars	1,980 00
Automobile supplies and repairs	2,752 94
Badges for Inspectors	30 00
Binding assessment lists	71 00
Brick	69 38
Brooms	207 00
Bench brackets	525 00
Carfare tickets	1,400 00
Card attachment for file	30 00
Clynta water	53 40
Coach hire	412 00
Coal	334 50
Commissioner of Deeds	5 31
Corrugated iron	250 34
Correcting atlas	185 00
Clipping horse	3 00
Crude petroleum	175 00
Desk	234 00
Draughtsmen's supplies	236 27
Erecting shed on Ovington avenue	360 00
Electric works	16 00
Feed	158 98
Field books	172 00

Furniture	732 67
Granite block pavement	948 50
Greater New York Charter	8 00
Glass	12 00
Hardware, tools, etc.	1,079 77
Harness and repairs to same	344 80
Horse keep	3,625 25
Horse shoes	990 95
Hydraulic jack	53 50
Horses	775 00
Instruments and repairs to same	368 55
Laboratory supplies	303 45
Linoleum	152 00
Lubricating oil	267 80
Lumber	574 00
Kerosene oil	77 32
Iron work	277 25
Ladder	16 00
Maps, etc.	166 00
Map rollers	28 00
Manhole heads	200 00
Metal case for maps	375 00
Metal signs	21 50
Names of streets for index	5 00
Numbers on steam boiler	17 50
Parts for steam roller	77 00
Paint	651 33
Postage stamps	196 00
Pitch	165 00
Rent of yards	1,729 16
Quartz	22 82
Repairing pavement	913 23
Replace broken railings	31 00
Repair wagons	1,353 90
Repair steam roller	46 50
Rubber stamps	8 00
Repairing tools	524 86
Rent of auto car	25 00
Sewer pipe	762 50
Stable supplies	122 75
Sprinkling wagons	765 00
Stationery	850 85
Telephone coupon books	790 00
Testing boilers	18 00
Tin boxes	70 00
Typewriters and supplies	143 00
Veterinary services	101 00
White ash stakes	80 00

Bureau of Sewers.

Supplies Obtained During Year on Department Orders.

Advertising	\$416 37
Atlas	30 00
Axle grease	3 50
Automobile supplies and repairs	84 50
Badges	40 80
Basin hoods	153 40
Basin heads	84 30
Binding assessment books	131 50
Blue-print cloth	200 00
Boiler compound	142 00
Boots	419 40
Brass hood catches	4 04
Broken stone	299 00
Brushes	87 00
Brick	227 75
Boiler repairs	112 45
Carfare tickets	1,200 00
Carriage and wagon repairs	352 85
Cartage of portable house	5 00
Carriage	250 00
Cement	399 90
Constructing impacting machine	90 00
Couplings	40 00
Coach for Paymaster	396 00
Connecting manhole with house lines	200 00
Construction of catch basin	356 00
Commissioner of Deeds certificate	21 24
Coal	26 50
Correcting atlas	75 00
Clip horse	9 00
Clynta water	95 00
Cylinder oil	25 00
Document filing case	117 60
Drawing materials	318 22
Dump tickets	1,500 00
Engine supplies	230 36
Feed, hay, etc.	409 78
Filing boxes	20 00
Flat bottomed boat	16 00
Fire hose	66 00
Fire brick	48 50
Gasoline	7 50
Gas pipes	22 04
General directory	7 50
Granite basin heads	65 00
Granite sill	24 40
Harness and repairs to same	89 15
Hardware, tools, etc.	351 27
Horses	535 00
Horse keep	3,143 35
Horse shoes	803 25
Instruments and repairs to same	300 66
Kerosene	45 87
Lumber	1,487 33
Letter books	18 25
Lime	560 00
Market pans	12 00
Maps	74 00
Manhole covers	240 00
Material for testing pipe	150 00
Moving portable building	75 00
Oak stakes	24 00
Oils	488 13
Oil stoves	34 00
Paving around sewer basins	546 93
Paints	9 00
Photo plates	8 03
Portable building	875 00
Photographs	24 00
Pumps	579 82
Postage stamps	80 00
Pipe crushing machine	2,800 00

Pipe connections to testing machine	30 00
Print 2,000 cards	10 00
Protecting tracks over sewer trench	15 37
Repairing harness	104 55
Repairing tools	32 78
Reconstructing Eighty-seventh street sewer	80 00
Removing water from cellar	12 00
Removing manure	25 00
Repairing tools	6 00
Repairing pumps	180 00
Rubber stamps	8 85
Repairing Hegeman avenue sewer	560 00
Repairing house connection	25 45
Repairing wagons	10 25
Salt	77 25
Sal soda	11 25
Sharpening tools	3 00
Stamps and stamped envelopes	397 00
Soap	28 28
Steam boiler repairs	290 00
Stationary engine supplies	90 05
Replace stoves	40 00
New roof on Caisson No. 4	273 00
Sewer pipe	322 00
Stationery supplies	34 10
Sundry expenses	12 35
Sewer basins	73 80
Sewer pails	12 00
Stable supplies	224 80
Typewriter	80 50
Tape line	18 00
Testing boiler	8 00
Tracing cloth	130 00
Wagon for repair yard	400 00
Use of boat	5 00
Greater New York Charter	15 00
Veterinary services	29 00

Bureau of Public Buildings and Offices.

Supplies and Repairs Ordered During the Year 1906.

Article or Repair.	Amount.
Automobiles	\$6,970 00
Automobiles, maintenance of	4,399 87
Awnings, hanging, taking down and repairing	740 40
Badges	5 60
Bath and comfort station supplies (on contract)	4,516 26
Bath and comfort station supplies (open order)	4,098 55
Board of horses	1,185 75
Carfare tickets	1,585 00
Carpenter work	6,319 12
Carpets, linoleum, etc.	1,055 49
Carpet cleaning	364 15
Cleaning windows	63 00
Clipping horses	18 00
Clocks, winding and repairs	230 86
Coal (on contract)	41,748 40
Dockage of baths	2,300 00
Draughtsmen's supplies	1,008 19
Electric work and supplies	3,316 10
Elevator repairs	736 33
Engineman's supplies	920 52
Flags	120 75
Floating bath repairs (on contract)	4,473 00
Floating bath repairs (open order)	570 00
Furnishing heat to court	250 00
Furniture	5,705 11
Furniture, repairing	1,193 73
Furniture, removing	492 00
Glazing	733 94
Grate bars	410 00
Halyards	53 80
Hardware	1,061 86
Harness and repair	192 05
Horseshoeing	244 89
Hose, steam	205 00
Ice (on contract)	1,547 99
Iron work	1,410 40
Janitor's supplies (on contract)	1,816 98
Janitor's supplies (open order)	3,964 31
Laundering towels (on contract)	1,468 74
Laundering towels (open order)	67 93
Locksmithing	542 85
Lumber	656 08
Maps, etc.	510 50
Mason work	1,908 06
Office supplies	1,024 07
Painters' supplies	343 90
Painting	6,219 25
Photographs	164 00
Plastering	847 43
Plumbing	4,643 03
Postage	809 50
Printed books	47 00
Printing	127 50
Rental of register	300 00
Repairing bicycle	16 00
Roofing	1,164 20
Rubber hose and boots	215 50
Safes, repairs to	35 00
Shades and curtains	171 48
Sidewalk elevators	525 00
Special stenographic services	184 24
Steamfitting	5,679 26
Storage of floating baths	389 00
Stoves, repairs to	654 00
Street cleaning supplies	219 10
Street sweeper, repairs to	297 25
Survey of property	150 00
Table water	253 40
Telephone service	4,914 97
Tiling (contract)	2,133 00
Tower clocks, repairs to	228 00
Towing baths	350 00
Typewriting machine and repairs	841 25
Ventilators	90 50
Veterinary services	33 75
Wagons	300 00
Wagons, repairs to	203 35
Wood	235 25

Coal.

Statement showing coal delivered to public buildings during the year:

Building.	Number of Tons.	Amount.
Borough Hall.....	425	\$2,465 00
Municipal Building.....	700	4,060 00
Court House.....	760	4,408 00
Hall of Records.....	575	3,335 00
County Jail.....	720	4,176 00
Disciplinary Training School.....	380	2,204 00
Second District Magistrates' Court.....	40	232 00
Third District Magistrates' Court.....	40	232 00
Fifth District Magistrates' Court.....	25	145 00
Sixth District Magistrates' Court.....	20	116 00
Seventh District Magistrates' Court.....	10	58 00
First District Municipal Court.....	20	116 00
Third District Municipal Court.....	45	261 00
Fourth District Municipal Court.....	15	87 00
Children's Court.....	20	116 00
Gates Avenue Court House.....	30	174 00
Bath No. 1.....	360	2,088 00
Bath No. 2.....	900	5,220 00
Bath No. 3.....	1,000	5,800 00
Bath No. 4.....	560	3,248 00
Bath No. 5.....	470	2,726 00
Comfort Station No. 2.....	8	46 40
Comfort Station No. 3.....	10	58 00
Comfort Station No. 4.....	14	81 20
Comfort Station No. 5.....	8	46 40
Comfort Station No. 6.....	8	46 40
Floating Baths.....	10	58 00
Administration Building, Wallabout Market.....	25	145 00
Total.....	7,198	\$41,748 40

Bureau of Public Buildings and Offices.

The cost of the supplies and repairs is divided among the different offices and buildings, as follows:

Buildings and Offices.	Supplies.	Repairs.	Total.
Borough President.....	\$13,112 78		\$13,112 78
Commissioner of Public Works.....	620 24		620 24
Assistant Commissioner of Public Works.....	1,992 75		1,992 75
Topographical Bureau.....	50 93		50 93
Bureau of Highways.....	1,351 84		1,351 84
Bureau of Sewers.....	3,671 89		3,671 89
Bureau of Public Buildings and Offices.....	5,294 37		5,294 37
Bureau of Incumbrances and Permits.....	4 50		4 50
Bureau of Buildings.....	474 14		474 14
Borough Hall.....	4,679 09	\$9,569 25	14,248 34
Municipal Building.....	6,375 86	8,335 44	14,711 30
Court House.....	6,905 35	2,850 27	9,755 62
Hall of Records.....	4,922 63	3,766 33	8,688 96
Kings County Jail.....	4,471 18	2,580 12	7,051 30
Disciplinary Training School.....	2,204 00	1,097 58	3,301 58
First District City Magistrates' Court.....	94 77	376 00	470 77
Second District City Magistrates' Court.....	332 42		332 42
Third District City Magistrates' Court.....	316 89	142 96	459 85
Fourth District City Magistrates' Court.....	95 94	526 58	622 52
Fifth District City Magistrates' Court.....	232 66		232 66
Sixth District City Magistrates' Court.....	208 92	21 45	230 37
Seventh District City Magistrates' Court.....	108 06	90 37	198 43
Eighth District City Magistrates' Court.....	74 18	77 05	151 23
First District Municipal Court.....	370 95		370 95
Second District Municipal Court.....	82 52	177 90	260 42
Third District Municipal Court.....	357 83	175 31	533 14
Fourth District Municipal Court.....	169 38		169 38
Fifth District Municipal Court.....	54 99		54 99
Sixth District Municipal Court.....	329 05	293 34	622 39
Seventh District Municipal Court.....	6 85	79 00	85 85
Children's Court.....	338 28	16 65	354 93
Gates Avenue Court House.....	186 00	21 75	207 75
Atheneum Building.....	45 00	34 50	79 50
Bath No. 1.....	3,170 69	830 22	4,000 91
Bath No. 2.....	6,331 99	1,135 83	7,467 82
Bath No. 3.....	6,935 58	2,168 72	9,104 30
Bath No. 4.....	4,460 16	470 52	4,930 68
Bath No. 5.....	3,945 69	828 28	4,773 97
Public Comfort Station No. 1.....	387 15	285 79	672 94
Public Comfort Station No. 2.....	230 80	194 60	425 40

Buildings and Offices.

Supplies.

Repairs.

Total.

Public Comfort Station No. 3.....	244 25	228 84	473 09
Public Comfort Station No. 4.....	265 95	316 34	582 29
Public Comfort Station No. 5.....	239 40	516 38	755 78
Public Comfort Station No. 6.....	231 15	176 40	407 55
Store Room.....	5,272 81		5,272 81
Floating Baths.....	628 96	8,663 66	9,292 62
Administration Building, Wallabout Market.....	272 05	201 43	473 48
Street Cleaning, Wallabout Market.....	1,245 75		1,245 75
Transportation.....	770 00		770 00
Paint Shop.....	229 71		229 71
Miscellaneous.....	150 00		150 00
Telephone Switchboard.....	3,402 55		3,402 55
Supplies and Contingencies.....	803 00		803 00
Total.....	\$98,753 88	\$46,248 86	\$145,002 74

List of contractors and merchants who have furnished supplies to the several offices and bureaus, or made repairs to the public buildings during the year, showing the class of service and the amount of their individual accounts:

General Administration, 1906.

Brooklyn Heights Railroad Company, carfare tickets.....	\$200 00
Byrns, Agnes R., typewriting.....	235 00
Coleman, E., typewriting.....	12 00
Coney Island and Brooklyn Railroad Company, carfare tickets.....	10 00
Carroll, Thomas F., newspapers.....	41 26
Coler, Bird S. (President), contingencies.....	500 00
Dunning, Wm., typewriting.....	92 30
Eldridge, F. M., postage and stationery.....	326 00
Jauvrin, Geo. M., reportorial service.....	100 00
Lane, Agnes F., stenography.....	100 00
Maurer, H. B., expert investigating.....	178 20
Municipal Journal Publishing Company, subscription.....	3 00
Ormond Auto Company, rent of auto.....	60 00
Sefton, W. Harry, investigating.....	225 00
Webb, John L., typewriting.....	32 15

Topographical Bureau, 1906.

Beatty, F. M., blue prints.....	\$93 28
Bischof, Geo. J., personal expenses.....	12 78
Brandis, Sons & Co., F. E., engineering instruments.....	3 65
Brooklyn Heights Railroad Company, carfare tickets.....	1,380 00
Brooklyn Blue Print Works, blue prints.....	65 42
Brooklyn Construction Company, monument covers.....	165 00
Byrne, John, carpenter work.....	740 00
Fries, Longin P., carpenter work.....	1,130 00
Hyde, E. B., maps.....	130 00
Jacobson & Sons, A. and S., lumber.....	59 02
Jacobson & Cowenhoven, hardware.....	8 73
Kaw's Sons, Mrs. B., rubber goods.....	54 00
Keuffel & Esser, draughtsmen's supplies.....	900 00
Kiernan, Edward S., mason work and material.....	187 50
Kistler, M. D. & D. A., rent of land.....	300 00
Pearson's Sons, A., office furniture.....	1,689 60
Sanborn Map Company, map correction.....	275 00
Shevlin, M. J., hardware.....	6 00
Walsh Filing Company, cards.....	27 12
Ward, Chas. P., personal expenses.....	16 80
Warth, P., boat hire.....	182 50

Bureau of Incumbrances, 1906.

Blanchard, F. G., electric supplies.....	\$3 00
Brady, Bernard, horehoeing.....	109 50
Brooklyn Heights Railroad Company, carfare tickets.....	545 00
Brown, J. H., tool repairs.....	7 80
Coney Island and Brooklyn Railroad Company, carfare tickets.....	10 00
Deegan, M. F., hardware.....	8 00
Douglass, Isaac W., horse keep.....	50 00
Donnelly, T. J., horse keep.....	225 00
Eldridge, F. M., postage and stationery.....	43 60
Fiske Rubber Company, auto repairs.....	7 75
Kramer, Herman, wagon repairs.....	31 75
Kornobis, H. W., veterinary services.....	3 00
Lockwood, H. S., electric work.....	3 30
Marlborough M. F., wagon repairs.....	101 35
Mulstein, John, tool repairs.....	58 05
Nelson, M. H., horse keep.....	25 00
New York and New Jersey Telephone Company, telephone coupons.....	24 00
Rhodes Company, removal of furniture.....	7 00
Remson, I. S., Manufacturing Company, harness, etc.....	28 40
Wilson, A. F., rubber stamps.....	5 40

Bureau of Highways, 1906.

Allen, Wm. T., horse keep.....	\$200 00
Automobile Exchange and Storage Company, storage.....	1 50
Andreasson & Lundquist, ashes.....	20 00
American Can Company, tin cans.....	63 58
Burling, Benj., harness repairs.....	3 06
Bartlett, Frederick L., surveyor's fees.....	2,215 05
Berns, Dr. Geo. H., veterinary services.....	18 50
Brown, J. H., repairing tools.....	448 55
Barrett Manufacturing Company, pitch.....	88 97
Brown, Martin B., Co., office stationery.....	218 00
Banks Law Publishing Company, New York Charter.....	7 00
Bonacci, Dominick, contract work.....	12,147 82
Bartlett, Homer L., surveyor's fees.....	112 54
Byrne, James J., surveyor's fees.....	511 16
Bedford Construction Company, contract work.....	8,471 42
Bureau of Charities Wood Yard, wood.....	40 00
Bacon & Co., coal.....	746 25
Borough Construction Company, vitrified pipe.....	428 85
Byrne, John, office furniture.....	164 85
Brooklyn Heights Railroad Company, carfare tickets.....	1,500 00
Bonacci & Vincelli Construction Company, contract work.....	8,535 05
Bauer, Henry C., rent.....	250 00
Burke, W. F., contract work.....	2,754 97
Bracken, McAvaney Company, contract work.....	35,467 42
Buffalo Steam Roller Company, machine fittings.....	117 50
Brooklyn Improvement Company, contract work.....	900 00
Berger, C. L., & Sons, surveying instruments.....	561 35
Berger Manufacturing Company, iron fittings.....	250 34
Barber Asphalt Pavement Company, contract work.....	413,265 11

Brooklyn Alcatraz Asphalt Company, contract work.....	231,244 03	Ray, Frank A., contract work.....	243 40
Campbell, M. G., wagon repairs.....	178 00	Republic Construction Company, contract work.....	4,960 30
Cook, E. H., Coal Company, coal.....	334 50	Rome Contracting and Realty Company, field books.....	115 20
Crystal Spring Water Company, drinking water.....	3 00	Sondericker, Henry J., Commissioner of Deeds' fees.....	5 31
Cornell, John F., horse keep.....	400 00	Shevlin, M. J., hardware.....	882 80
Corragan & Tillson, Inspectors' badges.....	30 00	Sclally, Edward H., restoring pavement refund.....	9 00
Conklin, Jacob E., contract work.....	21,705 13	Schneider's Sons, N., contract work.....	25,337 20
Castle, Walter L., contract work.....	6,093 05	Spalding & Bros., A. G., auto repairs.....	176 68
Coney Island and Brooklyn Railroad Company, carfare tickets.....	150 00	Schaffner's Sons, O., horse keep.....	387 50
Continental Asphalt Paving Company, contract work.....	696 28	Slattery, John, horse feed.....	44 95
Cunningham & Kearns Construction Company, contract work.....	7,627 19	Strahan, Joseph, auto license.....	2 00
Clynta Water Company, drinking water.....	38 90	Standard Oil Company, oil.....	162 50
Carey, James F., surveyor's fees.....	2,303 91	Sanborn Map Company, maps.....	290 00
Cranford Company, contract work.....	218,568 53	Studebaker Bros. Company, sprinklers.....	765 00
Clinton Construction Company, contract work.....	11,680 55	Scott, Thos. A., horse clipping.....	3 00
Culp, E. M., contract work.....	3,491 85	Stein & Co., A. M., horses.....	325 00
Cavanagh Bros. & Co., hardware.....	2,163 62	Seaboard Construction Company, contract work.....	6,410 26
Connor, John, contract work.....	1,202 04	Siler, W. P., stamp repairs.....	1 50
Cranford, Charles, contract work.....	1,120 95	Tagliabue, C. J., thermometers.....	87 75
Douglass, Daniel, contract work.....	68,636 72	Townsend, Arthur, auto storage and supplies.....	721 30
Delaney & Son, F., horseshoes.....	232 75	Tutty, John, horseshoeing.....	19 50
Doegan, Wm. F., shoeing horses.....	52 00	Torrey, Edward, surveyor's fees.....	1,272 64
Dennington, Fred C., surveyor's fees.....	2,039 26	Uvalde Asphalt Paving Company, contract work.....	236,846 44
Densmore Typewriting Company, typewriters, etc.....	158 85	U. S. Wood Preserving Company, restoring pavement.....	7 82
Dow, A. W., brass moulds.....	10 75	Underwood Typewriter Company, typewriter supplies.....	268 65
Department of Corrections, brooms, etc.....	134 00	Union League Stables, horse keep.....	50 00
Dauphin, William, iron fittings.....	525 00	Vofrie & O'Hearn, contract work.....	9,998 80
Durland, Randolph, restoring pavements.....	91 00	Vander Wegen, Wm., office furniture repairs.....	2 85
Donlon, P. J., contract work.....	2,658 82	Valentine & Co., paints.....	651 33
Donlon Contracting Company, contract work.....	3,148 54	Wilson, A. T., rubber stamps.....	27 30
Eldridge, F. M., postage stamps.....	882 25	Wechsler, J. Chas., contract work.....	669 60
Eddy & Co., Geo. M., repairing tapes.....	9 25	Williamsburg Auto and Gas Company, auto repairs and supplies.....	2,847 21
Estreich Sons, horse feed.....	82 98	Williams, A. L., surveyor's fees.....	507 78
Egbert, Geo. W., contract work.....	2,727 35	Woodcock, Henry W., surveyor's fees.....	289 60
Eastern Bermudez Asphalt Company, contract work.....	5,548 68	Wabash Cabinet Company, office furniture.....	320 61
Funk Brothers, oil.....	77 32		
Feist, J. August, contract work.....	3,541 20		
Frick, Frank E., sharpening tools.....	140 74		
Fitzpatrick, E., iron work.....	28 10		
Flager, F. W., auto repairs.....	15 00		
George & Farrell, contract work.....	31,109 16		
Graham, James P., contract work.....	11,130 48		
Gallagher, Frank J., contract work.....	962 48		
Grogan, John, horse keep.....	349 17		
Gifford, John A., carriage supplies.....	7 00		
Georgia-Florida Lumber Company, lumber.....	840 00		
Hastings Pavement Company, contract work.....	147,355 02		
Hanover Oil Company, oil.....	250 00		
Hickey, Maurice F., contract work.....	23,201 32		
Hanley, George W., rent.....	729 16		
Hansen, Charles C., openings.....	40 00		
Hemphill, A. J., oil cans.....	168 58		
Hughes, John, carfare.....	3 40		
Hyde, E. Belcher, maps, etc.....	30 00		
Hawkins, J. M., horse keep.....	137 50		
Interstate Paving Company, contract work.....	37,203 22		
Jennings, J. H., map rollers.....	36 00		
Jackson & Cowenhoven, hardware.....	21 50		
Jacobson & Sons, Arthur C., oak stakes.....	100 00		
Kramer, Herman, wagon repairs.....	269 25		
King, John, office furniture.....	32 82		
Keuffel & Esser Company, surveyors' instruments.....	291 42		
Kane Brothers, horseshoeing.....	242 25		
Keystone Garage Company, auto repairs.....	43 75		
Kelly, John J., horseshoeing.....	232 00		
Kornobis, H. W., veterinary services.....	50 50		
Kings County Auto Company, storage and repairs.....	147 26		
Knox Automobile Company, auto supplies.....	9 00		
Luck, Frederick, contract work.....	17,983 81		
Lyman, Peter F., contract work.....	4,204 90		
Leonard, Daniel S., carpenter work.....	398 00		
Latimer & Sons & Co., B. G., linoleum.....	67 90		
Lockwood, Henry S., electric light fixtures.....	112 57		
Lilley, Louis, contract work.....	11,521 08		
Lighthouse, Chas. F., auto signs.....	21 50		
Mangieri Company, contract work.....	6,788 20		
Meade, Chas. F., horse keep.....	56 50		
Moran & Crowley, contract work.....	14,543 99		
Murphy Brothers, contract work.....	11,416 09		
Metz, Otto, contract work.....	3,215 20		
Mulstein Company, John, repairing tools.....	820 35		
Maher, James E., horseshoeing.....	45 50		
Midwood Contracting Company, contract work.....	2,377 23		
Murphy, Alexander D., surveyor's fees.....	131 28		
Middleton, John, surveyor's fees.....	3,281 86		
McCarthy, Daniel F., contract work.....	2,949 00		
McDermott, Patrick T., contract work.....	8,930 01		
McSheffery, James, horseshoeing.....	70 25		
McGrath & McSheffery, horseshoeing.....	71 75		
New York and New Jersey Telephone Company, coupon books.....	740 00		
Norton, Dennis, contract work.....	347 21		
Newman, Jas. I., contract work.....	998 08		
Newman, Henry, contract work.....	765 60		
Nelson, W. H., horse keep.....	29 15		
National Trading Company, contract work.....	5,650 29		
Norton & Gorman Contracting Company, contract work.....	26,908 80		
O'Grady, John, contract work.....	354 00		
O'Neill's Sons, James, coach hire.....	512 00		
O'Grady Brothers, contract work.....	13,764 42		
O'Hara, Edward, horse keep.....	325 00		
Opera Stables, horse keep.....	425 00		
O'Keefe, Owen, contract work.....	4,980 42		
O'Connell, Daniel G., horse keep.....	225 00		
O'Hara Brothers, contract work.....	13,142 34		
Pearson's Sons, A., office furniture.....	536 00		
Powers & Son, P. H., horse keep.....	31 67		
Peerless Garage, auto supplies.....	186 36		
Police Department, testing boilers.....	6 00		
Platt, Wm. O., rent.....	625 00		
Phillips, M. H., contract work.....	1,200 89		
Phoenix Towing and Transportation Company, contract work.....	1,956 50		
Purcell, James, contract work.....	11,764 30		
Putnam, W. K., contract work.....	25,735 00		
Pierson, Edw. E., contract work.....	4,347 00		
Quinn, James, contract work.....	75,107 01		
Quinn, John E., contract work.....	47,652 29		
Reimer, John B., contract work.....	9,135 00		
Rutan & Co., Josiah T., contract work.....	1,736 22		
Reihle Bros. Testing Machine Company, quartz.....	50 22		
Remson Manufacturing Company, The I. S., repairing wagon, etc.....	1,397 34		
Reasner & Henning, contract work.....	11,333 00		
Reilly, John, contract work.....	5,237 49		
Robertson & Gerhart, contract work.....	41,352 62		
Riley, W. F., grading lots.....	467 95		
Receiver of Taxes, taxes.....	230 65		
Raban, Albert, glass.....	12 00		
		Bureau of Sewers, 1906.	
		Allen, Wm. T., horse keep.....	\$907 25
		Abrams, Chas. W., salt.....	77 25
		Abraham & Straus, photo supplies.....	1 53
		Abels Gold Realty Company, private sewer.....	176 33
		Borough Construction Company, contract work.....	297 70
		Brooklyn Heights Railroad Company, carfare tickets.....	1,200 00
		Brooklyn Alcatraz Asphalt Company, restoring pavement.....	23 70
		Bader, Louis, horse keep.....	300 00
		Brown, Edward, horse keep.....	3,151 07
		Birms, D. W., manhole heads and covers.....	239 00
		Barber Asphalt Paving Company, restoring pavement.....	31 10
		Burke, Wm. P., sewer basin.....	150 00
		Byrne, John, portable house.....	177 00
		Brown, Jas. H., hardware.....	14 78
		Bell, Harry W., sewer pipe.....	82 50
		Benvenue Granite Company, basin heads.....	49 50
		Buckley, J. H., rubber goods.....	71 50
		Brandes, Sons & Co., F. E., surveyor's supplies.....	103 70
		Bergstrom & Bass, pumps.....	164 00
		Bowns, Howard S., contract work.....	8,517 94
		Bureau of Highways, repairing streets.....	687 87
		Brand, I. M., postage stamps.....	40 00
		"Brooklyn Daily Eagle," advertising.....	85 50
		"Brooklyn Daily Times," advertising.....	84 00
		"Brooklyn Citizen," advertising.....	85 50
		Brooklyn Union Publishing Company, advertising.....	88 50
		"Brooklyn Freie Presse," advertising.....	72 87
		Creem, John J., contract work.....	38,370 63
		Clynta Water Company, drinking water.....	139 70
		Cantwell, Wm. J., notary fees.....	5 31
		Clinton Construction Company, contract work.....	6,727 92
		Campbell, John D., repairing steam roller.....	4 00
		Cavanagh Brothers & Co., hardware.....	1,629 43
		Carragan and Tilson, badges.....	40 80
		Cross, Astin & Ireland, lumber.....	567 05
		Cranford Company, restoring pavement.....	87 98
		Cranford, Wm. A., boat hire.....	3 50
		Clarke, Audley, brick and lime.....	4,347 65
		Cooney & Son, Jas. F., roof repairing.....	22 00
		Carey, J. L., contract work.....	15,096 94
		Cropsey & Mitchell, lumber.....	29 18
		Cropsey, Andrew B., veterinary services.....	2 00
		Culp, E. M., contract work.....	7,334 95
		Delaney, P., shoeing horses.....	85 00
		Dean Steam Pump Company, pump repairs.....	96 73
		Dobbie Foundry and Machine Company, engine supplies.....	3 00
		Daegan, Wm. F., horseshoeing.....	191 00
		Department of Corrections, broom handles.....	37 99
		Daus Duplicating Company, The Felix, Duplicators.....	5 00
		Dolan, John F. (Benvenue Granite Company), granite work.....	101 50
		Donlon Contracting Company, contract work.....	22,764 69
		Douglass, Isaac S., horse keep.....	300 00
		Doyle, Dr. Wm. F., veterinary services.....	4 50
		Donohue & Sons, Peter J., boiler repairs.....	383 15
		Donegan and Redmond, contract work.....	25,349 74
		Eddy & Co., Geo. M., steel tapes, etc.....	49 15
		Engeman, Wm. A., basin heads.....	10 00
		Eimer & Amend, iron boxes.....	137 50
		Eldredge, F. M., stamps, etc.....	636 23
		Esceba Manufacturing and Supply Company, manhole heads.....	630 24
		Eastern Bermudez Asphalt Paving Company, paving repairs.....	53 70
		Fox & Co., John, manhole covers.....	140 00
		Fitzpatrick, E., iron fittings.....	18 00
		Fox, Hugh L., hardware.....	445 65
		Fairbanks, Morse & Co., repair oil tanks.....	20 18
		Frick, Frank E., tool repairs.....	9 73
		Graham, James P., contract work.....	5,068 06
		Germania Real Estate and Improvement Company, private sewer.....	681 94
		Gfreerer, B. E., hose repair.....	25 45
		Gallagher, Frank J., contract work.....	756 00
		Goodyear India Rubber Glove Company, rubber boots.....	199 20
		Hicks & Co., M. F., broken stone.....	90 85
		Hemphill, A. J., brass fittings.....	28 47
		Hyde, E. Belcher, correction to atlas.....	200 00
		Hollingsworth, B. C., horse keep.....	227 80
		Hayes, Philip, contract work.....	9,850 31
		Hammond & Stone, contract work.....	7,244 18
		Hunt & Son, W. F., charters.....	15 00
		Hirsh, Abram L., acid.....	144 00
		Harris, Isaac, refund.....	86 58
		Hughes' Sons, Edward, horseshoeing.....	21 00
		Inter-State Paving Company, paving repairs.....	21 00
		Jennings, James, contract work.....	5,091 88
		Joyce, E. T., pump repairs.....	22 04
		Johnson Company, Henry, engine repairs.....	72 77
		Jackson & Cowenhoven, machine repairs.....	102 75
		Johnson, Addison, feed bags.....	6 35
		Jacobson & Sons, Arthur C., lumber.....	472 61

Julien, Francis, digging cellar	12 00	Cross, Austin & Ireland Lumber Company, lumber	191 32
Kane & Son, Mrs. B., rubber goods	220 20	Coney Island and Brooklyn Railroad Company, carfare tickets	95 00
Keenan, C. W., paints	3 00	Cooney, Patrick E., horse shoeing	3 25
Kramer, H., wagon repairs	351 25	Cornell, John F., horse keep	550 00
King, John, contract work	1,025 00	Cunningham, James, undertaker	175 00
Klinge, Julius E., expense account	26 90	Cobb, George W., locks and repairs	4 00
Kingston Realty Company, private sewer refund account	1,288 09	Collins, C. V., Superintendent, State prison goods	4,796 39
Keuffel & Esser, draughting materials	308 41	Cassidy & Son Manufacturing Company, contract work	2,106 75
Keystone Garage, gasoline	2 00	Colwell Lead Company, valves, etc.	55 03
Kelly, Frank, shoeing horse	7 00	Cuthertson, F. J., furnace supplies	136 90
Kornobis, H. W., veterinary services	27 00	Creamer & Co., F. D., cement, sand, etc.	24 43
Kohnken, Chas., cleaning stable	25 00	Canavan, Francis J., brass fittings	212 90
Lockwood, Henry S., lamp repairs	1 50	Cavanagh Brothers Company, contract work	6,446 74
Lydan, P., horseshoeing	171 00	Cook, E. M., rent	900 00
Long Island Railroad Company, protecting tracks	529 07	Coger's Sons, George W., pump repairs	162 50
Lynch and McMurray, sand	40 00	Columbia Insecticide Company, germicide	7 50
Linn & Son, V., wagon repairs	240 00	Campbell, H. G., wagon repairs	19 15
Murray, P. J., contract work	50,959 68	Curtin Manufacturing Company, W. H., fittings	17 63
Malloy & Co., James, contract work	223,674 73	Driscoll, M. J., plumbing	987 58
Maher, James E., horseshoeing	12 25	Davis, Albert, signs	244 85
Murphy Brothers, contract work	29,010 86	Department of Correction, sweepers' supplies	1,156 40
Martin, David, horse keep	22 00	Dubey, Edward A., signs	271 50
Miller & Co., C. L., paints	242 75	Dougherty & Buckley, undertakers	35 00
Mullady, Michael, horseshoeing	20 00	Decker, James F., undertaker	35 00
Mahnken, John H., lime	550 00	Daly, Wm. E., undertaker	35 00
Martin, William, horse keep	20 00	Deegan, Wm. F., horse shoeing	96 00
Moser Palace Carriage Company, horse keep	250 00	Dans, B. L., architect's services	1,623 94
Matthews Harness Company, harness repairs	8 20	Dags, George, ash cans	30 95
Meade, Chas., horse shoes	113 95	Dinsmore Typewriter Company, office furniture	30 90
Mulstein Company, John, tool repairs	5 37	Dixon, J. J., furnace supplies	19 90
McNamee, John, contract work	95,615 20	Dykeman, Jas. H., lumber	13 25
McAuliff, John, second hand boat	16 00	Duns Duplicator Company, Felix F., typewriter supplies	6 00
McPartland, M. T., horse shoes	6 50	Donnelly, T. J., undertaker	35 00
McSheffery, James, shoeing horses	183 00	Ducker Company, house	912 50
McCauley, Patrick J., contract work	12,823 54	Doyle, Dr. W. F., veterinary services	24 00
McGrath and McSheffery, horse shoeing	102 00	Donegan, metal polish	72 00
New York Tunnel Company, dump tickets	300 00	Diamond Match Company, matches	11 90
Newman, Henry, contract work	16,797 50	Eldridge, F. M., stationery and supplies	1,553 19
Nally, Chris., contract work	2,293 55	Ehlenberger, Geo., undertaker	70 00
New York Belting and Packing Company, Limited, hose	51 50	Ellis, E. B., undertaker	105 00
O'Keeffe, Wm. C., gas fittings	41 17	Engoron, N., grazing	207 75
O'Loan, Robert, wagon repairs	61 00	Eagle Iron Works, iron work	414 00
O'Grady Brothers, contract work	7,701 44	Edison Electric Illuminating Company, electric fixtures	23 40
O'Brien Brothers, dump tickets	400 00	Forker & Baldwin, American flag	120 00
Powers & Son, P. H., horse keep	100 00	Froehlich Brothers, undertakers	35 00
Pearsons' Sons, A., office furniture	240 00	Finkenauf, H. J., undertaker	35 00
Peirce Company, John, contract work	2,070 00	Fitzgibbons Boiler Company, boiler supplies	91 77
Paulson, Thomas, brass fittings	29 58	Frick, Frank E., tools	3 50
Perfection Chemical Company, chemicals	226 16	Ferris, Thos. E., plumbing	7 32
Police Department, boiler testing	16 00	Fuller & O'Connor, plumbing	2,444 00
Porzio, Pasquale, contract work	1,506 52	Fitzpatrick, E., iron work	1,639 23
Peerless Garage, auto repairs	34 00	Funk, J. P., reflector of tower clock	145 00
Quinlan, Wm., dump tickets	200 00	Fairbanks, Morse & Co., pump supplies	80 00
Riley, James, contract work	2,455 28	Fiske Rubber Company, case for auto	16 30
Remson Manufacturing Company, The I. S., harness	254 40	Flatbush Motor Car Company, auto supplies	272 86
Riley, Wm. F., Sewer basins	2,878 91	Findlay Manufacturing Company, electric works	7 00
Rutan, Harry A., contract work	48,553 95	Gateson, Daniel F., plumbers' supplies	1,154 81
Russell and Wylis, photo supplies	24 00	Grover, Wm. F., heating fittings	100 00
Stevenson and Marsters, office stationery	1 40	Gately, Thos. J., plumbing repairs	272 65
Sparks, John W., commissioner deeds, fees	5 36	Gleason, Edw. J., office furniture	2,197 97
Shevlin, M. J., hardware	266 40	Garrett & Co., pumps and tanks	286 40
Scellay, John A., engine supplies	83 50	Great International Window Cleaning Company, window cleaning	63 00
Slattery, John, horse feed	447 27	Gifford, John A., auto repairs	7 80
Spaulding, Frank, horse hire	136 00	Glidden, W. L., bunting, etc.	205 82
Swan & Finck Company, oils	566 78	Gorman Company, John J., towels	655 00
Stein & Co., A. M., horses	560 00	Gourlay, Stewart G. B., undertaker	35 00
Schaefer, M., dump tickets	600 00	Gedman, Axel S., inspectors' fees	87 00
Sigretto and Mannino, contract work	71,256 77	Haggerty & Walsh, horse keep	44 00
Scott, Thomas A., horse clip	6 00	Hyde, R. B., maps	608 00
Shadboldt Manufacturing Company, wagon repairs	251 60	Hall, Horatio, horse keep	201 50
Sattler, Wm. R., machine supplies	43 69	Harron, Howard H., undertaker	70 00
Upton, George, directory	7 50	Hildebrandt, H., undertaker	35 00
Underwood Typewriter Company, typewriter and supplies	93 00	Hart, Jos. L., undertaker	35 00
Union League stables, horse keep	50 00	Hinman Bros., undertakers	35 00
Valentine & Co., paints	9 00	Hamilton, deeds and filing	5 31
Vachris, Chas. F., sewer basins	162 00	Hanphill, J. F., fire hose	166 11
Wilson, A. T., rubber stamps	8 85	Haggerty & Eellicott, typewriting copy	50 00
Winslow, Geo. E., Commissioner of Deeds, fees	5 31	Hartford Suspension Company, electric supplies	50 00
Worthington, Henry R., engine supplies	217 35	Hall, Frank P., traveling expenses	2,284 84
Watson & Pittinger, lumber	140 00	Haran, P. M., headstones	1,099 00
Williamsburg Auto and Storage Company, auto repairs	4 09	Hamlin, A. D., architect's services	1,000 00
Bureau of Public Buildings and Offices, 1906.		Hunt, N. J., mason work	102 35
American Ice Company, ice	\$1,547 99	Ireland, Thos. H., undertaker	35 00
Almirall, Raymond T., architect services	1,550 00	Iron Clad Manufacturing Company, ash cans	111 84
Abraham & Straus, leather supplies	5 85	Imperial Theatre, heating	150 00
Alberene Stone Company, mason work	321 90	Joyce, E. F., hardware	306 93
Atherton, A. K., electrical work	20 25	James, Wm. H., steam fittings	22 94
Atlantic White Lead and Linseed Oil Company, white lead	35 00	Jenkins Bros., discs	2 75
Brooklyn Heights Railroad Company, carfare tickets	1,485 00	Jackson & Cowenhoven, hardware	1,023 18
Berry, Sidney A., plumbing	26 01	Jennings, J. H., carpenter work	418 09
Brand, I. M., postage stamps	61 00	Jacobson & Sons, A. C., lumber	498 00
Byrne, John, carpenter work	3,053 39	Jacobs, John, cartage	5 00
Bjurborg, Peter, hardware	168 32	Jackson, F. Frederick, contract work	2,680 25
Bishop, Howard W., locksmithing	404 83	Johnson, Addison, office furniture	25 30
Bergstrom & Bass, boiler repairs	2 50	Johnson Service Company, repairing heating plant	277 90
Buckley, John W., hose and reducers	87 08	Johnston, Thos., mason work	40 00
Bader, Louis, undertaker	35 00	Keenan, C. W., paint	267 75
Betz, John C., undertaker	35 00	Kruger, John L., electric fixtures	13 59
Brown, M. S. & P. C., hardware	11 25	Kiernan, Edw. S., mason work	1,368 72
Bureau of Charities, wood yard, kindling wood	235 50	King, John, carpenter work	4,148 38
Bohleber, Julius M., steam fittings	137 48	Kramer, Herman, wagon repairs	83 00
Bowers, Walter C., electrical repairs	153 02	King & Son, mason work	428 65
Bernham, George W., office furniture	177 04	Kornobis, H. W., veterinary services	5 00
Bleuchard, F. G., electrical supplies	92 02	Kanouse Mountain Water Company, drinking water	86 50
Bernstein & Bernstein, architect's services	850 00	Kings County Auto Car Company, supplies	5 50
Benoit, A. V., steel tapes	186 00	Kane & Son, Mrs. B., rubber goods	37 65
Bank Law Publishing Company, law books	2,315 50	Keystone Garage, auto supplies	5,101 23
Brooklyn Blue Print Company, blue prints	59 08	Keuffel & Esser, draughtsmen's supplies	1,056 30
Brooklyn Auto Company, storage	109 62	King, Philip F., plumbing	251 18
Borne, Scrymser Company, oils	142 02	Kiely & Mueller Co., bath supplies	6 00
Burk & Tuff, auto supplies	277 43	Knowles, Edw. R., professional services	150 00
Brooklyn "Citizen," advertising	125 00	Kreisel & Groell, engine repairs	1 15
Bedford & Son, P., expressage	325 00	Loeser & Co., Frederick, office furniture	2,811 75
Bay Ridge Yacht Basin, rent	500 00	Linden, F. V., clock repairs	7 50
Borough Construction Company, cement, lime, etc.	34 36	Lockwood, H. S., electrical repairs	1,979 86
Buchanan, J. A., steam fittings	1,447 13	Laughlin & McMally, horseshoeing	9 75
Buttle Parquet Floor Company, parquet flooring	122 50	Lynch, John J., wire mats	54 00
Boman, Geo., boat hire	10 00	Lockitt, John, undertaker	35 00
Bean, Sidney A., auto repairs	32 50	Leahy, M., undertaker	35 00
Clark & Baker, office furniture	310 00	Lennon & Woods Company, undertakers	35 00
Cooney & Son, roofing	239 69	Lennart, H., undertaker	35 00
Campbell, J. D., window shades	15 00	Latimer & Sons, Co., B. G., linoleum	599 25
Carroll, Thos. F., Eagle Almanac	7 00	Lewis, Wm. A., hardware	61 00
Clynta Water Company, drinking water	102 90	Lehman, Herman, lamp light cleaner	47 50
		Geo. F. Lacy, commissioner deed fees	5 31

Ludlam, Austin, surveyor's fees	40 00
Moser, Palser Car Company, horse keep	25 00
Meade, Chas. F., horse keep	99 00
Michaels, J., window shades	110 00
Miller, C. L.	2 50
Maintenance Company, The, electrical repairs	1,078 15
Maier, Jas. E., horseshoeing	89 50
Manganese Steel Safe Company, repairing	47 50
Montenese, Francis F., undertaker	140 00
Matthews, undertaker	35 00
Metz, Otto, tiling	2,169 00
Manhattan Fire Extinguisher Company, refilling extinguishers	4 00
Metz, Henry J., undertaker	35 00
Miller, C. E., electric repairs	21 75
Mahoney, Frank, gates	150 00
Moquin, Offerman, Wells Coal Company, coal	41,799 20
Meehan & Co., F. F., towing	915 21
Maurer, H. B., photographs	45 00
Marshall, Robert, streamers	6 00
Merck & Co., creoline	4 50
McGrath & McSheffery, horseshoeing	15 00
McLean, Mary, undertaker	70 00
McGucken, Joseph E., undertaker	35 00
McGlynn, Hays & Co., brass fittings	48 81
McAdams & Carthwright Elevator Company, electrical supplies	85 90
McJilton & Co., boiler compound	134 40
McDermott, John, mason work	195 00
McCormick, R. J., boiler repairs	583 68
McGuinness, Roger, carpenter work	76 82
Nager, Matthew, parts for auto	50 00
Nason, William, undertaker	35 00
New York Dock Company, rent	900 00
New York Broadway Rubber Tire Company, auto supplies	312 43
Norton & Gorman Contracting Company, white sand	28 00
New York Safe Company, safe	190 00
Nicholas Gas Fixture Manufacturing Company, chandeliers	131 00
Neathing, Leslie, Tiling Company, tiling	32 35
New York Belting and Packing Company, hose	215 05
New York and New Jersey Telephone Company, telephone service	3,104 67
National Lead Company, white lead	40 24
National Mortuary Company, undertaker	35 00
O'Connor, J. B., undertaker	35 00
O'Keeffe, Wm. C., plumbing	436 13
Oates, Thos. E., plumbing	265 14
Orient Spray Company, atomizers	25 50
O'Neill, B., furniture repairs	249 66
Otis Elevator Company, cables	431 25
Opera Stables, horse keep	225 00
O'Neill, M. H., roofing	83 75
O'Neill, H., awnings	640 85
O'Sullivan Bros., awnings	56 00
Ozone Fluid Company, disinfectant	60 00
Police Department, testing boilers	60 00
Protective Ventilator Company, ventilator repairs	60 26
Perfection Chemical Company, disinfectants	1,746 90
Pearson, McGlynn & Co., elevator repairs	100 20
Pouch, F. E., undertaker	35 00
Pearson, Alexander, furniture	4,356 84
Pearsall, E. S., varnish	29 71
Pearson's Sons, A., office furniture	6,076 90
Petitjean, Geo., painting	3,994 00
Paulson, Thos., saddles	150 00
Pearse, Geo., carpenter work	1,038 99
Peerless Motor Car Company, auto supplies	69 79
Peerless Garage, storage	51 00
Phoenix Boarding and Livery Stables, horse keep	25 00
Remsen Manufacturing Company, The I. S., harness	989 70
Rush, Myron, Company, contract work	17,495 65
Richards, Alford, wharfage	654 00
Rhodes Company, furniture removal	76 00
Review Publishing Company, guide	4 00
Russell & Wylie, photographs	221 50
Remington Typewriting Company, typewriting machine and repairs	826 25
Roach, Jas. F., undertaker	35 00
Ranzweiler, Wm., undertaker	70 00
Rosow, J. P., clock repairs	232 75
Russell, Robt. B., steam fittings	580 42
Raban, Albert, glass	605 35
Rowe & Son, A. C., fire extinguishers	4 10
Rithmograph Company, typewriter repaired	17 00
Stevenson & Marsters, stationery	166 83
Swan & Finch Company, oil	159 77
Shevlin, M. J., hardware	946 18
Scollay, John A., steam fittings	3,021 60
Schaffmiller's Sons, O., horse keep	5 64
Sattler, Wm. R., engine supplies	117 68
Schmelzle, Wm. F., painting and kalsomining	3,669 30
Self-winding Clock Company, tower clock repairs	66 55
Siler, W. S., clock repairs	67 25
Southworth, A. G., auto storage	9 14
Smith, George, roof repairs	1,534 68
Shapirograph Company, The, typewriter supplies	13 25
Selleck, M. P., typewriting	109 64
Sheffield, Thos., repairs, railings	170 30
Smyth, Neptune B., contract work	1,344 23
Scott, Thos. A., horse clipping	18 00
Sanford, C. E., clock rent	300 00
Schafer's Electric Construction Company, electric work	165 38
Stanley, John T., soap	3 90
Shadboldt Manufacturing Company, sweeper repairs	21 55
Stewart Company, The, varnish	7 50
Schratweiser Fireproof Construction Company, lath and nails	3 95
Salamander Grate Bar Company, grate bars	416 00
Sea Gate Garage, storage and supplies	53 14
Taaffe, J. P., laundry work	1,937 88
Townsend, A. R., brass fittings	747 25
Upington, George, directories	84 50
Underwood Typewriter Company, typewriting supplies	415 25
U. S. Steam Carpet Cleaning Company, carpet cleaning	59 68
United and Globe Rubber Manufacturing Company	75 00
Union League Stables, horse keep	50 75
Vander Wegan, Wm., furniture repairs	621 64
Valentine Company, oils and paints	255 98
Van Dorn Iron Works, contract work	22,611 43
Vosburgh Manufacturing Company, electric fixtures	16 00
Vogt, Henry A., clock repairs	1 00
Van Derwerken's Son, Yates, undertaker	35 00
Van Cliff, Jr., undertaker	35 00
Wilson, A. T., rubber stamps	110 35
Weybranch, G., sweeper repairs	145 54
Wilson, Howard L., card system	21 00
Walsh, Jr., John F., contract work	4,573 00
Wabash Cabinet Company, office furniture	1,753 33
Wilson and Baillie Manufacturing Company, tiling	81 27
Williamsburg Auto Storage Company, autos and supplies	2,500 40
Worthington, H. R., pump repairs	19 20

Webb, John L., typewriting	6 42
Weinberg, M., hardware	81 75
Weir, Jr.'s Son, James, care of plot and planting	50 00
Yost Writing Machine Company, typewriter repairs	3 25

Telephone.

The cost of telephone service during 1906, while much less than 1904, shows a slight increase over 1905. This increase is in the switchboard system and is caused by the greater amount of work in the different bureaus. Telephone coupons cost considerably less in 1906, and the charge for outside telephones (residences and yards) remains about the same as in 1905.

Comparative Statement of Cost of Service.

	1904.	1905.	1906.
Switchboard system	\$3,600 00	\$2,788 50	\$3,402 55
Outside telephones	1,745 56	1,496 50	1,512 42
Telephone coupons	1,234 72	1,040 00	814 00
Total	\$6,580 28	\$5,325 00	\$5,728 97

The charge for outside telephones during 1906 was distributed as follows:

Borough President	\$95 17
Commissioner of Public Works	110 05
Assistant Commissioner of Public Works	45 00
Bureau of Highways	187 87
Bureau of Sewers	723 75
Bureau of Public Buildings and Offices	173 24
Bureau of Buildings	177 34
Total	\$1,512 42

Carfare Tickets.

Comparative Statement of 1905 and 1906 by Bureaus.

	1905.		1906.	
	Number.	Amount.	Number.	Amount.
General Administration	10,220	\$511 00	4,200	\$210 00
Topographical Bureau	12,000	600 00	27,600	1,380 00
Bureau of Highways	22,000	1,100 00	28,000	1,400 00
Bureau of Sewers	28,000	1,400 00	24,000	1,200 00
Bureau of Public Buildings and Offices	28,100	1,405 00	31,300	1,565 00
Bureau of Incumbrances and Permits	8,000	400 00	11,000	550 00
Total	108,320	\$5,416 00	126,100	\$6,305 00

The large increase shown in the Topographical Bureau is due to the fact that in 1905 the men in that Bureau usually paid their own fares and would later charge for them on expense bills; in 1906 all fares were paid with tickets. For a part of the year 1906 the Bureau of Public Buildings and Offices bought tickets for the General Administration; this caused the decrease in that account and partly accounts for the increase in the Bureau of Public Buildings and Offices.

The increase here shown, except as before stated, is attributed to the increased volume of work in progress in the different bureaus.

In Account with the Department of Finance.

The number of vouchers examined in the office of the General Bookkeeper and forwarded to the Comptroller for payment was 4,362, submitted to the several bureaus as follows:

	Number.	Amount.
General Administration	88	\$76,611 92
Topographical Bureau	103	77,739 43
Bureau of Highways	1,859	2,538,634 42
Bureau of Sewers	1,024	1,103,454 69
Bureau of Public Buildings and Offices	1,166	523,910 34
Bureau of Incumbrances and Permits	122	24,376 80
Total	4,362	\$4,344,727 60

This amount is subdivided among the several appropriations and bond accounts as follows:

General Administration—	
Salaries	\$68,390 91
Supplies and Contingencies	1,846 79
	\$70,237 70
Division of Substructures Construction	6,374 22
Topographical Bureau—	
Salaries and Supplies	\$56,295 50
Fund for Topographical Bureau	21,443 93
Bureau of Highways—	
Salaries	\$67,270 00
Labor, Maintenance and Supplies	419,450 00
Supplies and Contingencies	1,500 00
	\$488,220 00
Bond and Assessments Accounts—	
Repairing Streets, Sections 48 and 169, Chapter 466, Laws of 1901 ..	\$1,301,768 78
Restoring and Repairing, Special Fund	62,698 00
Street Improvement Fund	678,973 82
Repaving Streets and Avenues	929 14
Fund for Repairing Streets	66,044 68
	\$2,110,414 42

Bureau of Sewers—

Salaries	\$107,593 86
Sewers, Repairing and Cleaning, Payrolls and Supplies.....	100,154 01
Sewers, Repairing and Cleaning, Contracts at Public Letting.....	20,341 28
Thirty-first Ward, Sewage Districts 1 and 3.....	44,607 09
Thirtieth Ward, Bath Beach District.....	6,084 68
Twenty-sixth Ward Disposal Works.....	30,926 75
Dredging Sewer Outlets.....	15,251 00
Horses, Horsekeeping and Supplies.....	2,400 00
Supplies and Contingencies.....	2,500 00
Thirty-second Ward Disposal Works.....	3,108 71
	<u>\$332,067 38</u>

Bond and Assessment Funds—

Construction of Sewers, Borough of Brooklyn.....	\$49,827 13
Atlantic Avenue Improvement Fund.....	22,460 47
Construction of Private Sewers.....	4,202 46
Street Improvement Fund.....	679,370 60
Fund for Twenty-sixth Ward Disposal Works.....	3,700 00
Fund for Improvement of Sanitary Condition of Gowanus Canal....	10,926 75
	<u>\$770,487 31</u>

Bureau of Public Buildings and Offices—

Salaries and Wages.....	\$281,273 98
Supplies and Repairs.....	148,912 92
Supplies and Contingencies.....	843 00
	<u>\$431,029 90</u>

Bond Accounts—

Fund for Payment of Cleaners and Watchmen, Hall of Records....	\$4,360 00
Public Bath Fund.....	22,426 73
Extension, Alteration, Improvement, etc., Kings County, Hall of Records	37,998 17
Fund for Deficiency in Salaries Account, 1906.....	6,300 00
Public Market, Borough of Brooklyn, Proportion of Land.....	6,274 31
Fund for Expenses, Sixth District Municipal Court, 1906.....	3,889 98
Fund for Expenses, Seventh District Municipal Court, 1906.....	3,600 00
Fund for Burial of Veterans, Erection of Headstones, etc.....	2,744 00
Fund for Repairing and Renovating Borough Hall.....	1,956 57
Fund for Central Library Building, Erection of.....	3,284 84
Fund for Coal Vault and Paving Alleyway, Kings County Court House	5 84
Fund for Sixth Municipal Court, Site of.....	40 00
	<u>\$92,880 44</u>

Bureau of Incumbrances and Permits—

Salaries	\$17,404 43
Removal of Incumbrances.....	6,972 37
	<u>\$24,376 80</u>

The Bookkeeper's Office.

The office of the General Bookkeeper is a clearing house for the accounts of all the Bureaus of the Department. The Engineers and Clerks of the several Bureaus prepare the certifications and bills and send them to the Bookkeeper for audit and entry. After examination they are submitted for your approval and signature. They are then entered into the claims book and forwarded to the Comptroller for payment.

For the better accounting with the Bureaus and the more ready reference to their accounts, a separate set of books is kept for the larger, such as Highways, Sewers and Public Buildings and Offices, while one set suffices for the General Administration, Topographical Bureau and Bureau of Incumbrances and Permits.

The books of permanent entry are:

Ledgers	4
Claims books	4
Order books	4
Cash book	1
Journal	1
Contract book	1
Record book	1
	<u>16</u>

A book usually comprises two years' accounts only, and as frequent comparisons are made with former years there are about thirty books in general use.

The long illness and subsequent death of the late Mr. Chambers, General Bookkeeper in Charge, seriously retarded the work in this office and compelled both Mr. Dorney and myself to work after office hours in order to audit the large number of vouchers passed through this office and keep the books up to date.

At this time I desire to call attention to the work of Mr. Dorney, succeeding to my position on my promotion to General Bookkeeper. He has rendered the most efficient and accurate service and has become an invaluable assistant to me in the work of this office. I think his salary should be increased at the earliest opportunity, as the amount now received by him is far less than is paid in corresponding positions in other Boroughs, and is not commensurate with the services performed.

With thanks to Mr. Dorney and Mr. Cunningham for their loyal support and efficient assistance, which helped me much in compiling this report, I am,

Yours respectfully,

THOMAS F. MORAN, General Bookkeeper.

City of New York, Borough of Brooklyn,
Office of Commissioner of Public Works, Municipal Building,
January 11, 1907.

Hon. DESMOND DUNNE, Commissioner of Public Works:

Sir—Herewith I forward annual report of the Bureau of Incumbrances for the year 1906. I am

Respectfully yours,

DURBIN VAN VLECK,

Assistant Commissioner of Public Works.

REPORT OF THE BUREAU OF INCUMBRANCES AND PERMITS.

Mr. DURBIN VAN VLECK, Assistant Commissioner of Public Works, Borough of Brooklyn, City of New York:

Sir—Attached herewith I have the honor to submit the report of the Bureau of Incumbrances and Permits for the year 1906.

Complaints received from the Bureau of Complaints.....	38
Complaints received by mail.....	223
Complaints received at office.....	403
Complaints received from Inspectors.....	902
Complaints received from Police Department.....	263
Complaints received from Department of Street Cleaning.....	36

Total received from all sources..... 1,865

Classification and Disposal.

Sidewalk signs, removed by owner and Bureau of Incumbrances.....	53
Slot machines, removed by owner and Bureau of Incumbrances.....	9
Pushcarts and wagons, removed by owner and Bureau of Incumbrances.....	10
Coal boxes removed and coal holes made safe by Bureau of Incumbrances and owner	8
Stands, removed by Bureau of Incumbrances and owner.....	18
Boulders, removed by Bureau of Incumbrances and owner.....	274
Trees and limbs, removed by Bureau of Incumbrances and owner.....	643
Posts, stumps, etc., removed by Bureau of Incumbrances and owner.....	77
Miscellaneous, removed by Bureau of Incumbrances and owner.....	236
	<u>1,328</u>

Summary of Inspectors' Work.

Complaints made	902
Complaints settled	1,854
Slips settled	6,967

Incumbrances.

Total number of seizures made.....	34
Incumbrances redeemed	8
Incumbrances on hand in Wallabout Yard.....	..

Permit Department.

Permits Issued—	
Building material	1,957
Crosswalk	1,799
Vaults, new	90
Vaults, repairs	237
Cement walks	979
Flag walks	45
Driveways	370
Corporations—	
Gas companies	7,134
Electric companies	5,076
Railroad companies	884
*Specials	5,774
Fire Department	48
Total	<u>24,393</u>

Permits Passed—

To tap water pipes	5,278
To repair water connections.....	2,618
To repair sewer connections.....	3,200
To make new sewer connections.....	5,064
Total	<u>16,160</u>

Receipts.

From the sale of incumbrances sold at public auction.....	<u>\$33 52</u>
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Expenses.

Total cost of removal of incumbrances.....	<u>\$6,972 37</u>
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Cashier's Report.

Statement of Money Received from January 1, 1906, Up to and Including December 31, 1906, Also Comparison With the Year 1905.

	1905.	1906.
First quarter.....	\$6,544 61	\$12,906 23
Second quarter.....	17,946 36	18,937 45
Third quarter.....	18,934 81	15,146 58
Fourth quarter.....	18,797 05	16,525 76
Total.....	<u>\$62,222 83</u>	<u>\$63,516 02</u>

Received during 1906 over 1905..... \$1,293 19

Credited as Follows.

Special Fund	\$60,242 37
Sinking Fund	3,263 65
General Fund	10 00
Total	<u>\$63,516 02</u>

Respectfully submitted,

CHAS. J. CASSIDY, Superintendent of Incumbrances.

The City of New York, Borough of Brooklyn,
Office of the Assistant Commissioner of Public Works,
Municipal Building, February 25, 1907.

Hon. DESMOND DUNNE, Commissioner of Public Works:

Sir—I have the honor to transmit herewith the annual statement of work done in this office for the year 1906, including a list of all contracts entered into for the different Bureaus of the Borough President's office, together with the estimated cost in each case. I am,

Respectfully yours,

DURBIN VAN VLECK,

Assistant Commissioner of Public Works.

List of Contracts Entered Into in the Borough of Brooklyn, City of New York, by the President of the Borough of Brooklyn, During the Year Ending December 31, 1906.

BUREAU OF HIGHWAYS.

For Repaving with Asphalt on Concrete.

	Estimated Cost.
1. Prospect street, from Gold street to Navy street.....	\$3,909 00
2. Luker street, from Court street to Smith street.....	2,404 25
3. Jefferson street, from Bushwick avenue to Central avenue.....	5,577 00
4. Suydam place, from Atlantic avenue to Herkimer street.....	2,540 50
5. Degraw street, from Franklin avenue to Nostrand avenue.....	13,740 80
6. Hopkinson avenue, from Broadway to Marion street, etc.....	22,808 00
7. Fifth street, from Seventh avenue to Prospect Park West.....	9,349 95
8. Kosciusko place, from Kent avenue to easterly terminus.....	1,408 20
9. Bleeker street, from Bushwick avenue to Knickerbocker avenue....	17,153 50
10. Troutman street, from Evergreen avenue to Hamburg avenue, etc.	18,888 55

* Specials include permits issued for stands within the stoop line, to relay flags, to repair regulation awnings, to place material on streets temporarily, to make repairs to yards and cellars, and miscellaneous permits for various purposes for which the Police insist on seeing permits.

	Estimated Cost.
11. Cornelia street, from Broadway to Central avenue.....	12,058 00
12. Duffield street, from Nassau street to 285 feet south of Concord street.....	4,272 00
13. Bridge road, from Sands street to Navy street, etc.....	12,015 00
14. Bergen street, from Schenectady avenue to Eastern parkway.....	37,230 00
15. Meserole avenue, from Guernsey street to Franklin street.....	4,008 35
16. Jewel street, from Nassau avenue to Norman avenue.....	3,589 60
17. India street, from West street to Oakland street.....	13,665 10
18. Tompkins avenue, from Pulaski street to Flushing avenue.....	11,995 80
19. Rogers avenue, from Bergen street to Park place.....	4,172 60
20. Harrison avenue, from Hewes street to Flushing avenue.....	13,892 20
21. Prospect place, from Grand avenue to Franklin avenue.....	13,448 20
22. Windsor place, from Tenth avenue to Fifteenth street.....	10,259 50
23. Sumpter street, from Fulton street to Hopkinson avenue.....	24,652 20
24. North Tenth street, from Driggs avenue to Union avenue.....	5,801 60
25. South Tenth street, from Kent avenue to Bedford avenue.....	7,018 80
26. Junius street, from East New York avenue to Pitkin avenue.....	9,534 50
27. Linden street, from Broadway to Bushwick avenue.....	4,054 60
28. Humboldt street, from Grand street to Meeker avenue.....	19,392 50
29. Grove street, from Hamburg avenue to Myrtle avenue.....	8,039 10
30. Chester street, from East New York avenue to Hunterfly road.....	13,726 00
31. Evergreen avenue, from Willoughby avenue to George street.....	6,234 80
32. Third place, from Henry street to Smith street.....	8,724 00
33. Kosciusko street, from Bedford avenue to Throop avenue, etc.....	26,800 50
34. Hopkinson avenue, from Fulton street to a point 264 feet north of Herkimer street.....	3,704 10
35. Himrod street, from Bushwick avenue to Myrtle avenue.....	12,259 30
36. Freeman street, from Manhattan avenue to Oakland street.....	4,703 30
37. South Second street, from Havemeyer street to Marcy avenue.....	8,104 40
38. McDougal street, from Fulton street to Rockaway avenue.....	19,784 25
39. Vernon avenue, from Sumner avenue to Stuyvesant avenue.....	10,158 80
40. Pleasant place, from Herkimer street to 295 feet south.....	2,118 20
41. Plymouth street, from Hudson avenue to Little street.....	1,606 60
42. St. Charles place, from St. John's place to Degraw street.....	1,844 50
43. Sterling place, from Brooklyn avenue to Kingston avenue.....	4,962 25
44. Sumpter street, from Hopkinson avenue to Broadway.....	11,245 80
45. Willoughby street, from Bridge street to Gold street, etc.....	11,792 50
46. Marcy avenue, from Broadway to South Third street.....	8,123 00
47. Marcy avenue, from Willoughby avenue to Flushing avenue.....	10,048 50
	\$480,880 20
48. Putnam avenue, from Broadway to Hamburg avenue, etc.....	\$19,333 20
49. Troutman street, from Myrtle avenue to Evergreen avenue.....	5,905 20
50. Calyer street, from Manhattan avenue to Newell street.....	5,683 80
51. Diamond street, from Driggs avenue to Norman avenue.....	8,466 30
52. Herbert street, from Graham avenue to Kingsland avenue.....	8,010 95
53. Humboldt street, from Engert avenue to Norman avenue.....	13,067 65
54. Jefferson avenue, from Central to Knickerbocker avenue.....	7,086 15
55. Chauncey street, from 159 feet east of Saratoga avenue to Rockaway avenue.....	9,243 25
56. Hunt's alley, from Henry street to easterly terminus.....	1,809 00
57. Eighth street, from Second avenue to Fifth avenue.....	14,810 10
58. Prospect place, from Troy to Schenectady avenue.....	5,584 50
59. St. John's place, from Rogers avenue to Nostrand avenue.....	4,060 50
60. Sandford street, from Flushing avenue to DeKalb avenue.....	17,156 80
61. Greene lane, from Front street to York street.....	1,280 53
62. Joralemon street, from Clinton to Court street.....	2,700 00
63. Taaffe place, from Park avenue to Flushing avenue.....	4,354 80
	\$129,512 73

Repaving with Asphalt on Present Pavement.

1. Hewes street, from Marcy avenue to Broadway.....	\$5,471 00
2. Intersection of State and Bond streets.....	267 50
3. Throop avenue, from Macon street to McDonough street.....	1,707 00
4. Vanderbilt avenue, from Park place to Plaza street.....	3,741 00
5. Washington avenue, from Fulton street to Atlantic avenue.....	4,482 00
6. Throop avenue, from Halsey street to Macon street.....	1,492 15
7. Classon avenue, from Madison street to Monroe street.....	2,078 60
8. Fort Greene place, from Fulton street to DeKalb avenue.....	5,516 50
9. South Elliott place, from DeKalb avenue to Hanson place.....	7,687 00
	\$32,442 75

Repaving with Granite on Concrete.

1. Johnson street, from Gold street to Raymond street.....	\$11,608 00
2. Mack place, from Bridge street to Gold street.....	2,918 75
3. Richardson street, from Union avenue to Leonard street, etc.....	16,725 00
4. Johnson street, from Duffield street to Pearl street.....	9,125 40
5. Park avenue, from Classon avenue to Broadway.....	53,253 10
6. Wilson street, from Wythe avenue to Kent avenue.....	7,162 70
7. Broadway, from Patchen avenue to Monroe street.....	26,539 50
8. Clay street, from Manhattan avenue to Commercial street.....	10,499 50
	\$137,831 95

Repaving with Asphalt Block on Concrete.

1. Ninth street, from Third avenue to Fifth avenue.....	\$9,627 50
2. Rogers avenue, from Malbone street to Montgomery street.....	5,041 20
3. Hopkinson avenue, from Marion street to Somers street.....	9,556 70
4. Fifty-fifth street, from Fifth avenue to Sixth avenue, etc.....	39,237 60
5. Forty-ninth street, from Third avenue to Fourth avenue.....	6,318 85
6. Evergreen avenue, from George street to Flushing avenue.....	9,937 50
7. Thirteenth street, from Fourth avenue to Eighth avenue, etc.....	37,615 70
8. Sixteenth street, from Hamilton avenue to Fourth avenue.....	11,781 70
9. Fourth street, from Smith street to Hoyt street.....	5,668 80
10. Seventeenth street, from Sixth avenue to Prospect Park West.....	19,555 50
11. Livingston street, from Court street to Flatbush avenue.....	42,761 00
12. Fifty-seventh street, from Third avenue to Sixth avenue.....	18,228 00
13. Fifty-first street, from Third avenue to Fourth avenue.....	6,124 20
14. Fifty-fourth street, from Fifth avenue to Sixth avenue.....	6,393 00
	\$218,847 25

Repaving with Granite Block and Asphalt Pavement.

1. Lexington avenue, from Throop avenue to Broadway.....	\$42,945 00
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Repaving with Iron Slag Block Pavement on Concrete.

1. Nevins street, from Flatbush avenue to Dean street.....	\$12,416 20
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Repaving with Medina Sandstone on Concrete.

1. South Eleventh street, from Kent avenue to Berry street.....	\$8,016 95
2. Garrison street, from Frost street to York street, etc.....	3,681 50
3. Fourth street, from Hoyt street to Bond street.....	13,626 50
4. Atlantic avenue, from Henry street to Flatbush avenue.....	106,733 00
5. Centre street, from Smith street to Hamilton avenue.....	4,278 25
6. Richards street, from Beard street to Verona street.....	21,116 50
7. Sullivan street, from Dwight street to Ferris street.....	26,402 60
	\$164,352 30

Repairing and Maintaining Asphalt Pavements.

	Estimated Cost.
1. On various streets in the Borough of Brooklyn.....	\$47,885 00

Paving with Asphalt Blocks on Concrete.

1. Sixtieth street, from Second avenue to Third avenue.....	\$7,559 95
2. Bay Ridge Parkway, from First avenue to Second avenue.....	8,004 50
	\$15,564 45

Paving with Asphalt on Concrete.

1. East Eighteenth street, from Beverley road to Cortelyou road.....	\$2,932 50
2. East Twenty-fifth street, from Newkirk avenue to Foster avenue.....	3,712 50
3. Glenwood road, from Flatbush avenue to Brooklyn avenue.....	8,547 40
4. Hale avenue, from Jamaica avenue to Fulton street.....	8,511 50
5. West Ninth street, from Clinton street to Henry street.....	1,801 50
6. Pitkin avenue, from Linwood street to Lincoln avenue.....	27,466 25
7. Fortieth street, from New Utrecht avenue to Fort Hamilton avenue.....	4,292 00
8. Logan street, from Jamaica avenue to Atlantic avenue.....	13,227 50
9. Norwood avenue, from Atlantic avenue to Jamaica avenue.....	11,676 40
10. Eighth street, from Eighth avenue to Prospect Park West.....	3,417 60
11. Hopkinson avenue, from Eastern Parkway extension to Blake avenue.....	15,158 00
12. Seventy-fourth street, from Third avenue to Fourth avenue.....	3,303 50
13. Glenn street, from Railroad avenue to Euclid avenue.....	5,084 50
14. Dumont avenue, from Rockaway avenue to Powell street.....	8,383 80
15. Folsom place, from Linwood street to Essex street.....	999 25
16. Church avenue, from Flatbush avenue to East Eleventh street.....	10,960 00
17. East Thirty-first street, from Avenue F to Glenwood road.....	3,941 40
18. Sixty-second street, from Fourth avenue to Fifth avenue.....	3,869 50
19. East Fifteenth street, from Cortelyou road to Dorchester road.....	3,279 00
20. East Fifth street, from Fort Hamilton avenue to Albemarle road.....	6,454 30
21. East Fifteenth street, from Beverley road to Cortelyou road.....	5,318 00
22. East Seventeenth street, from Albemarle road to Beverley road.....	4,054 00
23. East Fifteenth street, from Dorchester road to Ditmas avenue.....	3,567 00
24. Eighty-third street, from Second avenue to Third avenue.....	6,109 10
25. Newkirk avenue, from Flatbush avenue to East Seventeenth street.....	10,394 00
26. Bath avenue, from Fourteenth avenue to Twenty-first avenue.....	42,218 05
27. Elton street, from Atlantic avenue to Blake avenue.....	21,553 04
28. Prescott place, from Herkimer street to Atlantic avenue.....	1,055 25
29. Canon avenue, from St. Paul's place to Parade place.....	4,169 35
30. Forty-seventh street, from Sixth avenue to Seventh avenue.....	4,624 65
31. Tenth avenue, from Prospect avenue to Twentieth street.....	5,391 50
32. Milford street, from Atlantic avenue to Glenmore avenue.....	6,758 55
33. Beverley road, from Flatbush avenue to Bedford avenue.....	6,480 60
34. East Fifth street, from Greenwood avenue to Fort Hamilton avenue.....	3,353 50
35. Van Sicklen avenue, from Pitkin avenue to Dumont avenue.....	11,244 78
36. East Thirty-first street, from Flatbush avenue to Glenwood road.....	4,160 00
37. Kenilworth place, from Avenue G to Germania place.....	4,105 50
38. Fifty-second street, from Sixth avenue to Seventh avenue.....	4,062 89
39. Degraw street, from Classon avenue to Washington avenue.....	3,832 72
40. East Fifth street, from Vanderbilt street to Greenwood avenue.....	3,802 92
41. Heywood street, from Wythe avenue to Wallabout street.....	1,361 00
42. Avenue J, from Flatbush avenue to Brooklyn avenue.....	1,031 75
43. Farragut road, from Rogers avenue to a point 120 feet east of East Thirty-fourth street.....	12,943 05
44. Radde place, from about 115 feet north of Atlantic avenue to Atlantic avenue.....	962 50
	\$320,172 10

Paving with Granite on Concrete.

1. New Jersey avenue, from Jamaica avenue to Highland Boulevard.....	\$3,632 80
2. Engert avenue, from Graham avenue to Leonard street.....	5,089 15
	\$8,721 95

Grading, Curbing, Guttering and Laying Sidewalks.

1. Fifty-fourth street, from Thirteenth avenue to Fifteenth avenue.....	\$6,032 20
2. Eighty-sixth street, from Fifth avenue to Thirteenth avenue.....	12,107 79
3. Eighty-fifth street, from Fourth avenue to Seventh avenue.....	11,556 83
4. Utica avenue, from East New York avenue to Church avenue.....	19,951 36
	\$49,648 18

Grading, Curbing and Laying Sidewalks.

1. Washington avenue, from Gravesend avenue to First street.....	\$10,116 75
2. Eightieth street, from Third avenue to Fifth avenue.....	6,041 00
3. Johnson avenue, from First street to Coney Island avenue.....	1,839 25
4. Lotts street, from Vernon avenue to Beverley road.....	2,864 05
5. Prospect place, from Ralph avenue to Eastern Parkway.....	8,645 35
6. Foster avenue, from Coney Island avenue to East Fourteenth street.....	8,799 72
7. Etna street, from Hale avenue to Norwood avenue.....	1,029 81
8. Sutter avenue, from Saratoga avenue to Howard avenue.....	3,613 47
9. Dean street, from Saratoga avenue to Rockaway avenue.....	5,354 55
10. Avenue D, from Flatbush avenue to Rogers avenue.....	4,031 70
11. Belmont avenue, from Elton street to Chestnut street.....	9,342 07
12. Eleventh avenue, from Sixty-fifth street to Sixty-ninth street.....	5,161 53
13. Fifty-fifth street, from Eleventh avenue to Kouwenhoven lane.....	5,877 00
14. Seventy-third street, from New Utrecht avenue to Eighteenth avenue.....	2,949 30
15. Sixty-fourth street, from Third avenue to Fourth avenue.....	2,511 65
16. Grant avenue, from Jamaica avenue to Liberty avenue.....	15,528 90
17. East Fifth street, from Greenwood avenue to Fort Hamilton avenue.....	2,085 10
18. Thirty-eighth street, from Third avenue to Fifth avenue.....	5,513 98
19. New Jersey avenue, from Jamaica avenue to Highland Boulevard.....	1,573 06
20. Elmore place, from Farragut road to Glenwood road.....	1,315 50
21. Belmont avenue, from Warwick street to Elton street.....	2,238 35
22. Beverley road, from Flatbush avenue to Bedford avenue.....	2,610 92
23. Kenilworth place, from Avenue G to Germania place.....	2,641 05
24. Glenmore avenue, from Eldert lane to Queens County line.....	3,322 90
25. East Eighth street, from Avenue C to Avenue E.....	6,390 90
26. Warehouse avenue, from Surf avenue to Neptune avenue.....	5,471 38
27. East Thirty-first street, from Avenue F to Glenwood road.....	2,850 75
28. Huntington street, from Henry to Hamilton avenue.....	819 60
29. Sutter avenue, from Warwick street to Elton street.....	2,199 42
30. Church avenue, from Flatbush avenue to East Eleventh street.....	8,776 28
31. East Fifteenth street, from Beverley road to Cortelyou road.....	1,075 80
32. West Fifth street, from Neptune avenue to Sheepshead Bay road.....	2,951 89
33. Park place, from Eastern Parkway extension to East New York avenue.....	1,642 30
34. East Nineteenth street, from Avenue L to Avenue M.....	1,865 25
35. Ashford street, from Pitkin avenue to Livonia avenue.....	10,151 58
36. Cleveland street, from Pitkin avenue to Livonia avenue.....	9,249 16
37. Sixty-second street, from Fifth avenue to Sixth avenue.....	5,478 40
38. New York avenue, from Clarkson street to Church avenue.....	3,951 75
39. East Fifth street, from Fort Hamilton avenue to Albemarle road.....	4,072 67
40. East Fifteenth street, from Cortelyou road to Dorchester road.....	1,747 82
41. Newkirk avenue, from Flatbush avenue to East Seventeenth street.....	4,623 00
42. Hopkinson avenue, from Eastern Parkway to Atlantic avenue.....	4,862 93
43. Alabama avenue, from Belmont avenue to Sutter avenue.....	1,913 82
44. Seventy-second street, from Second avenue to the Shore road.....	9,749 76

	Estimated Cost.
45. Flatlands avenue, from Mill lane to Lotts lane.....	5,168 30
46. Dean street, from Troy avenue to Schenectady avenue.....	3,355 50
47. East Thirty-first street, from Flatbush avenue to Glenwood road....	2,585 12
	<u>\$216,960 34</u>
48. Rogers avenue, from Park place to Montgomery street.....	\$7,202 50
49. Sixty-first street, from Third avenue to Fourth avenue.....	2,555 80
50. Fortieth street, from Sixth avenue to New Utrecht avenue.....	10,369 60
51. Dumont avenue, from Van Sicklen avenue to Schenck avenue.....	1,600 54
52. Fourteenth avenue, from Seventy-fifth to Seventy-ninth street.....	3,677 27
53. Martense street, from Rogers avenue to Nostrand avenue.....	2,740 75
54. Lincoln avenue, from Atlantic avenue to Glenmore avenue.....	7,095 30
	<u>\$35,241 76</u>

Curbing, Guttering and Laying Sidewalks.

1. Seventh avenue, west side, from Bay Ridge avenue to Seventy-fifth street	\$4,734 35
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Grading, Curbing, Sodding Ovals and Laying Sidewalks.

1. Farragut road, from Rogers avenue to a point 120 feet east of East Thirty-fourth street	\$9,459 00
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Grading, Curbing and Sodding Ovals.

1. Glenwood road, from Flatbush avenue to Brooklyn avenue.....	\$6,414 55
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Grading and Curbing.

1. Dumont avenue, from a point about 75 feet west of Bristol street to Howard avenue, etc.....	\$13,637 60
2. Sixty-first street, from Fifth avenue to Sixth avenue.....	5,702 60
3. Forty-first street, from New Utrecht avenue to old City line.....	5,104 00
4. West Sixteenth street, from Mermaid avenue to Neptune avenue....	4,001 76
5. Degraw street, from Classon avenue to Franklin avenue.....	13,562 05
6. East Fifth street, from Vanderbilt street to Greenwood avenue.....	1,463 16
7. Sixth avenue, from Bay Ridge avenue to Seventy-first street.....	367 00
8. Repose place, from Schenck avenue to Jerome street.....	2,490 00
	<u>\$46,328 17</u>

Curbing and Laying Sidewalks.

1. Tenth avenue, from Seventy-fifth street to Bay Ridge avenue.....	\$4,830 80
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Regulating and Curbing.

1. Bay Ridge parkway, from Fifth avenue to Seventh avenue.....	\$10,354 95
2. Fifty-fourth street, from Sixth avenue to Seventh avenue.....	5,171 40
	<u>\$15,526 35</u>

Regulating and Grading.

1. Neptune avenue, from the end of the present Neptune avenue improvement at West Thirty-sixth street to West Thirty-seventh street..	\$4,498 99
2. First avenue, from Fifty-seventh street to a point midway between Sixtieth street and Sixty-first street.....	785 74
3. Rockaway avenue, from Hegeman avenue to Stanley avenue.....	4,073 90
4. Bay Eleventh street, from Eighty-sixth street to Cropsey avenue....	6,570 75
	<u>\$15,929 38</u>

Laying Crosswalks.

1. Lotts lane, at intersection of Forty-second and Forty-third streets....	\$457 92
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Grading Lots.

1. Southeast side DeSales place, between Bushwick and Evergreen Cemetery	\$527 50
2. South side Fifty-eighth street, between Sixth and Seventh avenues...	294 78
3. Southeast side of Meeker avenue, between Stewart and Gardner avenues	744 14
4. North side of Eastern parkway, between Bedford and Franklin avenues	1,202 04
5. North side of Windsor place, between Eighth avenue and Prospect Park West	3 07
6. Northeast side Irving avenue, between Starr street and Willoughby avenue	91 64
7. South side of Sixtieth street, between Third and Fourth avenues....	407 95
8. North side of Eighth street, between Eighth avenue and Prospect Park West	5,986 72
9. East side Underhill avenue, between Sterling and St. John's place...	4,091 50
10. West side Tenth avenue, between Fifteenth and Sixteenth streets....	269 63
11. Northwest side of Linden street, between Bushwick and Evergreen avenues	451 50
12. South side of Myrtle avenue, between Lewis avenue and Broadway...	213 75
13. South side of Eighty-third street, between Tenth and Eleventh avenues	782 74
14. North side Sixteenth street, between Prospect Park West and Tenth avenue	163 35
	<u>\$15,290 31</u>

Constructing Cement Sidewalks.

1. North side of St. Mark's avenue, between Hopkinson and Rockaway avenues	\$4,233 05
2. Southeast side Himrod street, between Wyckoff and St. Nicholas avenues	2,316 48
3. East side Howard avenue, between Decatur and Bainbridge streets...	4,736 25
4. Southwest side of Cropsey avenue, between Twenty-third and Twenty-fourth avenues, etc.....	2,447 76
5. East side Howard avenue, between Dean and Bergen streets, etc....	2,172 60
6. Northeast side Cropsey avenue, between Twenty-third avenue and Bay Thirty-fourth street, etc.....	2,451 96
7. Southeast side of Gates avenue, between Evergreen and Central avenues, etc.....	1,794 38
8. North side of Hull street, between Hopkinson and Rockaway avenues	2,111 04
9. West side of New Utrecht avenue, between Thirty-ninth street and Kouwenhoven lane, etc.....	1,877 75
10. South side of Troy avenue, between Prospect place and Park place, etc.....	903 67
11. East side of Albany avenue, between Degraw street and Eastern parkway, etc.....	1,655 64
12. South side of Forty-sixth street, between Sixth avenue and Seventh avenue, etc.....	2,117 88
13. West side of Kingsland avenue, between Maspeth and Skillman avenues, etc.....	2,295 00
	<u>\$31,113 46</u>

Fencing Vacant Lots.

	Estimated Cost.
1. North side of Thirty-second street, between Fourth avenue and Fifth avenues, etc.....	\$775 20
2. South side of Jefferson avenue, between Ralph avenue and Howard avenue, etc.....	554 32
3. Northeast side of South Second street, between Keap and Hooper streets, etc.....	690 04
4. Southeast side of Jamaica avenue, between Hendricks street and Schenck avenue, etc.....	1,124 71
5. South side of Fortieth street, between Third avenue and Fourth avenue, etc.....	772 60
6. South side of St. Marks avenue, between Classon and Franklin avenues, etc.....	224 00
7. North side of Dean street, between Fourth avenue and Fifth avenue, etc.....	400 82
8. South side of Thirty-second street, between Fourth avenue and Fifth avenue, etc.....	2,255 40
	<u>\$6,797 09</u>

Supplies.

1. 2,500 cubic yards of sand.....	\$3,000 00
2. 2,000 cubic yards of broken trap rock and 2,000 cubic yards of trap rock screenings.....	7,680 00
3. 3,058 cubic yards of broken trap rock and 1,020 cubic yards of trap rock screenings	7,829 76
4. 3,853 cubic yards of broken trap rock and 1,285 cubic yards trap rock screenings	9,433 37
5. 6,000 linear feet bluestone curbstone.....	3,744 00
6. 150,000 pounds of paving pitch.....	1,215 00
7. 4,485 cubic yards broken trap rock and 1,495 cubic yards trap rock screenings	14,190 54
8. 4,000 cubic yards of sand.....	3,120 00
9. 30,000 square feet bluestone flagstone.....	6,300 00
10. 4,288 cubic yards broken trap rock and 1,429 cubic yards trap rock screenings	10,770 83
11. 3,389 cubic yards broken trap rock and 1,130 cubic yards trap rock screenings	7,917 29
12. 1,000 barrels of Portland cement.....	1,800 00
13. 200 cubic yards of paving gravel and 100 cubic yards cement sidewalk grit	1,140 00
14. Hardware, tools and miscellaneous supplies.....	2,163 62
15. 125 gross tons of coal.....	746 25
16. Engineers' and draughtsmen's supplies.....	1,464 36
	<u>\$82,515 02</u>

BUREAU OF SEWERS.

Constructing Sewers.

1. Bay Eighth street, from Benson avenue to Bath avenue, etc.....	\$7,774 03
2. Sutter avenue, from Rockaway avenue to Chester street.....	537 47
3. Junius street, from Pitkin avenue to Blake avenue, etc.....	3,923 29
4. Calyer street, from Oakland street to Newell street, etc.....	1,930 15
5. Fifty-sixth street, from Twelfth avenue to Thirteenth avenue, etc....	3,887 28
6. Seventy-fifth street, from Shore road to Narrows avenue, etc.....	5,962 95
7. East Twenty-first street (Kenmore place), from Emmons avenue to the end of existing sewer north of Emmons avenue.....	1,185 48
8. Sixtieth street, from Second avenue to Third avenue, etc.....	8,362 12
9. Fifteenth avenue, from Sixtieth street to Sixty-sixth street	8,369 42
10. Rogers avenue, from Clarendon road to Flatbush avenue, etc.....	7,836 16
11. Caton avenue from Parade place to East Seventeenth street.....	385 14
12. Webster avenue, from Ocean Parkway to Gravesend avenue.....	3,397 40
13. First avenue, from Bay Ridge avenue to Wakeman place.....	7,264 65
14. Third avenue, between Sixtieth and Sixty-first streets, etc.....	20,506 99
15. Fifty-fourth street, from Sixth avenue to Seventh avenue.....	1,597 50
16. Prospect street, from Vernon avenue to Beverly road.....	1,399 16
17. Ninety-seventh street, from Shore road to Marine avenue.....	1,784 66
18. Forty-fourth street, from Fifth avenue to Sixth avenue.....	1,708 74
19. Fourth avenue, east side, between Ninety-fifth and Ninety-seventh streets	954 92
20. Eighty-fourth street, from First avenue to Second avenue.....	1,547 54
21. On north side of Parkside avenue, from St. Pauls place, to Ocean avenue, etc.....	2,611 66
22. Irving avenue, from Halsey street to Putnam avenue.....	7,115 80
23. Clinton place, from Crescent street to a point 275 feet west.....	803 90
24. Dean street, from Saratoga avenue to summit east of Saratoga avenue, etc.....	1,940 40
25. Forty-first street, from Seventh avenue to New Utrecht avenue....	6,411 48
26. Fifty-third street, from Thirteenth avenue to Fifteenth avenue, etc..	9,388 30
27. Fifty-seventh street, from Fourteenth avenue to Fifteenth avenue....	1,586 25
28. Eleventh avenue, from Eighteenth street to Terrace place.....	1,055 27
29. Forty-eighth street, from Thirteenth avenue to summit, between Fourteenth avenue and Fifteenth avenue.....	3,075 15
30. President street, from Bedford avenue to Rogers avenue.....	3,722 30
31. Decatur street, from Knickerbocker avenue to the borough line of Queens, etc.....	2,533 86
32. Weirfield street, between Knickerbocker avenue and boundary line between Queens and Brooklyn Boroughs.....	1,951 01
33. Bay Eleventh street, from Eighty-sixth street to Benson avenue....	1,767 65
34. East Fortieth street, from Avenue C to Ditmas avenue.....	4,116 35
35. Forty-first street, from the summit west of Seventh avenue to Seventh avenue	1,072 05
36. Thirteenth avenue, from Seventy-ninth street to Eighty-second street, etc.....	3,603 47
37. Eightieth street, from First avenue to Second avenue.....	1,550 52
38. Kenmore place, from Avenue G to end of existing sewer north of Avenue G.....	676 34
39. Eighth avenue, from Seventieth to Seventy-second street.....	1,108 48
40. The Bowery, from Jones' Walk to Steeplechase Walk.....	7,885 00
41. Eighteenth avenue, from East Fourth street to the old New Utrecht town line, etc.....	17,895 75
42. Fourth avenue, westerly side, from Eighty-second street to Eighty-sixth street	4,226 12
43. Pitkin avenue, south side, from Powell street to Van Siclen avenue	1,443 00
44. Fifty-ninth street, from Seventh avenue to Eighth avenue.....	2,646 90
45. Eighth street, from Second avenue to end of existing sewer.....	602 20
46. Brooklyn avenue, from Avenue G to Avenue H.....	1,642 15
47. Forty-second street, from Seventh avenue to Eighth avenue.....	2,792 10
48. Sixty-seventh street, from Fourth avenue to Fifth avenue.....	2,666 20
49. Dean street, from Ralph avenue to Howard avenue.....	1,527 87
50. Avenue D, from East Twenty-third street to Rogers avenue.....	4,386 10
51. Eighty-fourth street, from Twentieth avenue to Twenty-first avenue, etc.....	34,440 00
52. East Thirty-fourth street, from Flatbush Water Works to Avenue F..	1,477 25
53. Eighty-second street, from Sixth avenue to Fort Hamilton avenue	955 50
54. Fifty-first street, from Fourteenth avenue to Fifteenth avenue, etc....	36,547 00
55. East Thirty-first street, from Church avenue to Snyder avenue, etc.	14,589 00
56. Eighty-fifth street, from Sixteenth avenue to Seventeenth avenue, etc.	28,432 18
57. East Twenty-fifth street, from Clarendon road to Avenue D.....	2,051 60
58. East Twenty-sixth street, from Clarendon road to Avenue D.....	2,031 25
59. Senator street, from Fourth avenue to Fifth avenue.....	6,455 55

	Estimated Cost.
60. East Third street, from Ditmas avenue to Avenue F, etc.....	10,575 95
61. Warehouse avenue, from Surf avenue to Neptune avenue, etc.....	9,782 30
62. New York avenue, from Beverly road to Clarendon road.....	2,120 00
63. Huntington street, from Henry street to Hicks street.....	1,123 92
64. Hemlock street, from Glenmore avenue to Pitkin avenue.....	1,162 75
65. Seventy-ninth street, from Sixteenth avenue to Eighteenth avenue...	5,659 05
66. East Twenty-second street, from Avenue G north to end of existing sewer	1,114 07
67. Park place, from Hopkinson avenue to Eastern Parkway Extension, etc.	801 05
68. Congress street, from Columbia street to East river.....	3,927 19
69. Fifty-second street, from Thirteenth avenue to Fourteenth avenue..	2,726 01
70. Flatbush avenue, from Nostrand avenue to Avenue N, etc.....	53,015 00
71. Lexington avenue, south side, from Ralph avenue, westerly to existing sewer	1,368 77
72. East Nineteenth street, from Newkirk avenue to Foster avenue.....	1,401 75
73. Huntington street, from Henry street to Hamilton avenue.....	837 25
74. Seventy-third street, from Fourteenth avenue to Fifteenth avenue, etc.	54,477 75
75. Fourteenth avenue, from Sixty-fifth street to Seventy-fifth street..	18,400 00
76. Fourth avenue, west side, from Ninety-second street to Ninety-fifth street, etc.	4,427 00
77. Barrett street, from Pitkin avenue to Sutter avenue.....	2,766 45
78. Fifty-first street, from First avenue to Second avenue.....	1,967 75
79. Eighty-fifth street, from Fort Hamilton avenue to Seventh avenue	2,487 50
80. Eighty-fourth street, from Fort Hamilton avenue to Seventh avenue..	1,801 44
81. Lott street, from Tilden avenue to Beverly road.....	1,540 41
82. Brooklyn avenue, from Avenue C to Canarsie lane.....	1,253 16
83. Fortieth street, between Seventh avenue and New Utrecht avenue..	6,226 00
84. Sixty-first street, between Fifth and Sixth avenues.....	2,235 00
85. Blake avenue, from Powell street to Junius street.....	1,181 85
86. Eighty-seventh street, from Narrows avenue to Second avenue.....	4,007 00
87. Martense street, from Flatbush avenue to Bedford avenue.....	3,245 00
88. Battery avenue and Dahlgren place, between Eighty-eighth street and Ninetieth street, etc.....	6,642 81
89. West Twenty-third street, from Mermaid avenue to Neptune avenue	6,301 75
	<u>\$535,799 94</u>

Reconstructing Storm Sewers.

1. On easterly side of Nostrand avenue, from a point about 100 feet south of Lexington avenue to a point 35 feet north of Greene avenue.. \$7,532 77

Reconstructing Sewers.

1. Fifty-sixth street, from Fourth avenue to Fifth avenue..... \$1,850 71
2. Himrod street, from Evergreen avenue to Knickerbocker avenue.... 5,874 51
3. Newkirk avenue, from East Eighteenth street to Flatbush avenue.... 9,939 70

\$17,664 92

Outlet Sewers.

1. Benson avenue, between Bay Twenty-sixth and Twenty-first avenue, etc. \$1,470 36

Relief Sewer.

1. Carroll street, from Third avenue to Gowanus Canal..... \$14,293 22

Excavation.

1. In Paerdegat Basin, from Flatlands avenue to Avenue M..... \$4,100 00

Constructing Sewer Basins.

1. On Norman avenue, northeast corner Russell street, etc..... \$474 00
2. On Narrows avenue northeast and southeast corners Seventy-fourth street, etc. 1,057 50
3. Northwest and northeast corners New York avenue and Avenue H... 298 00
4. Northeast corner Seventy-ninth street and Seventh avenue..... 150 00
5. Eighth avenue and Sixtieth street, all four corners..... 492 00
6. Northeast and northwest corners East Sixteenth street and Cortelyou road
7. Northeast and northwest corners East Twenty-fifth street and Foster avenue
8. Northeast and northwest corners Grant avenue and Union avenue....
9. Northeast corner Atlantic avenue and Russell place.....
10. Northerly, southerly and westerly corners of Seventeenth avenue and Benson avenue, etc.
11. Southwest corner Dorchester road and East Eighteenth street, etc....
12. Southeast and southwest corners Jerome street and Belmont avenue, etc.
13. Southeast corner Hausman street and Nassau avenue.....
14. Northeast corner Norman avenue and Russell street.....
15. Northeast and southeast corners Newkirk avenue and East Eighteenth street
16. Northeast and northwest corners East Fifteenth street and Ditmas avenue
17. Southeast and southwest corners of Neptune avenue and West Fifth street
18. North and east corners Bay Thirteenth street and Cropsey avenue..
19. Northwest corner of Pitkin avenue and Osborn street.....
20. Southwest corner Fenimore street and Rogers avenue.....
21. Southeast corner of St. Marks and Rogers avenues.....
22. Easterly corner Bath avenue and Fourteenth avenue.....
23. Northerly corner Fourth avenue and Ninety-ninth street.....
24. New Jersey avenue, at southeast corner of Highland boulevard, etc...
25. Northeast corner of Gates and Reid avenues.....
26. Northeast corner Stratford road (East Eleventh street) and Slocum place
27. Beverley road, at the northeast corner of Flatbush avenue, etc.....
28. Southwest corner of Madison street and Stuyvesant avenue.....
29. Farragut road, at the northeast and northwest corners of East Twenty-eighth street, etc.
30. Northeast corner of Bond street and Third street.....
31. Northeast and northwest corners Winthrop street and Rogers avenue
32. Northeast corner of East Eighteenth street and Albemarle road....
33. Northeast and northwest corners East Thirty-second street and Avenue D
34. Southwest corner Schenck avenue and Atlantic avenue.....
35. Southwest corner East Seventh street and Beverley road, etc.....
36. Southeast and southwest corners Sutter and Van Siclen avenues, etc..
37. Northeast and northwest corners of East Fifteenth street and Dorchester road

\$17,090 28

Reconstructing Sewer Basins.

1. Imlay street, all four corners of Verona street, etc. \$2,040 00

Dredging.

1. Newtown creek canal, at and in the canal and basin, etc..... \$2,983 00
2. Gowanus canal

\$14,323 00

Supplies.

- | | Estimated
Cost. |
|------------------------------------------------------------------------------------------------------|--------------------|
| 1. Lime, cement, brick, fire clay and soda to the various sewage disposal works | \$6,866 25 |
| 2. 2,050 gross tons white ash anthracite coal | 10,773 00 |
| 3. Manhole heads and covers, etc. | 1,522 42 |
| 4. Hardware, tools and miscellaneous supplies..... | 1,629 43 |
| 5. Chemicals, disinfectants, etc., for use by Twenty-sixth and Thirty-first Ward disposal works..... | 1,419 00 |
| 6. Forage | 1,032 70 |
| | <u>\$23,242 80</u> |

BUREAU OF PUBLIC BUILDINGS AND OFFICES.

Miscellaneous.

1. Erection and entire completion of Public Bath Building at north-east corner Fourth avenue and President street..... \$157,200 00
2. Laying new tile floor with marble base, first story Borough Hall..... 2,133 00
3. Erecting headstones over graves of deceased veteran Union soldiers, sailors and marines..... 1,099 00
4. Repairing and fitting out five free floating baths..... 4,573 00
5. Furnishing and setting lighting fixtures, Gates Avenue Court House. 1,425 00
6. Making alterations for additional rooms in the Kings County Court House

\$171,330 00

Supplies.

1. 476,717 pounds of ice for public buildings, baths and comfort stations. \$1,547 99
2. Relaundering towels used at interior baths and comfort stations..... 1,468 74
3. 6,000 tons best grade white ash anthracite coal..... 41,760 00
4. Furniture, rugs, carpets, etc., to the Seventh District Municipal Court. 1,514 85
5. Furniture, rugs, carpets, etc., to Sixth District Municipal Court..... 1,340 99
6. Janitor's supplies

6,333 24\$53,965 81

Architects' Contracts.

1. For drawing, specifications, etc., for Central Library Building..... \$15,000 00

RECAPITULATION.

Bureau of Highways.

	Contracts.	Estimated Cost.
1. Repaving with asphalt on concrete.....	63	\$612,492 93
2. Repaving with asphalt on present pavement.....	9	32,442 75
3. Repaving with granite on concrete.....	8	137,831 95
4. Repaving with asphalt block on concrete.....	14	218,847 25
5. Repaving with granite block and asphalt pavements.....	1	42,945 00
6. Repaving with iron slag block pavement on concrete.....	1	12,426 20
7. Repaving with medina sandstone on concrete.....	7	164,352 30
8. Repairing and maintaining asphalt pavements.....	1	47,885 00
9. Paving with asphalt blocks on concrete.....	2	15,564 45
10. Paving with asphalt on concrete.....	44	320,172 10
11. Paving with granite on concrete.....	2	8,721 95
12. Grading, curbing, guttering and laying sidewalks.....	4	49,648 18
13. Grading, curbing and laying sidewalks.....	54	252,202 10
14. Curbing, guttering and laying sidewalks.....	1	4,734 35
15. Grading, curbing, sodding ovals and laying sidewalks.....	1	9,459 00
16. Grading, curbing and sodding ovals.....	1	6,414 55
17. Grading and curbing.....	8	46,328 17
18. Curbing and laying sidewalks.....	1	4,830 80
19. Regulating and curbing	2	15,526 35
20. Regulating and grading	4	15,929 38
21. Laying crosswalks	1	457 92
22. Grading lots	14	15,290 31
23. Constructing cement sidewalks.....	13	31,113 46
24. Fencing vacant lots.....	8	6,797 09
25. Supplies	16	82,515 02
	<u>280</u>	<u>\$2,154,928 56</u>

Bureau of Sewers.

	Contracts.	Estimated Cost.
1. Constructing sewers	89	\$535,799 94
2. Reconstructing storm sewers.....	1	7,532 77
3. Reconstructing sewers	3	17,664 92
4. Outlet sewers	1	1,470 36
5. Relief sewer	1	14,293 22
6. Excavation	1	4,100 00
7. Constructing sewer basins.....	37	17,090 28
8. Reconstructing sewer basins.....	1	2,040 00
9. Dredging	2	14,323 00
10. Supplies	6	23,242 80
	<u>142</u>	<u>\$637,557 29</u>

Bureau of Public Buildings and Offices.

	Contracts.	Estimated Cost.
1. Miscellaneous	6	\$171,330 00
2. Supplies	6	53,965 81
3. Architect's contract	1	15,000 00
	13	\$240,295 81
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	Contracts.	Estimated Cost.
Bureau of Highways.....	280	\$2,154,928 56
Bureau of Sewers.....	142	637,557 29
Bureau of Public Buildings and Offices.....	13	240,295 81
	445	\$3,032,781 66
Contracts pending	14	83,710 79
Total	459	\$3,116,492 45

The following is a list of sealed bids or estimates received by the President of the Borough of Brooklyn, for the year ending December 31, 1906:

On January 24, 1906.

1. For furnishing and delivering 476,000 pounds of ice to the Municipal Building, Borough Hall, Topographical Bureau and the various public baths and comfort stations.

One bid was received.

Received as security deposit on same, \$35.

On January 31, 1906.

1. For furnishing and delivering 6,000 tons best grade white ash anthracite coal (2,240 pounds to a ton) for the Bureau of Public Buildings and Offices.

Two bids were received.

Received as security deposit, \$1,500.

2. Relaundering towels used at the several public interior baths and comfort stations during the year 1906.

One bid received.

Deposited as security on bid, \$75.

On February 7, 1906.

1. For furnishing and delivering 2,050 tons (2,240 pounds to a ton) best grade white ash anthracite coal for use by the Bureau of Sewers.

Three bids were received.

Deposited as security on bids, \$650.

On February 14, 1906.

1. For repairing and maintaining asphalt pavements in various streets in the Borough of Brooklyn.

Three bids were received.

Deposited as security thereon, \$3,000.

On March 14, 1906.

1. For furnishing all the labor and material required to lay a new tile floor with marble base in place of the floor and base now on premises, first story, Borough Hall.

Nine bids were received.

Deposited as security on bids, \$517.40.

2. For furnishing and delivering 3,853 cubic yards of broken trap rock and 1,285 cubic yards trap rock screenings.

Five bids were received.

Deposited as security on bids, \$750.

3. Furnishing and delivering 4,288 cubic yards broken trap rock and 1,429 cubic yards trap rock screenings.

Six bids were received.

Deposited as security on bids, \$900.

4. Furnishing and delivering 3,058 cubic yards broken trap rock and 1,020 cubic yards trap rock screenings.

Five bids were received.

Deposited as security on bids, \$500.

5. Furnishing and delivering 4,485 cubic yards broken trap rock, and 1,495 cubic yards trap rock screenings.

Five bids were received.

Deposited as security on bids, \$875.

6. Furnishing and delivering 2,000 cubic yards of broken trap rock and 2,000 cubic yards of trap rock screenings.

Five bids were received.

Deposited as security on bids, \$500.

7. Furnishing and delivering 3,389 cubic yards of broken trap rock and 1,130 cubic yards of trap rock screenings.

Six bids were received.

Deposited as security on bids, \$1,050.

8. Furnishing and delivering 6,000 linear feet of bluestone curbstone.

Five bids were received.

Deposited as security on bids, \$300.

9. Furnishing and delivering 150,000 pounds of paving pitch.

One bid was received.

Deposited as security on bid, \$25.

10. Furnishing and delivering 1,000 barrels of Portland cement.

Five bids were received.

Deposited as security on bids, \$600.

11. Furnishing and delivering 30,000 square feet bluestone bridge stone.

Four bids were received.

Deposited as security on bids, \$300.

12. Furnishing and delivering 200 cubic yards paving gravel and 100 cubic yards cement sidewalk grit.

Three bids were received.

Deposited as security on bids, \$450.

13. Furnishing and delivering 4,000 cubic yards of sand.

Three bids were received.

Deposited as security on bids, \$225.

14. Furnishing and delivering 2,500 cubic yards of sand.

Four bids were received.

Deposited as security on bid, \$200.

On March 21, 1906.

1. Furnishing and erecting 100 headstones over the graves of the deceased veteran Union Soldiers, Sailors and Marines.

Three bids were received.

Deposited as security on bids, \$75.

On March 28, 1906.

1. Furnishing and delivering furniture, rugs, carpets, linoleum, shades, etc., to the Seventh District Municipal Court.

Five bids were received.

Deposited as security on bids, \$200.

2. Furnishing and delivering furniture, cork carpets, rugs, shades, etc., to the Sixth District Municipal Court.

Five bids were received.

Deposited as security on bids, \$175.

On April 4, 1906.

1. Constructing cement concrete sidewalks in various places and on various streets.

Two bids received.

Deposited as security on bids, \$60.

2. Constructing cement concrete sidewalks in various places and on various streets.

Three bids received.

Deposited as security on bids, \$75.

3. Constructing cement concrete sidewalks on various streets and in various places.

Three bids received.

Deposited as security on bids, \$105.

4. Constructing cement concrete sidewalks in various places and on various streets.

Six bids received.

Deposited as security on bids, \$240.

5. Constructing cement sidewalks in various places and on various streets.

Seven bids received.

Deposited as security on bids, \$350.

6. Constructing cement sidewalks in various places and on various streets.

Seven bids received.

Received as security deposits on same, \$350.

7. Fencing vacant lots in various places and on various streets.

Three bids received.

Deposited as security on bids, \$55.

8. Fencing vacant lots in various places and on various streets.

Three bids were received.

Deposited as security on bids, \$45.

9. Fencing vacant lots in various places and on various streets.

Two bids received.

Deposited as security on bids, \$20.

10. For grading lots on the south side of Sixtieth street, between Third and Fourth avenues, etc.

Two bids received.

Deposited as security on bids, \$40.

11. For grading lots on the north side of Eastern Parkway between Bedford and Franklin avenues, etc.

Eight bids received.

Deposited as security on bids, \$880.

12. For grading lots on south side of Myrtle avenue, between Lewis avenue and Broadway.

Six bids were received.

Deposited as security on bids, \$60.

13. For grading lots on the south side of St. Mark's avenue, between Kingston and Brooklyn avenues.

Five bids received.

Deposited as security on bids, \$25.

14. For grading lots on the northeast side of Irving avenue between Starr street and Willoughby avenue.

Six bids were received.

Deposited as security on bids, \$30.

15. For grading lots on the north side of Windsor place between Eighth avenue and Prospect Park West.

Three bids were received.

Deposited as security on bids, \$15.

16. For grading lots on the southeast side of Meeker avenue between Stewart and Gardner avenues.

Four bids received.

Deposited as security on bids, \$60.

On April 11, 1906.

1. For regulating, grading, curbing and laying sidewalks on Belmont avenue from Elton street to Chestnut street.

Three bids received.

Deposited as security on bids, \$675.

2. For grading, curbing and laying sidewalks on Avenue D from Flatbush avenue to Rogers avenue.

Eight bids received.

Deposited as security on bids, \$680.

3. For regulating, grading, curbing and laying sidewalks on Dean street from Saratoga avenue to Rockaway avenue.

Seven bids received.

Deposited as security on bids, \$875.

4. Regulating, grading and curbing on Dumont avenue from a point 75 feet west of Bristol street to Howard avenue, etc.

Five bids received.

Deposited as security on bids, \$1,500.

5. For regulating, grading, curbing and laying sidewalks on Etna street, from Hale avenue to Norwood avenue.

Two bids received.

Deposited as security on bids, \$50.

6. For regulating, grading, curbing and laying sidewalks on Foster avenue, from Coney Island avenue to East Fourteenth street, etc.

Eleven bids were received.

Deposited as security on bids, \$2,145.

7. Regulating, grading, curbing and laying sidewalks on Grant avenue, from Jamaica avenue to Liberty avenue.

Five bids received.

Deposited as security on bids, \$1,875.

8. For regulating and paving with asphalt pavement on concrete foundation, Hopkinson avenue, from Eastern parkway extension to Blake avenue.

Four bids received.

Deposited as security on bids, \$1,200.

9. Regulating, and paving with asphalt pavement on a concrete foundation, Logan street, from Jamaica avenue to Atlantic avenue.

Four bids received.

Deposited as security on bids, \$1,000.

10. Regulating, grading, curbing and laying sidewalks on Lott street, from Vernon avenue to Beverley road.

Six bids received.

Deposited as security on bids, \$180.

11. Constructing cement concrete sidewalks on the westerly side of New Utrecht avenue, between Thirty-ninth street and Kouwenhoven lane, etc.

Five bids received.

Deposited as security on bids, \$250.

12. For regulating and paving with asphalt pavement on a concrete foundation, Norwood avenue, from Atlantic avenue to Jamaica avenue.

Four bids received.

Deposited as security on bids, \$1,000.

13. Regulating, grading, curbing and laying sidewalks on Prospect place, from Ralph avenue to Eastern parkway.

Six bids received.

Deposited as security on bids, \$1,500.

14. Regulating, grading, curbing and laying sidewalks on Sutter avenue, from Saratoga avenue to Howard avenue.
Six bids received.
Deposited as security on bids, \$450.
15. For regulating, and paving with asphalt pavement on concrete foundation, Eighth street, from Eighth avenue to Prospect Park West.
Four bids received.
Deposited as security on bids, \$300.
16. For regulating, curbing and laying sidewalks on Tenth avenue, from Seventy-fifth street to Bay Ridge avenue.
Twelve bids received.
Deposited as security on bids, \$960.
17. For regulating, grading, curbing and laying sidewalks on Eleventh avenue, from Sixty-fifth street to Sixty-ninth street.
Twelve bids were received.
Deposited as security on bids, \$1,200.
18. Regulating, grading and curbing Forty-first street, from New Utrecht avenue to the old City line.
Nine bids received.
Deposited as security on bids, \$1,350.
19. Regulating, grading, curbing and laying sidewalks on Fifty-fifth street, from Eleventh avenue to Kouwenhoven lane.
Ten bids received.
Deposited as security on bids, \$1,100.
20. Regulating, grading and curbing Sixty-first street, from Fifth avenue to Sixth avenue.
Six bids received.
Deposited as security on bids, \$900.
21. Regulating, grading, curbing and laying sidewalks on Sixty-fourth street, from Third avenue to Fourth avenue.
Nine bids received.
Deposited as security on bids, \$675.
22. Regulating, grading, curbing and laying sidewalks on Seventy-third street, from New Utrecht avenue to Eighteenth avenue.
Eleven bids received.
Deposited as security on bids, \$715.
23. Furnishing and delivering 1,000 barrels of Portland cement.
Two bids received.
Deposited as security on bids, \$50.
24. Regulating, repaving with asphalt pavement on concrete foundation, Degraw street, from Franklin avenue to Nostrand avenue.
Four bids received.
Deposited as security on bids, \$1,000.
25. Regulating and repaving with asphalt pavement on a concrete foundation, Fifth street, from Seventh avenue to Prospect Park West.
Four bids received.
Deposited as security on bids, \$700.
26. For regulating and repaving with asphalt pavement on concrete foundation, Hopkinson avenue, from Broadway to Marion street, etc.
Four bids received.
Deposited as security on bids, \$1,800.
27. Repaving with asphalt pavement on concrete foundation, Kosciusko place, from Kent avenue to easterly terminus.
Three bids received.
Deposited as security on bids, \$75.

On April 18, 1906.

1. For furnishing and delivering lime, cement, brick, fire clay, soda, etc., to the various sewage disposal works.
Two bids received.
Deposited as security on bids, \$600.
2. For furnishing and delivering chemicals and disinfectants to the various disposal works in the Twenty-sixth and Thirty-first Wards.
Four bids received.
Deposited as security on bids, \$165.
3. Furnishing and delivering manhole heads, covers, etc., for use by the Bureau of Sewers.
Three bids received.
Deposited as security on bids, \$90.
4. Furnishing and delivering forage to the Bureau of Sewers.
Two bids received.
Deposited as security thereon, \$60.

On April 25, 1906.

1. Furnishing and delivering hardware, tools and miscellaneous supplies for use by the Bureau of Sewers.
Five bids received.
Deposited as security on bids, \$213.
2. Furnishing all the labor and material to repair and fit out five free floating baths, Borough of Brooklyn.
Eight bids received.
Deposited as security on bids, \$800.
3. Regulating and repaving with asphalt pavement on concrete foundation, Bergen street, from Schenectady avenue to Eastern parkway.
Four bids received.
Deposited as security on bids, \$2,800.
4. Regulating and repaving with asphalt pavement on concrete foundation, Bleeker street, from Bushwick avenue to Knickerbocker avenue.
Three bids received.
Deposited as security on bids, \$975.
5. Regulating and repaving with asphalt pavement on concrete foundation, Bridge road, from Sands street to Navy street, etc.
Four bids received.
Deposited as security on bids, \$720.
6. For regulating and repaving with asphalt pavement on a concrete foundation, Cornelia street, from Broadway to Central avenue.
Three bids received.
Deposited as security on bids, \$675.
7. Regulating and repaving with asphalt pavement on concrete foundation, Duffield street, from Nassau street to 285 feet south of Concord street.
Four bids received.
Deposited as security on bids, \$300.
8. Regulating and paving with asphalt pavement on concrete foundation, Glenn street, from Railroad avenue to Euclid avenue.
Four bids received.
Deposited as security on bids, \$400.
9. For regulating and repaving with asphalt pavement on concrete foundation, Harrison avenue, from Hewes street to Flushing avenue.
Four bids received.
Deposited as security on bids, \$1,000.
10. Regulating and repaving with granite pavement on concrete foundation, Johnson street, from Gold street to Raymond street.
Five bids received.
Deposited as security on bids, \$1,000.
11. Regulating and repaving with granite block and asphalt pavement on a concrete foundation, Lexington avenue, from Throop avenue to Broadway.
Four bids received.
Deposited as security on bids, \$3,000.
12. For regulating and repaving with granite pavement on concrete foundation, Mack place, from Bridge street to Gold street.
Five bids received.
Deposited as security on bids, \$250.
13. Regulating and repaving with asphalt pavement on concrete foundation, Prospect place, from Grand avenue to Franklin avenue.

- Four bids received.
Deposited as security on bids, \$900.
14. For repaving with asphalt on concrete, Rogers avenue, from Bergen street to Park place.
Three bids received.
Deposited as security on bids, \$210.
15. For regulating and paving with asphalt pavement on concrete foundation, Seventy-fourth street, from Third avenue to Fourth avenue.
Four bids received.
Deposited as security on bids, \$300.
16. For regulating and repaving with asphalt pavement on concrete foundation, Tompkins avenue, from Pulaski street to Flushing avenue.
Four bids received.
Deposited as security on bids, \$800.
17. For repaving with asphalt on concrete, Windsor place, from Tenth avenue to Fifteenth street.
Four bids received.
Deposited as security on bids, \$720.
18. For grading lot on the north side of Eighth street, between Eighth avenue and Prospect Park West.
Three bids received.
Deposited as security on bids, \$300.
19. For repaving with asphalt blocks on concrete on Hopkinson avenue, from Marion street to Somers street.
Two bids received.
Deposited as security on bids, \$350.
20. For regulating and repaving with asphalt block pavement on concrete foundation, Rogers avenue, from Malbone street to Montgomery street.
One bid received.
Deposited as security on bid, \$90.
21. For regulating and repaving with asphalt pavement on concrete foundation, Troutman street, from Evergreen avenue to Hamburg avenue.
Three bids received.
Deposited as security on bids, \$1,050.
22. Constructing cement sidewalks in various places and on various streets.
Two bids received.
Deposited as security on bids, \$30.
23. Fencing vacant lots in various places and on various streets.
Two bids received.
Deposited as security on bids, \$10.
24. For regulating, grading, curbing and laying sidewalks on East Fifth street, from Greenwood avenue to Fort Hamilton avenue.
Six bids received.
Deposited as security on bids, \$300.
25. For furnishing all labor and materials required for constructing sewers in Flatbush avenue, from Nostrand avenue to Avenue N, etc.
Nine bids received.
Deposited as security on bids, \$18,000.
26. Furnishing all labor and material required for constructing sewers in Eighteenth avenue, from East Fourth street to old New Utrecht town line.
Twelve bids received.
Deposited as security on bids, \$9,000.
27. For furnishing all labor and material required for constructing sewer in Third avenue, from Sixtieth to Sixty-first street, etc.
Nine bids received.
Deposited as security on bids, \$5,850.
28. For furnishing all labor and material required for constructing sewer in Fifty-third street, from Thirteenth avenue to Fifteenth avenue, etc.
Eleven bids received.
Deposited as security on bids, \$3,850.
29. Furnishing all labor and material required for constructing sewer in First avenue, from Bay Ridge avenue to Wakeman place.
Six bids received.
Deposited as security on bids, \$1,500.
30. For furnishing all labor and material required for constructing sewer in Bowery, from Jones' walk to Steeplechase walk.
Five bids received.
Deposited as security on bids, \$1,000.
31. For furnishing all labor and material required for constructing sewer in President street, from Bedford avenue to Rogers avenue, etc.
Six bids received.
Deposited as security on bids, \$900.
32. Furnishing all the labor and material required for constructing sewer in Webster avenue, from Ocean parkway to Gravesend avenue.
Thirteen bids received.
Deposited as security on bids, \$1,950.
33. Furnishing all labor and material required for constructing sewer in Forty-eighth street, from Thirteenth avenue to summit between Fourteenth and Fifteenth avenues.
Nine bids received.
Deposited as security on bids, \$1,155.
34. Furnishing all the labor and material required for constructing sewer in Forty-fourth street, from Fifth avenue to Sixth avenue.
Five bids received.
Deposited as security on bids, \$425.
35. For furnishing all labor and material required for constructing sewer in Prospect street, from Vernon avenue to Beverley road.
Six bids received.
Deposited as security on bids, \$420.
36. Furnishing all labor and material required for constructing sewer in Bay Eleventh street, from Eighty-sixth street to Benson avenue.
Six bids received.
Deposited as security on bids, \$360.
37. For furnishing all labor and material required for constructing sewer in Eleventh avenue, from Eighteenth street to Terrace place.
Three bids received.
Deposited as security on bids, \$120.
38. Furnishing all the labor and materials required for constructing sewer in Fourth avenue, east side, from Ninety-fifth street to Ninety-seventh street.
Four bids received.
Deposited as security on bids, \$140.
39. Furnishing all the labor and material required for constructing sewer basins at the northeast and northwest corners of East Twenty-fifth street and Foster avenue.
One bid received.
Deposited as security on bid, \$10.
40. Furnishing all the labor and material required for constructing sewer basin at the northeast and northwest corners of East Sixteenth street and Cortelyou road.
One bid received.
Deposited as security on bid, \$10.
41. For constructing sewer in Forty-first street, from Seventh avenue to New Utrecht avenue.
Six bids received.
Deposited as security on bids, \$1,800.
42. For constructing sewer in Irving avenue, from Halsey street to Putnam avenue.
Five bids received.
Deposited as security on bids, \$1,250.
43. For constructing sewer in Decatur street, from Knickerbocker avenue to borough line of Queens.
Seven bids received.
Deposited as security on bids, \$850.
44. Furnishing all the labor and material required for constructing sewer on the northerly side of Parkside avenue, from St. Paul's avenue to Ocean avenue, etc.
Five bids received.
Deposited as security on bids, \$550.

45. Furnishing all the labor and material required for constructing sewer in Weirfield street, from Knickerbocker avenue to the boundary lines between the boroughs of Brooklyn and Queens.

Seven bids received.

Deposited as security on bids, \$700.

46. Furnishing all the labor and material required for constructing sewer in Ninety-seventh street, from Shore road to Marine avenue.

Four bids received.

Deposited as security on bids, \$400.

47. For furnishing all the labor and material required for constructing sewer in Fifty-seventh street, from Fourteenth avenue to Fifteenth avenue.

Seven bids received.

Deposited as security on bids, \$665.

48. Furnishing all the labor and materials required for constructing sewer in Eighty-fourth street, from First avenue to Second avenue.

Five bids received.

Deposited as security on bids, \$425.

49. For furnishing all the labor and materials required for constructing sewer in Fifty-fourth street, from Sixth avenue to Seventh avenue.

Six bids received.

Deposited as security on bids, \$450.

50. For furnishing all labor and material required for constructing sewer in Dean street, from Saratoga avenue to summit east of Saratoga avenue.

Two bids received.

Deposited as security on bids, \$150.

51. For furnishing all labor and material for constructing outlet sewer in Benson avenue, from Bay Twenty-sixth street to Twenty-first avenue, etc.

Four bids received.

Deposited as security on bids, \$320.

52. For furnishing all labor and material required for constructing sewer in Clinton place, from Crescent street to a point 275 feet west thereof.

Two bids received.

Deposited as security on bids, \$70.

On May 9, 1906.

1. For regulating and repaving with asphalt pavement on a concrete foundation Chester street, from East New York avenue to Hunterfly road.

Four bids received.

Deposited as security on bids, \$1,000.

2. For regulating and repaving with asphalt pavement on concrete foundation Evergreen avenue, from Willoughby avenue to George street.

Three bids received.

Deposited as security on bids, \$375.

3. For regulating and repaving with asphalt block pavement on concrete foundation Evergreen avenue, from George street to Flushing avenue.

Three bids received.

Deposited as security on bids, \$450.

4. For regulating and repaving with asphalt block pavement on concrete foundation Forty-ninth street, from Third avenue to Fourth avenue.

Three bids received.

Deposited as security on bids, \$300.

5. For regulating and repaving with asphalt block pavement on concrete foundation Fifty-fifth street, from Fifth avenue to Sixth avenue.

Three bids received.

Deposited as security on bids, \$1,500.

6. For regulating and repaving with asphalt pavement on concrete foundation Grove street, from Hamburg avenue to Myrtle avenue.

Three bids received.

Deposited as security on bids, \$450.

7. For regulating and repaving with asphalt pavement on present pavement as a foundation Hewes street, from Marcy avenue to Broadway.

Four bids received.

Deposited as security on bids, \$700.

8. For regulating and repaving with asphalt pavement on concrete foundation Humboldt street, from Grand street to Meeker avenue.

Four bids received.

Deposited as security on bids, \$1,500.

9. For regulating and repaving with asphalt pavement on concrete foundation India street, from West street to Oakland street.

Four bids received.

Deposited as security on bids, \$900.

10. For regulating and repaving with asphalt pavement on present pavement as a foundation the intersection of State and Bond streets.

Three bids received.

Deposited as security on bids, \$15.

11. For regulating and repaving with asphalt pavement on concrete foundation Jewell street, from Nassau avenue to Norman avenue.

Three bids received.

Deposited as security on bids, \$195.

12. For regulating and repaving with asphalt pavement on concrete foundation Junius street, from East New York avenue to Pitkin avenue.

Four bids received.

Deposited as security on bids, \$700.

13. Regulating and repaving with asphalt pavement on concrete foundation Linden street, from Broadway to Bushwick avenue.

Three bids received.

Deposited as security on bids, \$225.

14. For regulating and repaving with asphalt pavement on concrete foundation Meserole avenue, from Guernsey street to Franklin avenue.

Three bids received.

Deposited as security on bids, \$225.

15. For regulating and repaving with iron slag pavement on a concrete foundation Nevins street, from Flatbush avenue to Dean street.

Three bids received.

Deposited as security on bids, \$1,425.

16. Regulating and repaving with asphalt pavement on concrete foundation North Tenth street, from Driggs avenue to Union avenue.

Four bids received.

Deposited as security on bids, \$440.

17. Regulating and repaving with granite pavement on concrete foundation Richardson street from Union avenue to Leonard street.

Eight bids received.

Deposited as security on bids, \$2,400.

18. Regulating and repaving with asphalt block pavement on concrete foundation Thirteenth street from Fourth avenue to Eighth avenue.

Three bids received.

Deposited as security on bids, \$1,950.

19. Regulating and repaving with asphalt on concrete foundation South Tenth street from Kent avenue to Bedford avenue.

Four bids received.

Deposited as security on bids, \$520.

20. Regulating and repaving with asphalt pavement on concrete foundation Sumpter street from Fulton street to Hopkinson avenue.

Four bids received.

Deposited as security on bids, \$1,900.

21. Regulating and repaving with asphalt on present pavement as a foundation Vanderbilt avenue from Park place to Plaza street.

Four bids received.

Deposited as security on bids, \$320.

22. Regulating and paving with asphalt on concrete foundation Dumont avenue from Rockaway avenue to Powell street.

Four bids received.

Deposited as security on bids, \$1,400.

23. Fencing vacant lots in various places and on various streets.

Two bids received.

Deposited as security on bids, \$30.

24. Constructing cement sidewalks in various places and on various streets.

One bid received.

Deposited as security on bid, \$25.

25. Regulating, grading, curbing and laying sidewalks on Thirty-eighth street from Third avenue to Fifth avenue.

Nine bids received.

Deposited as security on bids, \$1,260.

26. Regulating, grading, curbing, guttering and laying sidewalks on Eighty-fifth street from Fourth avenue to Seventh avenue.

Eight bids received.

Deposited as security on bids, \$1,600.

27. Furnishing and delivering Janitors' supplies for the various public buildings, baths and comfort stations in the Borough of Brooklyn.

Four bids received.

Deposited as security on bids, \$810.

On May 16, 1906.

1. For furnishing and delivering hardware, tools and miscellaneous supplies for the Bureau of Highways and Topographical Bureau.

Two bids received.

Deposited as security on same, \$80.

2. Furnishing all the labor and material required for constructing sewer in East Fortieth street from Avenue C (now Clarendon road) to Ditmas avenue (formerly Avenue E, now Foster avenue).

Seven bids received.

Deposited as security on bids, \$1,715.

3. Furnishing all labor and material required for constructing sewer in Thirtieth avenue from Seventy-ninth street to Eighty-second street, etc.

Eight bids received.

Deposited as security on bids, \$1,400.

4. Furnishing all the labor and material required for constructing sewer in Eightieth street from First avenue to Second avenue.

Ten bids received.

Deposited as security on bids, \$850.

5. Furnishing all the labor and material required for constructing sewer in Eighth avenue from Seventieth street to Seventy-second street.

Eight bids received.

Deposited as security on bids, \$600.

6. Furnishing all the labor and material required for constructing sewer in Pitkin avenue from Powell street to Van Sinderen avenue.

Four bids received.

Deposited as security on bids, \$240.

7. Furnishing all the labor and material required for constructing sewer in Forty-first street, from the summit west of Seventh avenue to Seventh avenue.

Five bids received.

Deposited as security on bids, \$287.50.

8. Furnishing all the labor and material required for constructing sewer in Kenmore place from Avenue G to the end of the existing sewer north of Avenue G.

Four bids received.

Deposited as security on bids, \$140.

9. Furnishing all the labor and materials required for excavation in Paerdegat basin from Flatlands avenue to Avenue M.

Four bids received.

Deposited as security on bids, \$700.

On May 23, 1906.

1. For regulating and repaving with medina sandstone on concrete foundation Atlantic avenue from Henry street to Flatbush avenue.

Eight bids were received.

Deposited as security on bids, \$13,600.

2. For regulating, grading, curbing and laying sidewalks on Belmont avenue from Warwick street to Elton street.

Six bids received.

Deposited as security on bids, \$300.

3. For regulating, grading, curbing and laying sidewalks on Beverley road from Flatbush avenue to Bedford avenue.

Ten bids received.

Deposited as security on bids, \$600.

4. For regulating and repaving with medina sandstone on concrete foundation Centre street from Smith street to Hamilton avenue.

Five bids received.

Deposited as security on bids, \$425.

5. For regulating, grading, curbing and laying sidewalks on Elmore place from Farragut road to Glenwood road.

Four bids received.

Deposited as security on bids, \$100.

6. For regulating and repaving with asphalt block pavement on concrete foundation Fourth street from Smith street to Hoyt street.

Three bids received.

Deposited as security on bids, \$270.

7. For regulating and repaving with medina sandstone on concrete foundation Fourth street from Hoyt street to Bond street, etc.

Six bids received.

Deposited as security on bids, \$1,410.

8. For regulating and repaving with asphalt pavement on concrete foundation Freeman street from Manhattan avenue to Oakland street.

Three bids received.

Deposited as security on bids, \$270.

9. For regulating and repaving with asphalt pavement on concrete foundation Himrod street, from Bushwick avenue to Myrtle avenue.

Three bids received.

Deposited as security on bids, \$690.

10. For regulating and repaving with asphalt pavement on concrete foundation Hopkinson avenue from Fulton street to 264 feet south of Herkimer street.

Three bids received.

Deposited as security on bids, \$225.

11. For regulating and repaving with granite pavement on concrete foundation Johnson street from Duffield street to Pearl street.

Four bids received.

Deposited as security on bids, \$650.

12. For regulating, grading, curbing and laying sidewalks on Kenilworth place from Avenue G to Germania place.

Six bids received.

Deposited as security on bids, \$300.

13. For regulating and repaving with asphalt pavement on concrete foundation Kosciuszko place from Bedford avenue to Throop avenue, etc.

Four bids received.

Deposited as security on bids, \$2,000.

14. For regulating and repaving with asphalt pavement on concrete foundation Marcy avenue from Broadway to South Third street, etc.

Three bids received.

Deposited as security on bids, \$405.

15. For regulating and repaving with asphalt pavement on concrete foundation Marcy avenue from Willoughby avenue to Flushing avenue.

Three bids received.

Deposited as security on bids, \$525.

16. For regulating and repaving with asphalt pavement on concrete foundation McDougal street from Fulton street to Rockaway avenue.

Four bids received.

Deposited as security on bids, \$1,400.

17. For regulating, grading and curbing on New Jersey avenue from Jamaica avenue to Highland boulevard.
Two bids received.
Deposited as security on bids, \$70.
18. For regulating and repaving with granite pavement on concrete foundation Park avenue from Classon avenue to Broadway.
Five bids received.
Deposited as security on bids, \$4,500.
19. For regulating and repaving with asphalt pavement on concrete foundation Pleasant place from Herkimer street to 295 feet southerly.
Three bids received.
Deposited as security on bids, \$120.
20. For regulating and repaving with asphalt pavement on concrete foundation Plymouth street from Hudson avenue to Little street.
Three bids received.
Deposited as security on bids, \$90.
21. For regulating and repaving with medina sandstone on concrete foundation Richards street from Beard street to Verona street.
Six bids received.
Deposited as security on bids, \$2,250.
22. For regulating and grading Rockaway avenue from Hegeman avenue to Stanley avenue, etc.
Two bids received.
Deposited as security on bids, \$130.
23. For regulating and repaving with asphalt block pavement on concrete foundation Sixteenth street from Hamilton avenue to Fourth avenue.
Three bids received.
Deposited as security on bids, \$570.
24. For regulating and repaving with asphalt block pavement on concrete foundation Seventeenth street from Sixth avenue to Prospect Park West.
Three bids received.
Deposited as security on bids, \$900.
25. For regulating and repaving with asphalt pavement on concrete foundation South Second street from Havemeyer street to Marcy avenue, etc.
Three bids received.
Deposited as security on bids, \$450.
26. For regulating and repaving with asphalt pavement on concrete foundation St. Charles place from St. John's place to Degraw street.
Three bids received.
Deposited as security on bids, \$90.
27. For regulating and repaving with asphalt pavement on concrete foundation Sterling place from Brooklyn avenue to Kingston avenue.
Three bids received.
Deposited as security on bids, \$270.
28. For regulating and repaving with medina sandstone on concrete foundation Sullivan street from Dwight street to Ferris street.
Seven bids received.
Deposited as security on bids, \$3,150.
29. For regulating and repaving with asphalt pavement on concrete foundation Sumpter street from Hopkinson avenue to Broadway.
Three bids received.
Deposited as security on bids, \$600.
30. For regulating and repaving with asphalt pavement on concrete foundation Third place from Henry street to Smith street.
Four bids received.
Deposited as security on bids, \$600.
31. For regulating and repaving with asphalt pavement on concrete foundation Throop avenue from Macon street to McDonough street.
Three bids received.
Deposited as security on bids, \$105.
32. For regulating and repaving with asphalt pavement on concrete foundation Vernon avenue from Sumner avenue to Stuyvesant avenue.
Three bids received.
Deposited as security on bids, \$555.
33. For regulating and paving with asphalt pavement on concrete foundation Willoughby street from Bridge street to Gold street, etc.
Three bids received.
Deposited as security on bids, \$525.
34. For furnishing and delivering lighting fixtures to the Gates Avenue Court House, Borough of Brooklyn.
Two bids received.
Deposited as security on bids, \$70.

On June 6, 1906.

1. For regulating, grading, curbing and laying sidewalks on Ashford street from Pitkin avenue to Livonia avenue.
Four bids received.
Deposited as security on bids, \$900.
2. Regulating, grading, curbing and laying sidewalks on Church avenue from Flatbush avenue to East Eleventh street.
Thirteen bids received.
Deposited as security on bids, \$1,950.
3. For regulating and paving with asphalt pavement on concrete foundation Church avenue from Flatbush avenue to East Eleventh street.
Four bids received.
Deposited as security on bids, \$800.
4. For regulating, grading, curbing and laying sidewalks on Cleveland street from Pitkin avenue to Livonia avenue.
Four bids received.
Deposited as security on bids, \$800.
5. For regulating, grading and curbing on Degraw street from Classon avenue to Franklin avenue, etc.
Five bids received.
Deposited as security on bids, \$750.
6. For regulating, grading, curbing and laying sidewalks on East Eighth street from Avenue C to Avenue E.
Eleven bids received.
Deposited as security on bids, \$1,375.
7. For regulating, grading, curbing and laying sidewalks on East Thirty-first street from Avenue F to Glenwood road.
Seven bids received.
Deposited as security on bids, \$350.
8. For regulating and paving with asphalt pavement on concrete foundation East Thirty-first street from Avenue F to Glenwood road.
Four bids received.
Deposited as security on bids, \$300.
9. For regulating and paving with asphalt pavement on concrete foundation Folsom place from Linwood street to Essex street.
Three bids received.
Deposited as security on bids, \$60.
10. For regulating, grading, curbing and laying sidewalks on Glenmore avenue from Eldert lane to Queens County line.
Two bids received.
Deposited as security on bids, \$150.
11. For regulating, grading, curbing and laying sidewalks on Huntington street from Henry street to Hamilton avenue.
Seven bids received.
Deposited as security on bids, \$140.
12. For regulating and repaving with asphalt pavement on a concrete foundation Hunts alley from Henry street to easterly terminus.
Four bids received.
Deposited as security on bids, \$120.

13. For laying crosswalks on Lotts lane at the intersections of Forty-second and Forty-third streets.
Two bids received.
Deposited as security on bids, \$20.
14. For curbing, guttering and laying sidewalks on the westerly side of Seventh avenue from Bay Ridge avenue to Seventy-fifth street, etc.
Eight bids received.
Deposited as security on bids, \$1,200.
15. For regulating, grading, curbing and laying sidewalks on Seventy-second street from Second avenue to Shore road.
Eleven bids received.
Deposited as security on bids, \$2,750.
16. For regulating and paving with asphalt pavement on concrete foundation Sixty-second street from Fourth avenue to Fifth avenue.
Four bids received.
Deposited as security on bids, \$300.
17. For regulating, grading, curbing and laying sidewalks on Sutter avenue from Warwick street to Elton street.
Four bids received.
Deposited as security on bids, \$200.
18. For regulating, grading, curbing and laying sidewalks on Warehouse avenue from Surf avenue to Neptune avenue.
Three bids received.
Deposited as security on bids, \$375.
19. For furnishing all the labor and material required for constructing sewer basins at the northeast and northwest corners of Grant and Union avenues.
One bid received.
Deposited as security on bid, \$10.
20. For furnishing all the labor and material required for constructing sewer basin at the northeast corner of Atlantic avenue and Russell place.
One bid received.
Deposited as security on bid, \$5.

On June 13, 1906.

1. For furnishing all the labor and material required for constructing sewer in Fourth avenue from Eighty-second street to Eighty-sixth street (west side).
Eight bids received.
Deposited as security on bids, \$1,200.
2. For furnishing all the labor and material required for reconstructing sewer basins on Imlay street at all four corners of Verona street, etc.
Three bids received.
Deposited as security on bids, \$150.
3. For furnishing all the labor and material required for constructing sewer in Eighth street from Second avenue to end of existing sewer thereof.
One bid received.
Deposited as security on bid, \$15.
4. For furnishing all the labor and materials required for constructing sewer basins on Seventeenth avenue at the northerly, southerly and westerly corners of Benson avenue, etc.
Five bids received.
Deposited as security on bids, \$75.
5. For furnishing all the labor and material required for constructing sewer basins on East Eighteenth street at the southwest corner of Dorchester road.
Two bids received.
Deposited as security on bids, \$25.

On June 27, 1906.

1. For regulating, grading, curbing and laying sidewalks on East Fifth street from Fort Hamilton avenue to Albemarle road.
Eight bids received.
Deposited as security on bids, \$720.
2. For regulating and paving with asphalt pavement on concrete foundation East Fifth street from Fort Hamilton to Albemarle road.
Three bids received.
Deposited as security on bids, \$450.
3. For regulating, grading, curbing and laying sidewalks on East Fifteenth street from Beverley road to Cortelyou road.
Six bids received.
Deposited as security on bids, \$150.
4. For regulating and paving with asphalt pavement on concrete foundation East Fifteenth street from Beverley road to Cortelyou road.
Three bids received.
Deposited as security on bids, \$300.
5. For regulating, grading, curbing and laying sidewalks on East Fifteenth street from Cortelyou road to Dorchester road.
Six bids received.
Deposited as security on bids, \$270.
6. For regulating and paving with asphalt pavement on concrete foundation East Fifteenth street from Cortelyou road to Dorchester road.
Three bids received.
Deposited as security on bids, \$350.
7. For regulating and paving with asphalt on concrete foundation East Fifteenth street from Ditmas avenue to Dorchester road.
Three bids received.
Deposited as security on bids, \$225.
8. For regulating and paving with asphalt on concrete foundation East Seventeenth street from Albemarle road to Beverley road.
Three bids received.
Deposited as security on bids, \$300.
9. For regulating and paving with asphalt on concrete foundation on Eighty-third street from Second avenue to Third avenue.
Two bids received.
Deposited as security on bids, \$250.
10. For regulating and paving with granite on concrete foundation New Jersey avenue from Jamaica avenue to Highland boulevard.
Four bids received.
Deposited as security on bids, \$240.
11. For regulating, grading, curbing and laying sidewalks on Newkirk avenue from Flatbush avenue to East Seventeenth street.
Ten bids received.
Deposited as security on bids, \$1,000.
12. For regulating and paving with asphalt on concrete foundation Newkirk avenue from Flatbush avenue to East Seventeenth street.
Three bids received.
Deposited as security on bids, \$750.
13. For regulating, grading, curbing and laying sidewalks on New York avenue from Clarkson street to Church avenue.
Seven bids received.
Deposited as security on bids, \$875.
14. For regulating, grading, curbing and laying sidewalks on Park place from Eastern parkway extension to East New York avenue.
Four bids received.
Deposited as security on bids, \$180.
15. For regulating and paving with asphalt on concrete foundation Prescott place from Herkimer street to Atlantic avenue.
Three bids received.
Deposited as security on bids, \$75.
16. For regulating, grading, curbing and laying sidewalks on West Fifth street from Neptune avenue to Sheepshead Bay road.
Five bids received.
Deposited as security on bids, \$275.

17. For regulating, grading, curbing West Sixteenth street, from Mermaid avenue to Neptune avenue.
Three bids received.
Deposited as security on bids, \$225.
18. For furnishing and delivering 125 tons of best white ash anthracite coal.
One bid received.
Deposited as security on bid, \$50.

On July 6, 1906.

1. For furnishing and delivering engineers' and draughtsmen's supplies for use by the Bureau of Highways and Topographical Bureau.
Five bids received.
Deposited as security on bids, \$125.
2. For furnishing all the labor and material required for constructing sewer in Brooklyn avenue, from Avenue G (Glenwood road) to Avenue H.
Four bids received.
Deposited as security on bids, \$400.
3. For furnishing all the labor and material required for constructing sewer in Fifty-ninth street, from Seventh avenue to Eighth avenue.
Four bids received.
Deposited as security on bids, \$240.
4. For furnishing all the labor and material required for constructing sewer in Forty-second street, from Seventh avenue to Eighth avenue.
Four bids received.
Deposited as security on bids, \$300.
5. For furnishing all the labor and material required for constructing sewer basins at southeast and southwest corners of Jerome street and Belmont avenue.
Four bids received.
Deposited as security on bids, \$260.
6. For regulating and curbing Bay Ridge avenue, from Fifth avenue to Seventh avenue, etc.
Five bids received.
Deposited as security on bids, \$1,000.
7. For regulating and repaving with asphalt pavement on concrete foundation Calyer street, from Manhattan avenue to Newell street.
Three bids received.
Deposited as security on bids, \$300.
8. For regulating and repaving with asphalt pavement on concrete foundation Chauncey street, from 159 feet east of Saratoga avenue to Rockaway avenue.
Three bids received.
Deposited as security on bids, \$495.
9. For regulating and repaving with granite pavement on concrete foundation Clay street, from Manhattan avenue to Commercial street.
Five bids received.
Deposited as security on bids, \$900.
10. For regulating and repaving with asphalt pavement on concrete foundation Diamond street, from Driggs avenue to Norman avenue.
Three bids received.
Deposited as security on bids, \$450.
11. For regulating, grading, curbing and laying sidewalks on East Nineteenth street, from Avenue L to Avenue M.
Three bids received.
Deposited as security on bids, \$150.
12. Regulating, grading, curbing and laying sidewalks on East Nineteenth street, from Avenue L to Avenue M.
Three bids received.
Deposited as security on bids, \$150.
13. Regulating and repaving with asphalt blocks on concrete foundation Fifty-seventh street, from Third avenue to Sixth avenue.
Two bids received.
Deposited as security on bids, \$600.
14. Regulating and repaving with asphalt pavement on concrete foundation Herbert street, from Graham avenue to Kingsland avenue.
Three bids received.
Deposited as security on bids, \$450.
15. Regulating and repaving with asphalt pavement on concrete foundation Humboldt street, from Engert avenue to Norman avenue.
Three bids received.
Deposited as security on bids, \$675.
16. Regulating and repaving with asphalt pavement on concrete foundation Jefferson avenue, from Central avenue to Knickerbocker avenue.
Three bids received.
Deposited as security on bids, \$450.
17. Regulating and repaving with asphalt pavement on concrete foundation Putnam avenue, from Broadway to Hamburg avenue, etc.
Three bids received.
Deposited as security on bids, \$1,050.
18. For regulating, grading, curbing, guttering and laying sidewalks on Sixty-second street, from Fifth avenue to Sixth avenue.
Four bids received.
Deposited as security on bids, \$500.
19. For regulating and repaving with asphalt pavement on concrete foundation South Elliott place, from DeKalb avenue to Hanson place.
Four bids received.
Deposited as security on bids, \$560.
20. Regulating and repaving with asphalt pavement on concrete foundation Troutman street, from Myrtle avenue to Evergreen avenue.
Three bids received.
Deposited as security on bids, \$330.
21. Regulating and repaving with granite block pavement on concrete foundation Wilson street, from Wythe avenue to Kent avenue.
Four bids received.
Deposited as security on bid, \$500.

On July 18, 1906.

1. For dredging Gowanus Canal, from its head near Butler street to Ninth street, etc.
One bid received.
Deposit as security on bid, \$500.
2. For furnishing all labor and material required for constructing sewer in Eighty-fifth street, from Sixteenth avenue to Seventeenth avenue, etc.
Ten bids received.
Deposited as security on bids, \$7,500.
3. For furnishing all the labor and material required for constructing sewer in East Thirty-first street, from Church avenue to Snyder avenue, etc.
Eleven bids received.
Deposited as security on bids, \$6,600.
4. For furnishing all the labor and material required for constructing sewer in Fifty-first street, from Fourteenth avenue to Fifteenth avenue, etc.
Nine bids received.
Deposited as security on bids, \$9,000.
5. For furnishing all the labor and material required for constructing sewer in Senator street, from Fourth avenue to Fifth avenue, etc.
Eight bids received.
Deposited as security on bids, \$1,880.
6. For furnishing all the labor and material required for constructing sewer in Avenue D, from East Twenty-third street to Rogers avenue.
Eight bids received.
Deposited as security on bids, \$1,040.
7. For furnishing all the labor and material required for constructing sewer in East Twenty-sixth street, from Clarendon road to Avenue D.
Eight bids received.
Deposited as security on bids, \$640.

8. For furnishing all the labor and material required for constructing sewer in East Twenty-fifth street, from Clarendon road to Avenue D.
Eight bids received.
Deposited as security on bids, \$640.
9. For furnishing all the labor and material required for constructing sewer in East Thirty-fourth street, from Flatbush Water Works to Avenue F (Farragut road).
Two bids received.
Deposited as security on bids, \$80.
10. For furnishing all the labor and material required for constructing sewer in Eighty-second street, from Sixth avenue to Fort Hamilton avenue.
Two bids received.
Deposited as security on bids, \$70.
11. For furnishing all the labor and material required for constructing sewer basin at the northwest corner of Norman avenue and Russell street.
One bid received.
Deposited as security on bid, \$5.00.
12. For furnishing all the labor and material required for constructing sewer basin at the southeast corner of Hausman street and Nassau avenue.
One bid received.
Deposited as security on bid, \$5.00.
13. For furnishing all the labor and material required for constructing sewer basins at the northeast and northwest corners of East Thirty-second street and Avenue D.
No bids received.
14. Regulating, grading and paving with asphalt pavement on concrete foundation, Bath avenue from Fourteenth avenue to Bay Eighteenth street, and from Bay Nineteenth to Twenty-first avenue.
Four bids received.
Deposited as security on bids, \$3,200.
15. Regulating and grading Bay Eleventh street from Eighty-sixth street to Cropsey avenue.
Seven bids received.
Deposited as security on bids, \$1,225.
16. Regulating and paving with asphalt pavement on concrete foundation the roadway of Caton avenue from St. Paul's place to Parade place.
Three bids received.
Deposited as security on bids, \$300.
17. Regulating, grading and paving with asphalt pavement on a concrete foundation, the roadway of Elton street from Atlantic avenue to Blake avenue.
Three bids received.
Deposited as security on bids, \$1,500.
18. For grading lot on the east side of Underhill avenue, between Sterling place and St. John's place, known as lot No. 2, Block 1173.
Five bids received.
Deposited as security on bids, \$250.
19. Constructing cement concrete sidewalks in various places and on various streets in the Borough of Brooklyn.
One bid received.
Deposited as security on bids, \$30.
20. For fencing vacant lots in various places and on various streets in the Borough of Brooklyn.
Two bids received.
Deposited as security on bids, \$20.
21. For regulating, grading, curbing and laying sidewalks on Hopkinson avenue from Eastern Parkway to Atlantic avenue.
Four bids received.
Deposited as security on bids, \$400.

On July 25, 1906.

1. For furnishing all labor and material required for constructing sewer in Eighty-fourth street from Twentieth avenue to Twenty-first avenue, with an outlet sewer in Twenty-first avenue, etc.
Fourteen bids received.
Deposited as security on bids, \$16,800.
2. For furnishing all the labor and material required for constructing sewer in Sixty-seventh street from Fourth avenue to Fifth avenue.
Four bids received.
Deposited as security on bids, \$380.
3. For furnishing all the labor and material required for constructing sewer in Dean street from Ralph avenue to Howard avenue.
Two bids received.
Deposited as security on bids, \$130.
4. For furnishing all the labor and material required for constructing sewer basins on Newkirk avenue at the northeast and southeast corners of East Eighteenth street; at the northwest and southeast corners of East Nineteenth street, etc.
Five bids received.
Deposited as security on bids, \$150.
5. Regulating, grading and paving with asphalt pavement on a concrete foundation, the roadway of Beverley road, from Flatbush avenue to Bedford avenue.
Four bids received.
Deposited as security on bids, \$500.
6. Regulating, grading and repaving with asphalt pavement on present pavement as foundation, Classon avenue between Madison street and Monroe street.
Three bids received.
Deposited as security on bids, \$112.50.
7. Regulating, grading, curbing and laying sidewalks on Dean street, from Troy avenue to Schenectady avenue.
Three bids received.
Deposited as security on bids, \$180.
8. Regulating and repaving with asphalt pavement on a concrete foundation, the roadway of Eighth street, from Second avenue to Fifth avenue.
Four bids received.
Deposited as security on bids, \$1,100.
9. Regulating, grading and paving with asphalt pavement on a concrete foundation, Forty-seventh street between Sixth avenue and Seventh avenue.
Four bids received.
Deposited as security on bids, \$400.
10. Regulating and repaving with asphalt block pavement on a concrete foundation, the roadway of Fifty-first street, from Third avenue to Fourth avenue.
Two bids received.
Deposited as security on bids, \$210.
11. Regulating and repaving with asphalt block pavement on a concrete foundation, the roadway of Fifty-fourth street, from Fifth avenue to Sixth avenue.
Two bids received.
Deposited as security on bids, \$250.
12. Regulating and repaving with asphalt pavement on present pavement as a foundation, the roadway of Fort Green place, from Fulton street to DeKalb avenue.
Four bids received.
Deposited as security on bids, \$400.
13. Regulating, grading and repaving with asphalt pavement on a concrete foundation, Greene lane, from Front street to York street.
Three bids received.
Deposited as security on bids, \$60.
14. Regulating, grading and paving with asphalt pavement on concrete foundation, Milford street, from Atlantic avenue to Glenmore avenue.
Three bids received.
Deposited as security on bids, \$450.
15. Regulating, grading and paving with asphalt pavement on a concrete foundation Prospect place, between Troy and Schenectady avenues.
Three bids received.
Deposited as security on bids, \$300.
16. Regulating, grading and repaving with asphalt pavement on concrete foundation Sandford street, between Flushing avenue and DeKalb avenue.
Three bids received.
Deposited as security on bids, \$900.

17. Regulating and repaving with asphalt pavement on concrete foundation the roadway of St. John's place, from Rogers avenue to Nostrand avenue.
Three bids received.
Deposited as security on bids, \$210.
18. Regulating and paving with asphalt block pavement on concrete foundation the roadway of Sixtieth street, from Second avenue to Third avenue.
Two bids received.
Deposited as security on bids, \$250.
19. Regulating, grading and paving with asphalt pavement on concrete foundation Tenth avenue, between Prospect avenue and Twentieth street.
Four bids received.
Deposited as security on bids, \$500.
20. Regulating and repaving with asphalt pavement on present pavement as a foundation the roadway of Throop avenue, from Halsey street to Macon street.
Three bids received.
Deposited as security on bids, \$75.
21. Regulating and repaving with asphalt pavement on present pavement as a foundation the roadway of Washington avenue, from Fulton street to Atlantic avenue.
Four bids received.
Deposited as security on bids, \$320.
22. Grading portion of a lot on the west side of Tenth avenue, between Fifteenth street and Sixteenth street, known as Lot No. 38, Block 1106.
Three bids received.
Deposited as security on bids, \$15.

On August 1, 1906.

1. Grading, curbing and laying sidewalks on Alabama avenue, from Belmont avenue to Sutter avenue.
Five bids received.
Deposited as security on bids, \$175.
2. Paving with asphalt block pavement on concrete Bay Ridge parkway, from First avenue to Second avenue.
Two bids received.
Deposited as security on bids, \$280.
3. Repaving with granite block pavement on concrete foundation Broadway, from Patchen avenue to Monroe street.
Five bids received.
Deposited as security on bids, \$2,500.
4. Grading and curbing Decatur street, from Hamburg avenue to Knickerbocker avenue.
Six bids received.
Deposited as security on bids, \$180.
5. Grading and curbing East Fifth street, from Vanderbilt street to Greenwood avenue.
Seven bids received.
Deposited as security on bids, \$280.
6. Paving with asphalt pavement on concrete foundation East Fifth street, from Vanderbilt street to Greenwood avenue.
Four bids received.
Deposited as security on bids, \$300.
7. Paving with asphalt pavement on concrete foundation Kenilworth place, from Avenue G to Germania place.
Three bids received.
Deposited as security on bids, \$225.
8. Grading, curbing and laying sidewalks on Seventieth street, from Fourteenth avenue to Fifteenth avenue.
Seven bids received.
Deposited as security on bids, \$350.
9. Grading, curbing and laying sidewalks on Seventy-second street, from Second avenue to Shore road.
Seven bids received.
Deposited as security on bids, \$1,750.
10. Repaving with asphalt pavement on concrete foundation Spencer street, from Flushing avenue to DeKalb avenue, etc.
Three bids received.
Deposited as security on bids, \$975.
11. Repaving with asphalt pavement on concrete foundation St. Francis place, from Degraw street to St. John's place.
Three bids received.
Deposited as security on bids, \$105.
12. Repaving with asphalt pavement on present pavement Stuyvesant avenue, from Fulton street to Gates avenue.
Four bids received.
Deposited as security on bids, \$1,400.
13. Grading, curbing, guttering and laying sidewalks on Utica avenue, from East New York avenue to Church avenue.
Four bids received.
Deposited as security on said bids, \$1,200.

On August 8, 1906.

1. For furnishing all labor and material for reconstructing sewer in Newkirk avenue, from East Eighteenth street to Flatbush avenue.
Twelve bids received.
Deposited as security on bids, \$3,000.
2. For furnishing all the labor and material required for constructing sewer basins at the southeast and southwest corners of Neptune avenue and West Fifth street.
Four bids received.
Deposited as security on bids, \$40.
3. For furnishing all the labor and material required for constructing sewer basins at the northeast and northwest corners of East Fifteenth street and Ditmas avenue.
Three bids received.
Deposited as security on bids, \$30.

On August 15, 1906.

1. Repaving with granite pavement on concrete foundation Clay street, from Manhattan avenue to Commercial street.
Four bids received.
Deposited as security on bids, \$720.
2. For paving with asphalt pavement on concrete foundation Degraw street, from Classon avenue to Washington avenue.
Three bids received.
Deposited as security on bids, \$225.
3. For paving with asphalt pavement on concrete foundation East Fifth street, from Greenwood avenue to Fort Hamilton avenue.
Three bids received.
Deposited as security on bids, \$225.
4. For grading, curbing and laying sidewalks on East Thirty-first street, from Flatbush avenue to Glenwood road.
Four bids received.
Deposited as security on bids, \$200.
5. Paving with asphalt pavement on concrete foundation East Thirty-first street, from Flatbush avenue to Glenwood road.
Three bids received.
Deposited as security on bids, \$240.
6. Paving with granite pavement on concrete foundation Engert avenue, from Graham avenue to Leonard street.
Three bids received.
Deposited as security on bids, \$300.
7. Paving with asphalt pavement on concrete foundation Fifty-second street, from Sixth avenue to Seventh avenue.
Three bids received.
Deposited as security on bids, \$225.

8. For grading, curbing and laying sidewalks on Flatlands avenue, from Mill lane to Lotts lane.
Two bids received.
Deposited as security on bids, \$200.
9. Paving with asphalt pavement on concrete foundation Heyward street, from Wythe avenue to Wallabout street.
Three bids received.
Deposited as security on same, \$75.
10. Paving with asphalt pavement on concrete foundation Avenue J, from Flatbush avenue to Brooklyn avenue.
Three bids received.
Deposited as security on bids, \$75.
11. Grading and curbing on Sixth avenue, from Bay Ridge avenue to Seventy-first street.
Three bids received.
Deposited as security on bids, \$60.
12. Grading, curbing and laying sidewalks on Sixty-first street, from Third avenue to Fourth avenue.
Six bids received.
Deposited as security on bids, \$450.
13. Paving with asphalt pavement on concrete foundation Van Sicklen avenue, from Pitkin avenue to Dumont avenue.
Three bids received.
Deposited as security on bids, \$750.
14. For grading a lot on the northwest side of Linden street, between Bushwick avenue and Evergreen avenue.
Three bids received.
Deposited as security on bids, \$22.50.
15. For grading portion of a lot south side of Myrtle avenue, between Lewis avenue and Broadway.
Three bids received.
Deposited as security on bids, \$7.50.
16. For grading a lot on the north side of Sixteenth street, between Prospect Park West and Tenth avenue.
Three bids received.
Deposited as security on bids, \$15.

On September 12, 1906.

1. Regulating, grading, curbing and laying sidewalks on Dumont avenue, from Van Sicklen avenue to Schenck avenue.
Three bids received.
Deposited as security on bids, \$105.
2. Regulating, grading, curbing, sodding ovals and laying sidewalks on Farra-gut road, from Rogers avenue to a point 120 feet, more or less, east of East Thirty-fourth street.
Four bids received.
Deposited as security on bids, \$800.
3. Regulating, grading, curbing and laying sidewalks on Fourteenth avenue, from Seventy-fifth street to Seventy-ninth street.
Six bids received.
Deposited as security on bids, \$450.
4. Regulating, grading, curbing and laying sidewalks on Fortieth street, from Sixth avenue to New Utrecht avenue.
Five bids received.
Deposited as security on bids, \$1,125.
5. Regulating, grading, curbing and laying sidewalks on Lincoln avenue, from Atlantic avenue to Glenmore avenue.
Four bids received.
Deposited as security on bids, \$600.
6. Regulating, grading, curbing and laying sidewalks on Martense street, from Rogers avenue to Nostrand avenue.
Three bids received.
Deposited as security on bids, \$150.
7. Regulating, grading and curbing Repose place, from Schenck avenue to Jerome street.
Three bids received.
Deposited as security on bids, \$150.
8. Regulating and paving with asphalt pavement on concrete foundation, the roadway of Radde place from a point about 115 feet north of Atlantic avenue to Atlantic avenue.
Three bids received.
Deposited as security on bids, \$325.
9. Regulating, grading, curbing and laying sidewalks on Rogers avenue, from Park place to Montgomery street.
Three bids received.
Deposited as security on bids, \$525.
10. Grading lots on the south side of Eighty-third street, between Tenth and Eleventh avenues, and on the north side of Eighty-fourth street, between Tenth avenue and Eleventh avenue, known as lots Nos. 1, 12 and 68, Block 6,022.
Three bids received.
Deposited as security on bids, \$225.
11. Furnishing all labor and material required for constructing sewer in Warehouse avenue, from Surf avenue to Neptune avenue, with outlet sewer, etc.
Three bids received.
Deposited as security on bids, \$900.
12. Furnishing all labor and material required for constructing sewer in East Third street, from Ditmas avenue to Avenue F, etc.
Six bids received.
Deposited as security on bids, \$1,800.
13. Furnishing all labor and material required for constructing sewer in New York avenue, from Beverly road to Clarendon road.
Three bids received.
Deposited as security on bids, \$240.
14. Furnishing all labor and material required for constructing sewer in Huntington street, from Henry street to Hicks street.
Three bids received.
Deposited as security on bids, \$150.
15. Furnishing all labor and material required for constructing sewer in Congress street, from Columbia street to the East River.
One bid received.
Deposited as security on bid, \$50.
16. Furnishing all labor and material required for constructing sewer in Hemlock street, from Glenmore avenue to Pitkin avenue.
Three bids received.
Deposited as security on bids, \$135.
17. Furnishing all the labor and material required for constructing sewer in East Nineteenth street, from Newkirk avenue to Foster avenue.
Four bids received.
Deposited as security on bids, \$160.
18. Furnishing all the labor and material required for constructing sewer in Huntington street, from Henry street to Hamilton avenue.
Three bids received.
Deposited as security on bids, \$90.
19. Furnishing all the labor and material required for constructing sewer basins on New Jersey avenue, at the southwest corner of Highland boulevard, at the northwest corner of Evergreen place, etc.
Three bids received.
Deposited as security on bids, \$45.
20. Furnishing all the labor and material required for constructing sewer basins at the north and east corners of Bay Thirteenth street and Cropsey avenue.
Four bids received.
Deposited as security on bids, \$30.

On September 19, 1906.

1. Furnishing all labor and material required for constructing sewer in Seventy-third street, from 14th avenue to Fifteenth avenue, with outlet sewers, etc.
Eight bids received.
Deposited as security on bids, \$18,000.
2. Furnishing all labor and material required for constructing sewer in Flatbush avenue, from Nostrand avenue to Avenue N, with outlet sewers, etc.
Seven bids received.
Deposited as security on bids, \$14,000.
3. Furnishing all labor and material required for constructing sewer in East Twenty-second street, from Avenue G north to the end of the existing sewer.
Five bids received.
Deposited as security on bids, \$230.
4. Furnishing all labor and material required for constructing sewer in Park place, from Hopkinson avenue to Eastern Parkway Extension, etc.
Two bids received.
Deposited as security on bids, \$40.
5. Furnishing all labor and material required for constructing sewer basin at the easterly corner of Bath avenue and Fourteenth avenue.
Two bids received.
Deposited as security on bids, \$10.
6. Furnishing all labor and material required for constructing sewer basin at the northeast corner of Gates and Reid avenues.
Two bids received.
Deposited as security on bids, \$10.
7. Furnishing all labor and material required for constructing sewer basin at the southeast corner of St. Mark's and Rogers avenues.
Two bids received.
Deposited as security on bids, \$10.
8. Furnishing all labor and material required for constructing sewer basin at the northeast corner of Pitkin avenue and Osborn street.
Three bids received.
Deposited as security on bids, \$15.
9. Furnishing all labor and material required for constructing sewer basin at the southwest corner of Fenimore street and Rogers avenue.
Three bids received.
Deposited as security on bids, \$15.

On September 26, 1906.

1. For furnishing all the labor and materials for making alterations, repairs, etc., to make additional rooms for use of the Supreme Court Judges, Kings County Court House.
Six bids received.
Deposited as security on bids, \$1,300.
2. For furnishing and setting lighting fixtures in the Gates Avenue Court House.
Two bids received.
Deposited as security on bids, \$70.

On October 3, 1906.

1. For dredging Newtown creek canal, at and in the canal and basin included within the boundaries of Johnson avenue, Montrose avenue, etc.
Three bids received.
Deposited as security on bids, \$300.
2. For furnishing all labor and material required for constructing a relief sewer in Carroll street, from Third avenue to Gowanus canal.
Three bids received.
Deposited as security on bids, \$285.
3. For furnishing all the labor and material required for constructing sewer in Seventy-ninth street, from Sixteenth avenue to Eighteenth avenue.
Seven bids received.
Deposited as security on bids, \$1,750.
4. For furnishing all the labor and material required for constructing sewer in Fifty-second street, from Thirteenth avenue to Fourteenth avenue.
Four bids received.
Deposited as security on bids, \$340.
5. For furnishing all the labor and material required for constructing sewer in Lexington avenue, south side, from Ralph avenue westerly to existing sewer.
Two bids received.
Deposited as security on bids, \$60.
6. For furnishing all the labor and material required for constructing sewer basins on Beverley road, at the northeast corner of Flatbush avenue, etc.
Three bids received.
Deposited as security on bids, \$45.
7. Furnishing all the labor and material required for constructing sewer basin at the southwest corner of Madison street and Stuyvesant avenue.
Three bids received.
Deposited as security on bids, \$15.
8. Furnishing all labor and material required for constructing sewer basin at the northeast corner of Stratford road and Slocum place.
Three bids received.
Deposited as security on bids, \$15.
9. Furnishing all the labor and material required for constructing sewer basin at the northerly corner of Fourth avenue and Ninety-ninth street.
Three bids received.
Deposited as security on bids, \$15.

On October 17, 1906.

1. For paving with asphalt pavement on concrete foundation, Farragut road, from Rogers avenue to a point 120 feet, more or less, east of East Thirty-fourth street.
Three bids received.
Deposited as security on bids, \$750.
2. For repaving with asphalt pavement on concrete foundation, Taaffe place, from Park avenue to Flushing avenue.
Three bids received.
Deposited as security on bids, \$225.
3. For curbing Fifty-fourth street from Sixth avenue to Seventh avenue, and laying sidewalks on Fifty-fourth street, from Sixth avenue to Fort Hamilton avenue.
Six bids received.
Deposited as security on bids, \$600.
4. For constructing cement sidewalks in various places and on various streets.
Two bids received.
Deposited as security on bids, \$60.
5. For constructing cement concrete sidewalks in various places and on various streets.
Three bids received.
Deposited as security on bids, \$120.
6. For fencing vacant lots in various places and on various streets.
Two bids received.
Deposited as security on bids, \$60.
7. For repaving with asphalt on concrete Joralemon street, from Clinton street to Court street.
Three bids received.
Deposited as security on bids, \$150.

On October 24, 1906.

1. Furnishing all labor and material required for constructing sewer in Fortieth street, from Seventh avenue to New Utrecht avenue.
Seven bids received.
Deposited as security on bids, \$2,100.
2. Furnishing all labor and material required for constructing sewer in Barrett street, from Pitkin avenue to Sutter avenue.
Seven bids received.
Deposited as security on bids, \$700.

3. For furnishing all labor and material required for constructing sewer in Eighty-fifth street, from Fort Hamilton avenue to Seventh avenue.
Five bids received.
Deposited as security on bids, \$450.
4. For furnishing all the labor and material required for constructing sewer in Fourth avenue, west side, from Ninety-second street to Ninety-fifth street.
Six bids received.
Deposited as security on bids, \$1,440.
5. For furnishing all the labor and material required for constructing sewer in Lott street, from Tilden avenue to Beverley road.
Six bids received.
Deposited as security on bids, \$510.
6. For furnishing all the labor and material required for constructing sewer in Fifty-first street, from First avenue to Second avenue.
Six bids received.
Deposited as security on bids, \$510.
7. For furnishing all the labor and material required for constructing sewer basins on Farragut road, at the northeast and northwest corners of East Twenty-eighth street, etc.
Six bids received.
Deposited as security on bids, \$390.
8. For furnishing all the labor and material required for constructing sewer in Sixty-first street, from Fifth avenue to Sixth avenue.
Six bids received.
Deposited as security on bids, \$510.
9. For furnishing all the labor and material required for constructing sewer in Eighty-fourth street, from Fort Hamilton avenue to Seventh avenue.
Five bids received.
Deposited as security on bids, \$375.
10. For furnishing all labor and material required for constructing sewer basins at northeast corner of Bond and Third streets.
Three bids received.
Deposited as security on bids, \$15.
11. For furnishing all the labor and material required for constructing sewer basins at northeast and northwest corners of East Thirty-second street and Avenue D.
Two bids received.
Deposit as security on bids, \$20.
12. For furnishing all the labor and material required for constructing sewer basins at northeast and southeast corners of Winthrop street and Rogers avenue.
Two bids received.
Deposited as security on bids, \$20.
13. For furnishing all labor and material required for constructing sewer basin at the northeast corner of East Eighteenth street and Albemarle road.
Two bids received.
Deposited as security on bids, \$10.
14. For furnishing all the labor and material required for constructing sewer basins, southwest corner of Schenck avenue and Atlantic avenue.
One bid received.
Deposited as security on bid, \$5.

On October 31, 1906.

1. Furnishing all the labor and material required for constructing sewer in Fourteenth avenue, from Sixty-fifth street to Seventy-fifth street.
Eight bids received.
Deposited as security on bids, \$5,600.

On November 7, 1906.

1. For furnishing all labor and material required for dredging Gowanus Canal.
Two bids received.
Deposited as security on bids, \$600.
2. For furnishing all labor and material required for constructing sewer in Battery avenue and Dahlgren place, between Eighty-eighth and Ninetieth streets, etc.
Five bids received.
Deposited as security on bids, \$1,250.
3. For furnishing all labor and material required for constructing sewer in Eighty-seventh street, from Narrows avenue to Second avenue.
Five bids received.
Deposited as security on bids, \$750.
4. For furnishing all labor and material required for constructing sewer in Martense street, from Flatbush avenue to Bedford avenue.
Three bids received.
Deposited as security on bids, \$322.50.
5. For furnishing all labor and material required for constructing sewer basins at the southwest corner of East Seventh street and Beverley road, etc.
Three bids received.
Deposited as security on bids, \$255.
6. For furnishing all labor and material required for constructing sewer in Bushwick avenue, from Garden street to Beaver street.
Two bids received.
Deposited as security on bids, \$130.
7. For furnishing all labor and material required for constructing sewer in Blake avenue, from Powell street to Junius street.
Three bids received.
Deposited as security on bids, \$135.
8. For furnishing all labor and material required for constructing sewer in Brooklyn avenue, from Avenue C to Canarsie lane.
Three bids received.
Deposited as security on bids, \$75.
9. For furnishing all labor and material required for constructing sewer basins at the southeast and southwest corners of Sutter avenue and Van Sicklen avenue.
Four bids received.
Deposited as security on bids, \$60.
10. For furnishing all labor and material required for constructing sewer basins at the north and south sides of Avenue G, at the Brighton Beach Railroad.
Three bids received.
Deposited as security on bids, \$30.
11. For furnishing all labor and material required for constructing sewer basins at the northeast and northwest corners of East Fifteenth street and Dorchester road.
Three bids received.
Deposited as security on bids, \$26.25.

On November 1, 1906.

1. For furnishing, delivering and erecting an asphalt plant.
Four bids received.
Deposited as security on bids, \$1,000.
2. For furnishing all labor and material required for constructing sewer in East Fourth street, from Avenue C to Church avenue, etc.
Ten bids received.
Deposited as security on bids, \$4,000.
3. For furnishing all labor and material required for constructing sewer in West Twenty-third street, from Mermaid avenue to Neptune avenue, etc.
Seven bids received.
Deposited as security on bids, \$1,400.
4. Constructing sewer in Etna street, from Force Tube avenue to Hale avenue, etc.
Four bids received.
Deposited as security on bids, \$420.
5. Furnishing all the labor and material required for constructing sewer basins at the northeast and northwest corners of West Second street (Van Sicklen avenue) and Neptune avenue.
Three bids received.
Deposited as security on bids, \$30.

On December 19, 1906.

1. For furnishing and delivering desks, chairs, rugs, etc., Supreme Court, Kings County Court House.
Three bids received.
Deposited as security on bids, \$300.
2. For furnishing, delivering and erecting an asphalt plant.
Two bids received.
Deposited as security on bids, \$500.
3. Furnishing and delivering 940 cubic yards broken trap rock and 1,980 cubic yards trap rock screenings.
Four bids received.
Deposited as security on bids, \$800.
4. Furnishing and delivering 4,310 cubic yards of broken trap rock, and 1,540 cubic yards of trap rock screenings.
Four bids received.
Deposited as security on bids, \$700.
5. Furnishing and delivering 4,560 cubic yards of broken trap rock and 1,520 cubic yards of trap rock screenings.
Four bids received.
Deposited as security on bids, \$700.
6. Furnishing and delivering 3,840 cubic yards of broken trap rock and 1,280 cubic yards of trap rock screenings.
Four bids received.
Deposited as security on bids, \$520.
7. Furnishing and delivering 1,650 cubic yards of trap rock and 550 cubic yards of trap rock screenings.
Four bids received.
Deposited as security on bids, \$240.
8. Furnishing and delivering 1,320 cubic yards of broken trap rock and 440 cubic yards of trap rock screenings.
Four bids received.
Deposited as security on bids, \$200.
9. For grading, curbing and laying sidewalks on Sixty-fifth street, from Third avenue to Fourth avenue.
Seven bids received.
Deposited as security on bids, \$1,050.
10. For grading a lot on northwest corner of Thirty-third street and Fifth avenue.
Three bids received.
Deposited as security on bids, \$15.
11. For grading, curbing and laying sidewalks on Seventieth street, from Fourteenth avenue to Fifteenth avenue.
Four bids deposited.
Deposited as security on bids, \$200.

List of Contracts Pending in the Office of the Assistant Commissioner of Public Works, Not Certified to by the Comptroller of The City of New York, Bids for Which Were Opened Prior to January 1, 1907.

	Estimated Cost.
1. Repaving with asphalt pavement on concrete foundation Spencer street from Flushing avenue to DeKalb avenue, etc.....	\$18,526 40
2. Repaving with asphalt pavement on concrete foundation St. Francis place from Degraw street to St. John's place.....	1,987 15
3. Repaving with asphalt pavement on present pavement as a foundation Stuyvesant avenue from Fulton street to Gates avenue.....	17,404 80
4. Constructing cement sidewalks, northeast side of Bath avenue, between Bay Eleventh street and Sixteenth avenue, etc.....	2,067 95
5. Furnishing, delivering and erecting an asphalt plant.....	22,485 00
6. Grading, curbing and laying sidewalks on Sixty-fifth street, from Third avenue to Fourth avenue.....	2,791 90
7. For grading lots on northwest corner of Thirty-third street and Fifth avenue.....	17 28
8. Grading, curbing and laying sidewalks on Seventieth street, from Fourteenth avenue to Fifteenth avenue.....	2,425 40
9. Furnishing all labor and material required for constructing sewer in East Fourth street, from Avenue C to Church avenue.....	8,088 20
10. Furnishing all the labor and material required for constructing sewer in Etna street, from Force Tube avenue to Hale avenue.....	3,200 46
11. Furnishing all the labor and material required for constructing sewer basins at north and south sides of Avenue G at the Brighton Beach Railroad.....	319 00
12. Furnishing all the labor and material required for constructing sewer in Bushwick avenue, from Garden street to Beaver street.....	2,150 25
13. Furnishing all labor and material required for constructing sewer basins at northeast and northwest corners of West Second street and Neptune avenue.....	420 00
14. For furnishing and delivering desks, chairs, rugs, etc., Supreme Court, Kings County Court House.....	1,827 00
	<u>\$83,710 79</u>

Borough of Brooklyn—Office of Commissioner of Public Works,
Bureau of Highways—Chief Engineer's Office,
Municipal Building, February 14, 1907.

Hon. DESMOND DUNNE, Commissioner of Public Works:

Dear Sir—I transmit herewith five copies of my annual report for the year ending December 31, 1906.

Respectfully,

GEO. W. TILLSON, Chief Engineer.

ANNUAL REPORT OF THE CHIEF ENGINEER OF THE BUREAU OF HIGHWAYS, BOROUGH OF BROOKLYN.

Borough of Brooklyn—Office of Commissioner of Public Works,
Bureau of Highways—Chief Engineer's Office,
Municipal Building, December 31, 1906.

Hon. FRANK J. ULRICH, Superintendent of Highways:

Dear Sir—I submit herewith statement of the operations of this Bureau for the year ending December 31, 1906.

All of the work ordered by the Board of Estimate and Apportionment has been placed under contract, and a large amount of it completed, except the streets ordered in the latter part of the year. Surveys are being made for these, and contracts will be awarded before spring, so that work can be begun as soon as the weather will permit.

The following table shows in detail the contracts made by this Bureau and registered by the Comptroller during the year:

Number of Contracts.	Nature of Contracts.	Street Improvement Fund.	Repaving Bond Fund.	Labor, Maintenance and Supplies.
43	Asphalt.....	\$316,369 18	.....	.....
72	Asphalt.....	.....	\$644,835 68	.....
12	Asphalt block.....	.....	206,329 85	.....

Number of Contracts.	Nature of Contracts.	Street Improvement Fund.	Repaving Bond Fund.	Labor, Maintenance and Supplies.
4	Asphalt block.....	28,081 65	.....	.....
1	Granite and asphalt.....	.....	42,945 00	.....
2	Granite block.....	8,722 30	.....	.....
8	Granite block.....	.....	137,831 95	.....
1	Iron slag block.....	.....	12,426 20	.....
1	Medina sandstone.....	.....	184,352 30	.....
75	Regulating, grading, curbing, etc.....	397,635 23	.....	.....
2	Regulating and grading.....	5,284 73	.....	.....
14	Grading lots.....	15,290 31	.....	.....
13	Cement sidewalks.....	31,113 47	.....	.....
8	Fencing lots.....	6,797 09	.....	.....
1	Repairing and maintaining asphalt pavements.....	.....	.....	\$47,885 00
6	Broken trap rock and screenings.....	.....	.....	57,821 79
1	Paving gravel and grit.....	.....	.....	1,140 00
2	Sand.....	.....	.....	6,120 00
1	Bluestone curbstone.....	.....	.....	3,744 00
1	Paving pitch.....	.....	.....	1,215 00
1	Bluestone flagstone.....	.....	.....	6,300 00
1	Portland cement.....	.....	.....	1,800 00
1	Coal (125 tons).....	.....	.....	746 25
1	Engineer and Draughtsmen supplies.....	.....	.....	1,210 86
278	Total.....	\$809,293 96	\$1,228,720 98	\$127,982 90
	Grand total.....			\$2,165,997 84

The number of miles of street improvement work contracted during 1906 was as follows:

	Miles.
Asphalt and asphalt block.....	34.06
Granite.....	3.05
Medina.....	2.17
Iron slag.....	0.26
Regulating, grading, etc.....	18.41
Total.....	<u>57.95</u>

During the season work has been carried on upon 245 contracts, of which 219 have been completed, leaving 26 at the present time upon which work is in progress. These will be completed shortly after the opening of the season in the spring.

Following you will find a statement in detail of the amount of pavement laid under the different contracts, together with that laid by the Park Department and by private property owners.

The principal change in mileage has taken place in the asphalt and cobble stone pavements, the former having increased from 263.48 miles to 302.41 miles, while the cobble has decreased from 78.40 miles to 50.27 miles, so that if the rate of decrease for 1906 be continued for two years, cobble stone will be entirely eliminated from the streets of our Borough. When it is remembered that in 1888 there were 308 miles of this material, the vast amount of work done in this connection during the past few years can be appreciated.

Pavement Laid on Completed Contracts.

	Miles
Asphalt and asphalt block.....	34.45
Granite.....	3.25
Medina.....	1.28
Iron slag.....	0.26
	<u>39.24</u>

Pavement Laid on Incompleted Contracts.

	Miles
Asphalt.....	0.02
Granite.....	0.34
Medina.....	0.44
	<u>0.80</u>

Pavement Laid by Repair Gangs.

	Miles
Granite.....	0.74
Macadam.....	0.08
	<u>0.82</u>

Total of Completed Pavements Laid by This Bureau.

	Miles
Asphalt and asphalt block.....	34.47
Granite.....	4.33
Medina.....	1.72
Iron slag.....	0.26
Macadam.....	0.08
	<u>40.86</u>

Pavement Laid by the Park Department.

	Miles
On completed contracts, asphalt.....	1.22
On incompleted contracts, asphalt.....	1.17
	<u>2.39</u>

Pavement Laid by Private Contract Under the Supervision of this Bureau.

	Miles
Asphalt.....	4.25
Granite.....	0.10
	<u>4.35</u>

Pavement Laid by Public Contract Out of Common Land Fund, Late Town of Gravesend.

	Miles
Macadam.....	0.86

A grand total of new pavements laid in the Borough of Brooklyn of 48.46 miles, of which 41.11 miles were asphalt.

Mileage of Pavements in the Borough Compared with 1905.

	December 31, 1905.	December 31, 1906.
	Miles.	Miles.
Asphalt and asphalt block.....	263.48	302.41
Granite	140.88	142.12
Cobble	78.40	50.27
Belgian	40.80	40.41
Macadam	99.81	99.53
Brick	3.62	3.36
Trap block	1.24	1.24
Medina	3.61	5.32
Wood	2.16	2.16
Iron slag .....	.....	0.26
Total	634.00	647.08

Work to Be Done on Incompleted Contracts.

	Miles
Asphalt and asphalt block.....	2.91
Granite	0.30
Medina	0.05
Regulating, grading, etc.....	7.26
	11.12

Mileage of Contracts Now in Force on Which Work Has Not Been Begun.

	Miles
Asphalt and asphalt block.....	4.61
Regulating, grading, etc.....	1.80
	6.41

Mileage of Contracts Awarded But Not Registered.

	Miles
Asphalt	1.25
Regulating, grading, etc.....	0.28
	1.53

Mileage of Contracts Authorized But Not Awarded.

	Miles
Asphalt and asphalt block.....	2.75
Macadam	0.92
Regulating, grading, etc.....	12.56
	16.23

Summary of Work Carried Over to 1907.

	Miles
Incompleted contracts	11.12
Contracts not begun	6.41
Contracts awarded, not registered.....	1.53
Contracts authorized, not awarded	16.23
	35.29
	Miles
Of which pavement contracts total.....	13.39
And regulating, grading, etc., contracts.....	21.90

On the above completed contracts there were laid 854,320 square feet of cement sidewalks. The total amount of money certified by the Bureau during the year on the above contracts was:

Final estimates	\$1,940,092.12
Partial estimates	113,990.00

A total of	\$2,054,082.12
Less amount paid on partial estimates in 1905.....	147,045.72

Making a total value of work of 1906 of.....	\$1,907,036.40
----------------------------------------------	----------------

Of the above total, \$640,226.90 was paid for out of the Street Improvement Fund.

Pavements Laid Under Petitions from the Property Owners.

	Miles
Pavement Ordered—	
Asphalt	6.93
Granite .....	.16

This fact shows the desires of the property owners for asphalt pavement when they pay for the same themselves.

Repaving.

Not quite as large an amount of pavement was laid this year as last, on account of the appropriation being less than that of previous years. The cobble stone pavement, however, has been materially reduced, and the asphalt pavements extended correspondingly. The work of the repaving of Atlantic avenue, from Nostrand avenue westerly toward Flatbush avenue, has been completed as far as the work of the Atlantic Avenue Improvement Commission will allow. It will require but a small amount of work to complete it to Flatbush avenue. West of Flatbush avenue, Atlantic avenue has been put under contract for repaving with Medina sandstone to Henry street, west of which a new granite pavement was laid three years ago. When this latter contract is completed, Atlantic avenue will have new modern pavement from South Ferry to Berriman street, with the single exception at the Long Island station, a distance of 6.45 miles.

Asphalt Pavements.

During the year there were laid under contract with this Bureau 34.47 miles of asphalt pavement, the contractors for the work being the same as last year. The average price paid for asphalt pavements during the year has been \$1.48 per square yard for asphalt pavement consisting of 1-inch of binder and 2 inches of wearing surface, on a 5-inch Portland cement concrete base. For streets with railroad tracks the average price was \$1.65 per square yard, and for streets without railroad tracks, \$1.46 per square yard.

The prices for the above work in 1905 were \$1.48, \$1.58 and \$1.42 per square yard respectively, so that the prices were a trifle higher for 1906 than for 1905.

Asphalt Block Pavements.

A large amount of asphalt block pavement was laid during the year, it being used upon streets where the grades exceeded 3½ to 4 per cent., as it was considered on these grades sheet asphalt would be too slippery. The average price paid on

street car streets was \$2.26 per square yard, and \$2.15 on streets without tracks. The prices for this work in 1905 were \$1.99 and \$1.87 per square yard respectively. This is somewhat higher than the prices for 1905, but it has been generally conceded that the prices for that year were abnormally low.

Granite Pavements.

During the year there have been laid 4.33 miles of granite, as against 4.83 the previous year. The price for this work on a concrete base with tar and gravel joints was \$3.19 per square yard, as against \$3.07 in 1905, and \$3.46 in 1904.

Medina Sandstone.

There were laid 1.72 miles of Medina sandstone, the average price for which was \$3.54 per square yard, as against \$3.45 in 1905, and \$3.58 in 1904. In 1905, however, there were only about 5,000 yards laid.

One new material was used in our streets this year, and that was what is known as iron slag blocks. These blocks are moulded at the smelting works from the slag, that is, the waste product from iron smelting. These particular blocks were brought over from England and laid on Nevins street, between Dean street and Flatbush avenue, to take the place of the old brick pavement on that street. Such blocks have been used to quite an extent in Canadian cities between the tracks and rails of the street railway companies, and to quite a little extent in the streets of Philadelphia. The pavement is smooth, and I doubt not, will be durable. It is laid on a concrete base with pitch joints, and this one contract cost \$3.66 per square yard. No wood pavements were laid during the year.

Local Improvements.

A large amount of work has been done during the year payable from the Street Improvement Fund. The property owners have been exceedingly anxious to have their streets improved, and have been willing to pay for the cost of same. Thirty-five contracts for asphalt pavement have been completed, payable from this fund, 1 for granite, and 73 for regulating, grading, curbing, etc., involving an expenditure of \$640,226.90. The work has been principally done in the 26th, 29th, and 30th Wards.

Sidewalks.

In addition to the sidewalks laid under regulating and grading contracts, there has been a large amount constructed under special contracts, public and private. No flagging has been laid by public contract, but by private property owners there have been laid 173,565 square feet. Under special public contracts there have been laid 173,565 square feet, while under private contract, as near as can be ascertained, the amount laid is 1,293,395 square feet.

A large amount of sidewalk work has also been done by the repair gangs, but it will be specially referred to in the report of Mr. Van Buskirk, Engineer in charge of the Repair Division.

Fencing.

There have been 9,993 linear feet of fencing erected in front of vacant lots during the year.

Map Room.

The following is a statement of work performed in the Map Room:

Assessment Maps and Lists in Duplicate.

Character.	Number of Lists.	Parcels Affected.	Blocks.
Grading and paving, etc.....	78	7,377	659
Cement sidewalks.....	20	515	182
Fencing vacant lots.....	10	141	64
Grading lots.....	8	18	8
Total.....	116	8,051	913

Plans for New Work.

Grading, paving, etc.....	33
Repaving	103
Laying cement sidewalks.....	159
Fencing vacant lots	90
Grading lots	4
Total	389

Miscellaneous Plans, Etc.

Proposed changes of grade (affecting sixty-seven streets).....	28
Profiles in duplicate for Board of Assessors.....	46
Specifications prepared (5 copies each).....	226
Proposed parks and playgrounds.....	24
Blue prints	1,704
Tables, tracings, etc.....	56
Number of plans filed	263
Total	2,347

In addition to the above there has been, of course, a large amount of routine work performed which it is impossible to estimate.

Original Improvements.

The surveys for repaving and the preliminary reports in original improvements have been made as heretofore, and a list of same in detail is herewith appended:

Character of Improvement.	1906.	
	Number of Estimates.	Estimated Cost.
Grading, curbing sidewalks, etc.....	260	\$1,969,900 00
Grading and paving with granite blocks.....	24	462,700 00
Grading and paving with wood blocks.....	5	79,900 00
Grading and paving with macadam.....	37	632,100 00
Paving with asphalt.....	168	1,582,200 00
Total.....	494	\$4,726,800 00

The number of estimates made is about 25 per cent. more than that of last year, the estimated cost of which has been about 20 per cent. more.

Laboratory.

The work in the Chemical Laboratory has been under the charge of Mr. W. H. Broadhurst, Chemist, who has had the direction of this work for nearly eleven years. This work is very important, as the Department is able in this way to learn positively

of all the materials that are being used, and also to investigate carefully any new materials that may be proposed. Extended work has been done in the line of making experiments so as to determine on a proper form of specifications for treating wood in pavements. The growing favor with which wood is being received as a paving material makes it very important to know what is the best method and the best material in treating wood, as, if not properly treated to prevent decay, wood cannot be successful as a paving material. Mr. Broadhurst's report is appended, and gives his work in detail.

General Repairs.

The work of the Repair Bureau for the past season has been under three different men, Mr. E. J. Fort, Mr. John C. Sheridan, and Mr. C. R. Van Buskirk, who is in charge at present, the other gentlemen having been transferred to the Sewer Bureau.

The repairs to asphalt pavements have been conducted on the same plan as in previous years, and the average cost per yard has been $3\frac{1}{2}$ cents over all area maintained, the cost of this work having been \$49,869.84, the area maintained 1,424,579 square yards. The unit price for the work was less than last year, it being 56 cents per cubic foot for wearing surface, and 25 cents per cubic foot for binder. A larger amount of material was used this year than in the past, this being caused by the extra work required on the older pavements. It would, I think, be advisable to repave some of these older streets, as they have been paved eighteen or nineteen years, the original foundation being wood, so that the cost of repairs per square yard has been large. By repaving some of these the amount per square yard would be materially reduced.

The repair work on stone and macadam pavements has been about the same as that done in previous years. The work of the last few seasons on macadam streets has been such that they are nearly all now in first class condition, although some of them will need resurfacing in 1907.

A large amount of work has been done, too, on the unpaved streets in the suburbs, as it seems only right that the property owners who pay taxes on their property should have their streets taken care of even if not paved.

The report of Mr. Van Buskirk, which is attached hereto, shows in detail what has been accomplished.

Topographical Bureau.

This Bureau in the latter part of the season was taken from the Bureau of Highways, and directed to report to the Borough President, so that no report is herewith submitted.

Bureau of Complaints.

In the early part of the season Mr. James A. Rooney, Supervisor of Complaints, was transferred to the jurisdiction of this Bureau, and his report follows:

Complaints received	2,167
Complaints disposed of	2,104
Complaints pending	63

Character of Complaints.

Edison Electric Illuminating Company.....	41
Gas companies	21
Brooklyn Heights Railroad Company	66
Long Island Railroad Company	3
New York and New Jersey Telephone Company.....	24
Tenement House Law violations.....	10
Building Code violations	25
License Law violations	15
Sanitary Code violations	55
Street repairs	488
Street obstructions	150
Street lights	36
Street cleaning	49
Street signs	9
Street sprinkling	19
Street crossings	31
Sidewalk repairs	364
Sidewalk obstructions	111
Original and other improvements	59
Flagging sidewalks	58
Fencing vacant property.....	80
Party fences	19
Sewers and sewer basins	65
Nonremoval of ashes	19
Defective hydrants	14
Damage by water	37
Ponding of water	63
Illegal dumping	52
Dangerous excavations	35
Vicious and dead animals.....	20
House numbers	41
Grading lots	22
Dead and dangerous trees.....	35
Defective water leaders	10
Dangerous awnings	9
Police protection	12
Total.....	2,167

In closing I wish to call your attention to the work of this Bureau as performed by the different individuals. Each man has worked honestly and faithfully, with the same spirit as if he had been engaged in private business, a fact which the general public does not seem to understand. I also wish to extend my thanks to yourself and other members of the Borough government for the uniform courtesy with which the Bureau has been treated during the past year.

All of which is respectfully submitted.

GEO. W. TILLSON, Chief Engineer.

List of Tables Accompanying Report.

1. Diagram showing mileage of pavements from January 1, 1880, to January 1, 1907.
2. Table showing mileage and percentage of the various pavements in the City and Borough of Brooklyn from January 1, 1880, to January 1, 1907.
3. Table showing the area of the different Wards of the Borough of Brooklyn.
4. Table showing amount of asphalt laid on completed contracts during the year ending December 31, 1907.
5. Table showing amount of stone pavement laid on completed contracts during the year ending December 31, 1906.
6. Table showing streets graded, curbed, guttered and macadamized on contracts completed during the year ending December 31, 1906.
7. Table showing streets upon which work was in progress December 31, 1906.
8. Table showing streets upon which contracts were in force and work not begun December 31, 1906.
9. Table showing contracts awarded but not certified.
10. Table showing improvements authorized by the Board of Estimate and Apportionment for which bids have not been received December 31, 1906.
11. Table showing cost of maintaining asphalt pavements during 1906.
12. Table showing work done by corporations during 1906.

REPORT OF ASSISTANT ENGINEER, BUREAU OF HIGHWAYS, IN CHARGE OF DIVISION OF STREET REPAIRS.

January 11, 1907.

Mr. GEO. W. TILLSON, Chief Engineer, Bureau of Highways:

Dear Sir—Herewith I beg to submit to you the following report of work done by this Division of the Bureau of Highways during the year 1906. In general the working

organization has been the same throughout as the previous year. The average force employed during the year for a working month is given in the table below, as follows:

Number Working	Rate Per Day.
1 General Foreman	\$5 00
7 Foremen	4 50
24 Foremen	4 00
6 Assistant Foremen	3 00
36 Pavers	4 96
17 Rammers	3 84
65 Trucks	5 00
24 Sprinklers	5 00
1 Sprinkler	6 00
48 Horses and wagons.....	3 75
69 Horses and carts.....	3 50
3 Drivers	2 50
127 Laborers	2 00
14 Laborers	2 25
1 Laborer	2 50
1 Laborer	2 75
1 Watchman	2 00
4 Inspectors	4 93
59 Inspectors	4 00
1 Assistant Inspector	4 00
15 Flaggers	4 50
2 Engineers of Steam Roller.....	4 00
1 Stationary Engineman	4 00
3 Auto Enginemen	3 00
1 Steam Roller	9 00
1 Foreman of Bricklayers.....	5 60

In the employment of the above force there was spent in wages \$365,748.83, distributed according to general classes of work, as follows:

Connection	\$65,313 44
Repair	111,919 19
Drivers, Auto Enginemen, etc.....	7,992 66
Yards and miscellaneous	17,207 53
General Foremen, Section and Assistant Foremen.....	3,105 00
Dirt roads	37,770 74
Macadam cleaning	19,609 72
Macadam repairing	39,079 20
Sprinkling	20,312 50
Engineer's force	7,308 50
Inspectors	36,130 28

The following materials and supplies were purchased in connection with the work of this Division by contract:

2,500 cubic yards of sand	\$2,500 00
150,000 pounds of paving pitch.....	1,200 80
200 cubic yards of paving gravel and 100 yards of cement sidewalk grit	1,044 00
1,000 barrels of Portland cement.....	1,869 52
2,000 cubic yards of broken trap rock and 2,000 cubic yards of trap rock screenings	7,396 80
4,288 cubic yards of broken trap rock and 1,429 cubic yards of trap rock screenings	8,391 65
3,872 cubic yards of broken stone and 1,369 cubic yards of trap rock screenings	8,018 73
2,905 cubic yards of broken trap rock and 1,026 cubic yards of broken trap rock screenings.....	6,289 60
3,384 cubic yards of broken trap rock and 1,135 cubic yards of broken trap rock screenings.....	6,597 74
4,380 cubic yards of broken stone and 1,755 cubic yards of broken trap rock screenings	12,120 90
Repairing and maintaining asphalt pavements.....	49,869 84
Outstanding	15,835 73
Total.....	\$121,135 40

By requisition—

Hardware, tools, etc.....	\$641 20
1,200 feet sewer pipe.....	690 00
1 hydraulic jack.....	50 00
Yellow pine lumber	840 00
50 tons coal.....	334 50
Building shed at Sixty-seventh street yard.....	398 00
50 barrels of petroleum.....	163 00
Sharpening tools, etc.....	107 27
Sharpening tools, etc.....	107 12
3 sprinklers	765 00
4 dozen street brooms.....	32 00
25 barrels of pitch.....	28 97
Hay, grain, etc.....	72 95
Rent of Sixth street basin.....	1,080 00
Lexington avenue yard.....	500 00
Sixty-seventh street yard.....	900 00
North Eighth street yard.....	500 00
Miscellaneous	30,473 92
Total.....	\$37,683 93

This division is concerned with the maintenance of all roads and pavements, except those asphalt pavements which are in guarantee and those streets and roads under the jurisdiction of the Park Department.

The amount of work done in the maintenance in the above mileage pavements is indicated as follows:

On granite pavement, square yards.....	86,587
On belgian pavement, square yards.....	30,266
On cobble pavement, square yards.....	28,589
On brick pavement, square yards.....	2,493
On medina pavement, square yards.....	118
Total pavements, square yards	148,053

The number of openings made during the year is 12,143, of which number 10,887 are plumbers' openings. Of the above number of openings there were 2,736 made on the streets on which no pavement exists and 3,454 openings on asphalt streets.

The above total—6,190—did not require to be restored by this Division directly. This would leave to be repaved 5,953 openings by this Division, and in addition 574 openings carried from last year. This shows a total of 6,527 openings repaved under our direct supervision during the year 1906.

Of the above number of openings there are 309 at this time unpaved. This may be explained in that building operations are going on, keeping these openings covered with building material.

The following table shows the number of complaints received from all sources during the year 1906:

January, February, March.....	1,100
April, May, June.....	1,449
July, August, September.....	1,697
October, November, December.....	1,550
Total.....	5,796

These complaints received immediate attention and the total number of complaints and defects remedied were 12,638.

It will be seen from the above that 6,842 defects were permanently remedied on the initiative of this Division.

Sidewalk Repairs.

The repairs found necessary to sidewalks over which this Division has entire jurisdiction, has become very extensive. Each year finds us increasing in magnitude the amount of work done in this direction. It will be seen from the following table that a steady increase in results is in evidence. The amount of work done by the flaggers gang is given as follows:

Curb set and reset, linear feet.....	12,838
Gutter stones relaid, linear feet.....	5,932
Bridge stones laid and relaid, square feet.....	19,465
Flagging laid and relaid, square feet.....	312,150
Cement walk laid and repaired, square feet.....	26,730

This is comparatively a good showing, in that we did not at any time have more than fourteen flaggers on the average working.

The great bulk of these sidewalk repairs has been done in response to citizens' complaints as we cannot hope for some time to come to be able to put all defective sidewalks in good condition. We have to rely entirely upon these complaints to make repairs.

Macadam Pavements.

We have done quite a little resurfacing work of macadam pavements during the year past—a yardage of 118,970—which is approximately about the same results obtained as the previous year.

The cleaning of macadam streets now in existence devolves upon this Division. We have had two gangs constantly employed on this kind of work and have succeeded in keeping these pavements in fairly clean condition, considering the small labor force employed.

In regard to sprinkling macadam pavements more work has been done than ever before. The following table shows the work done in detail on macadam paved streets and roads summarized as follows:

Macadam pavements repaired, square yards.....	118,970
Macadam pavements cleaned, miles.....	134.9
Sprinklers, hours employed.....	32,500
Broken stone hauled, cubic yards.....	3,095
Screenings, cubic yards.....	2,573

Dirt Roads.

A great deal has been done to improve the condition of the unpaved streets in the suburban districts; requests for improvements to all kinds of conditions are being received constantly. These are granted wherever practicable.

Seventy-two miles of dirt roads were cleaned, repaired and shaped up during the year. We have also removed the grass and weeds from the gutters on these streets and doing in nearly every instance more or less grading, in order to throw the surface waters off, which is a constant cause of complaint to the average suburbanite.

Miscellaneous Work.

In connection with and in the performance of the various kinds of work discussed heretofore, there has been done a great deal of miscellaneous work, which is shown in the table, as follows:

Gutters cleaned, miles.....	397
Dirt filled, cubic yards.....	27,861
Rubbish hauled, cubic yards.....	57,906
Miscellaneous streets cleaned (after repair gangs on stone pavements), linear feet.....	21,684
Miscellaneous gutters cleaned, linear feet.....	37,690
Drain pipe laid, linear feet.....	744
Drain box laid, linear feet.....	92
Wooden curb, linear feet.....	214
Washouts filled.....	76
Washouts filled, cubic yards.....	5,790
Cesspools built.....	8
Cesspools cleaned.....	188
Dirt hauled, cubic yards.....	6,671
Sand hauled, cubic yards.....	8,792
Miscellaneous yards of stone hauled, cubic yards.....	4,132

There was also in addition to the above miscellaneous work, 1,538 linear feet of corrugated iron fence erected. The various highway bridges under the jurisdiction of this Bureau have been inspected during the year and where repairs were needed they were made by those corporations whose duty it is to make repairs when notified, in order that the necessary repairs be made. We have thoroughly overhauled the bridges over the railroad cut at Eighth avenue and Thirty-eighth street, putting it in a safe and passable condition, which was sadly needed for a long time.

In addition to the above we have hauled and used 14,628 loads of ashes. This has been used extensively in the suburban districts for the making of crosswalks. This seems to be the only satisfactory temporary relief which can be afforded the people in these districts, as we have received more than one compliment on our work in this direction during the stormy weather.

Asphalt Pavements.

The following report showing work done and money expended for repairs to asphalt pavements in this Borough upon which the contractors guarantee has expired, during the year 1906, is respectfully submitted. For comparison I have embodied this in a table showing the work done in previous years since 1902, when the method of payment at present in use was adopted:

	Uvalde Company.			Barber Company.	
	1902.	1903.	1904.	1905.	1906.
Square yards out of guarantee....	698,566	1,227,034	1,275,088	1,324,236	1,424,579
Average cost per square yard to City.....	\$0 0579	\$0 0637	\$0 0422	\$0 0345	\$0 035
Total cost.....	49,417 17	78,142 87	53,852 42	45,666 32	49,869 84
Top mixture, per cubic foot.....	90	95	85	67	56
Binder, per cubic foot.....	50	40	30	25	25
Top mix, cubic foot burner.....			50		
Concrete, per cubic yard.....	6 00		5 00	4 83	5 25

The slightly increased average cost per square yard over that of 1905 is explained by the fact that extensive repairs were made to several streets which were then in guarantee, such as Nassau avenue, between North Fourteenth street and Lorimer street, and by the large amount of work rendered necessary by the determination of pavement in streets through which water mains were laid during the year.

The contractor for repairing and maintaining asphalt pavements is paid a price per cubic foot for material as measured in the trucks delivered on the work. The amount of wearing surface mixture used during the year was 81,787 cubic feet. Assuming 1.8 cubic feet as the quantity of material used per square yard we get 45,437 square yards as yardage of asphalt laid for repairs.

During the past year 2,374 openings were made in asphalt pavements by plumbers for water and sewer connections. At the end of 1905, there were carried forward 445 unpaved openings, making a total of 2,819. The restoring of these openings is under the direction of this Division, the work being done by the various asphalt companies. Of the 2,819 cuts with which we were charged 2,172 have been repaved, leaving 647 not paved, accounted for as follows:

Concreted 211, covered 123, open, not concreted 313. Considering the fact that 416 permits for openings were taken out during the months of November and December, the number of openings accessible and not restored is not large.

Table Showing Cost of Maintaining Asphalt Pavements During 1906.

Time Out of Guarantee.	Square Yards.	Total Cost.	Cost Per Square Yard.	Cost Per Square Yard, Car Track Streets Excluded.	Cost of Square Yards, Car Track Streets.
One year.....	175,936	\$1,468 95	\$0 008	\$0 008	.....
Two years.....	57,929	429 17	007	006	\$0 006
Three years.....	82,937	365 75	004	003	036
Four years.....	421,274	13,301 88	032	027	067
Five years.....	189,415	3,212 28	017	017	024
Six years.....	209,937	9,098 90	043	045	016
Seven years.....	44,056	1,743 66	039	036	053
Eight years.....	41,187	1,406 85	034	034	.....
Nine years.....	36,706	1,984 84	054	054	.....
Ten years.....	27,419	2,270 31	083	021	128
Eleven years.....	5,278	169 70	032	025	130
Twelve years.....	29,069	2,577 53	089	100	072
Thirteen years.....	79,249	8,934 86	113	105	231
Fourteen years.....	20,504	2,862 72	140	140	.....
Fifteen years.....	235	.....	.....	.....	.....
Sixteen years.....	3,448	4,244 00	012	012	.....
Total.....	1,424,579	\$49,869 84	\$0 0350	\$0 0321	\$0 0630

Respectfully submitted,

C. R. VAN BUSKIRK, Assistant Engineer.

REPORT OF THE CHEMICAL AND PHYSICAL TESTING LABORATORY FOR THE YEAR ENDING DECEMBER 31, 1906.

Chemical and Physical Testing Laboratory,
Municipal Building, Brooklyn, N. Y.,
December 31, 1906.

Mr. GEO. W. TILLSON, Chief Engineer Bureau of Highways:

Sir—I beg to submit the following report of the work of testing materials performed in the Chemical and Physical Testing Laboratory during the year 1906. A summary of the number of samples examined is as follows:

Samples Taken from Work During Construction.	
Hydraulic cements.....	427
Asphalt surface mixtures.....	557
Asphalt blocks.....	77
Miscellaneous samples.....	100
Total.....	2,161

Hydraulic Cements.

The hydraulic cements tested have been sampled directly from each shipment of cement as delivered at the work under construction. The average tensile strength of the several brands used in street foundations and sidewalks will be found in the accompanying table, reference to which is invited. The cement testing for the Bureau of Sewers has also been carried on in this laboratory as for several years past. In nearly all cases, satisfactory cement has been submitted. In the instance of one brand, the results showed a gradual deterioration in quality and its use was therefore discontinued. One day neat tests in the instance of several brands have shown a seasonal decrease in strength during the fall and winter as heretofore. This, however, is regarded as usual at the approach of cold weather, and of little significance, as no decrease in the strength at the end of the seven day period has been noted. In general, the strength developed by the several brands used has been equal to the high average of several years past.

Asphalt Surface Mixtures.

Samples of asphalt surface mixtures have been taken daily during the prosecution of work on each contract. The mixtures laid have generally maintained the high degree of excellence required by the specifications. In some cases irregularities in the mixture were traced to the use of coarse sand. This was corrected by admixture of a fine sand with the coarse. In this connection it would seem advisable that asphalt contractors should be specially notified that, in general, only specially selected sand is suitable for asphalt pavements, and that this fact should be made known to the sand supply dealer before the material is delivered. In other words just as much care should be exercised by the contractor in the selection of sand as of asphalt. The specifications for sand, it is believed, should be rigidly enforced. In no other way can a strictly high grade pavement be produced. Further co-operation between sand dealers, asphalt contractors and City officials along these lines is essential.

In some few instances the percentage of bitumen fell slightly below the specification requirements. Of any irregularities in composition the contractor has been promptly notified and the necessary correction in formula made. The plants of the several asphalt contractors have been inspected from time to time during the year, samples of the refined asphalt, flux, asphaltic cement, sand and mineral dust taken and examined as to their suitability for paving. It has been observed recently that a number of manufactured asphalts are being put on the market. It is desired, therefore, to again call attention to the desirability of drawing the specifications more rigidly, especially in regard to the "ductility" of the asphalt or asphaltic cement, which property gives the resistance to withstand the tendency of asphalt pavements to crack.

The revised specifications for asphalt blocks have been responsible for a decided improvement in the quality of blocks laid during the year. The blocks laid under the new specifications show an increase in density, a decrease in amount of water absorbed, and a decided improvement in quality of stone used.

The miscellaneous samples examined include crude and refined asphalts, fluxing oils, lubricating oils, creosote oils, creosoted wooden blocks, paving pitch, etc.
Respectfully,

W. H. BROADHURST, Chemist.

Table Showing Results of Tests of Hydraulic Cements Used in Street Construction, Borough of Brooklyn, During 1906.

Brand.	Lots Averaged.	One Day, Neat.	Seven Days.				Twenty-eight Days.			
			Neat.	3 to 1.	2 to 1.	1 to 1.	Neat.	3 to 1.	2 to 1.	1 to 1.
Alpha	155	324	682	254	408	788	275	506		
Atlas	111	431	685	246	401	754	269			
Lehigh	96	316	675	224	377	840				529
Nazareth	64	254	639	207	369					
Reliance	62	338	511	178	431					
Trowel	56	270	620	201	367	652	183			
Giant	45	301	651	230	415					
Pennsylvania	43	264	625	209	358	701	236			
Bath	42	329	641	222		736	262			
Alsen	28	161	651	220	372	770				478

Brand.	Lots Averaged.	One Day, Neat.	Seven Days.				Twenty-eight Days.			
			Neat.	3 to 1.	2 to 1.	1 to 1.	Neat.	3 to 1.	2 to 1.	1 to 1.
Iron-Clad	24	417	679	238	360					
Phoenix	19	271	568	218	364	567				453
Star	17	311	692	226	439	761	208			
Hudson	7	185	591	168	288	717	227			
Penn-Allen	6	341	685	241	416	676				453
Kraus	5	322	707		447					
Clover-Leaf	4	307	603	234		654				503
Saylor's	4	132	575		336	737	247			
Vulcanite	3	245	542		309					
Whitehall	2	317	682		423					
Kraus-Northampton	2	425	814	276	456					

3 to 1 equals standard crushed quartz, 3 parts by weight; cement, 1 part by weight.
2 to 1 equals standard crushed quartz, 2 parts by weight; cement, 1 part by weight.

W. H. BROADHURST, Chemist.

TABLE No. 1.

Diagram Showing Mileage of Pavements from January 1, 1880, to January 1, 1907.

TABLE No. 2.

Showing Mileage and Percentage of the Various Pavements in the City and Borough of Brooklyn, from January 1, 1880, to January 1, 1907.

Year.	Asphalt.		Granite.		Cobble.		Belgian.		Macadam.		Brick.		Medina.		Wood.		Total.
	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	
January 1, 1880.....	7.129	2.130	16.630	4.950	292.928	87.250	17.200	5.120	0.798	0.230					1.050	0.320	335.735
January 1, 1881.....	7.039	2.080	17.050	5.060	293.458	88.210	17.200	5.110	0.798	0.230					0.720	0.210	336.265
January 1, 1882.....	6.659	1.970	17.430	5.140	295.548	87.170	17.250	5.090	1.398	0.420					0.720	0.210	339.005
January 1, 1883.....	7.379	2.170	19.230	5.660	294.348	86.630	17.250	5.070	1.588	0.470							339.795
January 1, 1884.....	7.379	2.160	19.230	5.630	295.718	86.660	17.250	5.060	1.688	0.490							341.265
January 1, 1885.....	7.379	2.140	19.280	5.580	299.078	86.760	17.250	5.040	1.688	0.480							344.675
January 1, 1886.....	6.459	1.860	22.050	6.350	299.658	86.310	17.360	5.000	1.688	0.480							347.215
January 1, 1887.....	6.459	1.820	24.410	6.870	304.398	85.650	17.360	4.870	2.816	0.770							355.375
January 1, 1888.....	6.459	1.790	27.070	7.490	307.871	85.160	17.360	4.800	2.816	0.760							361.508
January 1, 1889.....	10.597	2.810	36.382	9.640	304.865	80.720	23.029	6.090	2.816	0.740							377.689
January 1, 1890.....	10.847	2.820	58.252	15.060	289.211	74.770	25.652	6.630	2.816	0.720							386.778
January 1, 1891.....	11.676	2.970	74.425	18.780	279.915	70.630	27.480	6.930	2.816	0.690							396.312
January 1, 1892.....	12.069	2.970	81.528	20.070	280.543	69.080	29.229	7.210	2.816	0.670							406.185
January 1, 1893.....	13.049	3.100	88.792	21.060	279.263	66.240	37.646	8.930	2.816	0.670							421.566
January 1, 1894.....	14.078	3.250	91.029	20.980	284.136	65.480	41.851	9.640	2.816	0.650							433.910
January 1, 1895.....	18.845	3.880	98.870	20.340	284.321	58.490	42.157	8.670	41.876	8.620							486.069
January 1, 1896.....	27.570	5.530	109.131	21.900	269.102	54.000	42.833	8.590	49.406	9.910	0.321	0.070					498.363
January 1, 1897.....	38.162	7.420	110.552	21.480	261.486	50.800	44.463	8.640	58.893	11.440	1.105	0.220					514.661
January 1, 1898.....	61.590	11.750	111.165	21.210	241.784	46.120	44.351	8.460	62.825	11.990	2.440	0.470					524.155
January 1, 1899.....	65.990	12.256	112.870	20.962	237.960	44.193	45.330	8.418	72.520	13.469	3.780	0.702					538.450
January 1, 1900.....	68.820	12.559	114.620	20.916	236.850	43.224	45.330	8.273	78.570	14.339	3.780	0.689					547.970
January 1, 1901.....	82.260	14.664	117.010	20.881	227.300	40.518	46.990	8.353	82.310	14.673	5.110	0.911					560.980
January 1, 1902.....	95.140	16.790	119.870	21.160	216.800	38.260	47.390	8.360	82.150	14.490	5.310	0.940					566.660
January 1, 1903.....	117.410	20.370	125.470	21.760	193.830	33.620	47.570	8.250	87.060	15.100	4.930	0.860	0.180	0.030	0.080	0.010	576.530
January 1, 1904.....	166.190	28.015	132.130	22.273	153.950	25.952	44.260	7.461	88.780	14.966	4.930	0.831	2.160	0.364	0.080	0.010	576.530
January 1, 1905.....	211.590	34.440	140.360	22.846	113.730	18.511	43.160	7.025	96.160	15.651	4.400	0.716	2.980	0.485	2.000	0.326	614.380
January 1, 1906.....	263.480	41.558	140.880	22.221	78.400	12.366	42.040	6.631	99.810	15.743	3.620	0.571	3.610	0.569	2.160	0.341	634.000
January 1, 1907.....	302.410	46.735	142.380	22.003	50.270	7.769	41.650	6.437	99.530	15.381	3.360	0.519	5.320	0.822	2.160	0.334	647.080

a Includes 0.13 miles oblong trap.

b Includes 0.78 miles trap block.

c Includes 1.09 miles trap block.

d Includes 1.24 miles trap block.

e Includes 0.26 miles iron slag.

TABLE No. 3.

Showing the Area of the Different Wards of the Borough of Brooklyn.

	Block Area.	Street Area.	Park Area.	Cemetery Area.	Canal Area.	Miscellaneous.	Total Area, Acres.
First	163.3	66.9	2.8				233.0
Second	66.8	30.9					97.7
Third	106.8	54.6					161.4
Fourth	71.3	40.0					111.3
Fifth	83.8	35.6					119.4
Sixth	201.9	101.0					302.9
Seventh	311.7	146.8					458.5
Eighth	929.3	436.2	15.6	462.1			1,843.2
Ninth	356.8	195.1	71.7				623.6
Tenth	215.9	94.7	1.9		6.2		318.7
Eleventh	115.7	68.9	28.7		39.3	Navy Yard.....	252.6
Twelfth	453.4	161.1	5.3		2.5	40.8 Atlantic basin.....	663.1
Thirteenth	152.7	77.6					230.3
Fourteenth	186.7	95.9					282.6
Fifteenth	159.7	85.1					244.8
Sixteenth	157.3	87.5					244.8
Seventeenth	553.3	253.9	9.1		7.0		823.3
Eighteenth	568.6	271.7	6.9		25.8		873.0

* Includes east side lands.

	Block Area.	Street Area.	Park Area.	Cemetery Area.	Canal Area.	Miscellaneous.	Total Area, Acres.
Nineteenth.....	223.2	151.8	0.04		4.3	17.3 Wallabout Market, 17.2 United States Hospital	413.84
Twentieth.....	203.1	118.1	14.9			96.8 Navy Yard, 28.6 Wallabout Market...	461.5
Twenty-first	324.4	158.8					483.2
Twenty-second ..	584.9	282.7	482.8		11.2		1,361.6
Twenty-third	488.9	239.3	7.8				736.0
Twenty-fourth ..	799.7	286.7	12.1				1,198.5
Twenty-fifth	367.2	197.4	3.2				567.8
Twenty-sixth.....	2,343.6	1,155.4	27.3		47.0	16.9 reservoir lands....	3,590.2
Twenty-seventh...	261.5	128.4	10.8				400.7
Twenty-eighth ...	502.3	267.5	2.8	111.8			884.4
Twenty-ninth.....	2,439.7	1,269.3		54.2		36.8 Kings County Hospital, etc.....	3,800.0
Thirtieth.....	3,326.9	1,589.7	346.0	32.0		109.5 Fort Hamilton...	5,404.1
Thirty-first	4,132.3	1,999.9			180.1		6,312.3
Thirty-second ...	3,565.1	1,825.3			89.1		†5,479.5
Acres.....	24,417.8	11,973.8	1,049.74	660.1	373.2	403.2.....	38,977.84
Square miles....	38.156	18.865	1.640	1.030	0.582	0.630.....	60.993

† Does not include marsh land nor islands in Jamaica Bay which belong to this ward.

TABLE
Statement Showing Amount of Asphalt Laid on Completed

	Fund Paid From.	Character.	Foundation.	Thickness.	
				Binder.	Wearing Surface.
Amos street, from Morgan avenue to Debevoise avenue.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Atlantic avenue, from Sixth avenue to Nostrand avenue.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Bay Ridge parkway, from First avenue to Second avenue.....	Street Improvement...	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Beadel street, from Morgan avenue to Porter avenue.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Bergen street, from Schenectady avenue to Eastern parkway.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Beverly road, from Flatbush avenue to Bedford avenue.....	Street Improvement...	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Bleecker street, from Bushwick avenue to Knickerbocker avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Bridge road, from Sands street to Navy street.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Charles street, from York street to Sands street.....					
Prince street, from Concord street to Myrtle avenue.....	Repaving Bond.....	Alcatraz.....	4-inch concrete.....	1-inch	2½-inch
Broadway, from Havemeyer street to Lafayette avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Calver street, from Manhattan avenue to Newell street.....	Street Improvement...	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Caton avenue, from St. Paul's place to Parade place.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Chauncey street, from 159 feet east of Saratoga avenue to Rockaway avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Chester street, from East New York avenue to Hunterly road.....	Repaving Bond.....	Venezuela.....	Granite.....	1-inch	2-inch
Classon avenue, from Madison street to Monroe street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Cornelia street, from Broadway to Central avenue.....	Street Improvement...	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Degraw street, from Classon avenue to Washington avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Degraw street, from Franklin avenue to Nostrand avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Diamond street, from Driggs avenue to Norman avenue.....	Street Improvement...	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Douglass street, from East New York avenue to Sutter avenue.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Duffield street, from Nassau street to 285 feet south of Concord street.....	Street Improvement...	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Dumont avenue, from Rockaway avenue to Powell street.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Fifth street, from Vanderbilt street to Greenwood avenue.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Fifteenth street, from Beverley road to Cortelyou road.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Fifteenth street, from Cortelyou road to Dorchester road.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Fifteenth street, from Dorchester road to Ditmas avenue.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Sixteenth street, from Avenue H to Manhattan Beach Railroad.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Seventeenth street, from Albemarle road to Beverley road.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Seventeenth street, from Avenue H to Manhattan Beach Railroad.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Seventeenth street, from Foster avenue to Newkirk avenue.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
East Seventeenth street, from Ditmas avenue to Newkirk avenue.....	Street Improvement...	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
East Eighteenth street, from Beverley road to Cortelyou road.....	Street Improvement...	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
East Twenty-fifth street, from Newkirk avenue to Foster avenue.....	Street Improvement...	Venezuela.....	5-inch concrete.....	1-inch	2-inch
East Thirty-fourth street, from Avenue F to Glenwood road.....	Street Improvement...	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Eighth street, from Eighth avenue to Prospect Park West.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Eighteenth street, from Sixth avenue to Prospect Park West.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Eighty-third street, from Second avenue to Third avenue.....		Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Eleventh avenue, from New Utrecht avenue to Fifty-second street.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Engert avenue, from Russell street to Humboldt street.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Etna street, from Chestnut street to Euclid avenue.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Evergreen avenue, from George street to Flushing avenue.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Evergreen avenue, from Willoughby avenue to George street.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
First street, from Hoyt street to Bond street.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Fourth street, from Smith street to Hoyt street.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Fifth street, from Seventh avenue to Prospect Park West.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Fortieth street, from New Utrecht avenue to Fort Hamilton avenue.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Forty-fifth street, from New Utrecht avenue to Fort Hamilton avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Forty-sixth street, from New Utrecht avenue to Fort Hamilton avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Forty-seventh street, from New Utrecht avenue to 280 feet west of Fort Hamilton avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Forty-eighth street, from New Utrecht avenue to Fort Hamilton avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Forty-ninth street, from New Utrecht avenue to Fort Hamilton avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Forty-ninth street, from Third avenue to Fourth avenue.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Fiftieth street, from New Utrecht avenue to 200 feet west of Eleventh avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Fifty-first street, from New Utrecht avenue to Eleventh avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Fifty-second street, from New Utrecht avenue to Eleventh avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Fifty-second street, from Sixth avenue to Seventh avenue.....	Street Improvement...	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Fifty-third street, from New Utrecht avenue to Eleventh avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Fifty-fourth street, from New Utrecht avenue to Eleventh avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Fifty-fifth street, from Fifth avenue to Sixth avenue.....	Repaving Fund.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Fifty-sixth street, from Second avenue to Sixth avenue.....					
Fifty-seventh street, from Third avenue to Sixth avenue.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Folsom place, from Linwood street to Essex street.....	Street Improvement...	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Fort Greene place, from Fulton street to DeKalb avenue.....	Repaving Bond.....	Venezuela.....	Granite.....	1-inch	2-inch
Freeman street, from Manhattan avenue to Oakland street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Glen street, from Railroad avenue to Euclid avenue.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Glenmore avenue, from Stone avenue to Alabama avenue.....	Park Department.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Glenmore avenue, from Doscher street to Ashford street.....	Park Department.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Glenwood road, from Flatbush avenue to Brooklyn avenue.....	Street Improvement...	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Greene lane, from Front street to York street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Grove street, from Hamburg avenue to Myrtle avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Hale avenue, from Jamaica avenue to Fulton street.....	Street Improvement...	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Harrison avenue, from Hewes street to Flushing avenue.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Harrison place, from Porter avenue to Varick avenue.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch

No. 4.

Contracts During the Year Ending December 31, 1906.

Pavement Replaced.	Pave-ment, Square Yards.	Price Per Square Yard, Including Foundation.	Curb, Feet.		Exca-vation, Cubic Yards.	Em-bankment, Cubic Yards.	Length, Feet.	Width of Road-way.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
			New.	Old.					Amount.	Per Cent.				
.....	1,453	....	....	....	....	....	435	30	.....	.....	.....	.....	.....	Uvalde Asphalt Paving Com-pany.
4,756 linear feet granite	28,322	\$1 31	8,467	2,298	1,000	....	{ 3,221 e 80 } 2,373 e 68 732 44	.....	\$1,120 00	1.63	\$68,497 94	April 20, 1906	Oct. 31, 1906	Brooklyn Alcatraz Asphalt Company.
.....	3,584	2 24	....	....	....	....	860	30	88 00	1.08	8,117 40	Nov. 5, 1906	Dec. 26, 1906	Barber Asphalt Paving Com-pany.
.....	2,880	....	....	....	....	....	860	30	.....	.....	.....	.....	.....	Uvalde Asphalt Paving Com-pany.
Cobble.....	19,642	1 38	6,883	5,118	....	....	6,156	34	316 00	0.82	38,431 30	July 20, 1906	Nov. 10, 1906	Brooklyn Alcatraz Asphalt Company.
.....	4,142	1 58	....	....	....	....	893	42	88 00	1.32	6,646 94	Oct. 2, 1906	Nov. 16, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	8,459	1 43	2,972	2,037	....	....	2,543	30	252 00	1.51	16,668 86	June 4, 1906	July 9, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	273	1 59	288	61	....	....	178	14	120 00	1.06	11,349 50	June 28, 1906	Aug. 6, 1906	Brooklyn Alcatraz Asphalt Company.
	663	1 59	757	58	....	....	474	13						
	3,589	1 59	2,018	126	....	....	1,358	24						
Asphalt block..	34,462	2 05	12,532	4,321	....	....	11,063	42	1,560 00	1.76	88,620 95	Sept. 25, 1905	Dec. 12, 1906	Kelly Asphalt Block Com-pany.
Cobble.....	2,860	1 47	1,431	293	....	....	854	30	80 00	1.33	6,009 23	Sept. 11, 1906	Oct. 2, 1906	Barber Asphalt Paving Com-pany.
.....	2,107	1 61	d 897	....	....	....	488	39	60 00	1.35	4,455 83	Oct. 2, 1906	Nov. 27, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	4,604	1 50	1,892	536	....	....	1,221	34	92 00	0.98	9,369 23	Aug. 30, 1906	Sept. 24, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	6,888	1 43	1,292	3,618	....	....	2,559	24	224 00	1.65	13,544 50	June 25, 1906	Aug. 11, 1906	Uvalde Asphalt Paving Com-pany.
Granite.....	1,270	1 23	....	577	....	....	336	34	36 00	1.94	1,856 93	Oct. 3, 1906	Nov. 5, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	6,094	1 44	2,394	1,244	....	....	1,827	30	268 00	2.19	12,218 21	June 12, 1906	July 26, 1906	Barber Asphalt Paving Com-pany.
.....	1,661	1 97	242	632	1,299	....	439	34	32 00	0.81	3,938 93	Oct. 29, 1906	Dec. 27, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	7,334	1 44	842	2,900	....	....	1,947	34	116 00	0.87	13,263 86	May 16, 1906	June 29, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	3,853	1 46	2,130	754	....	....	1,443	24	56 00	0.66	8,508 30	Sept. 4, 1906	Sept. 20, 1906	Barber Asphalt Paving Com-pany.
.....	3,921	1 43	2,327	....	1,040	....	1,176	30	172 00	1.73	9,930 75	April 3, 1906	June 12, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble.....	1,919	1 51	959	124	....	....	590	30	52 00	1.23	4,209 15	July 16, 1906	July 31, 1906	Brooklyn Alcatraz Asphalt Company.
.....	6,022	1 41	....	....	....	....	1,601	34	76 00	0.89	8,521 66	July 2, 1906	July 28, 1906	Uvalde Asphalt Paving Com-pany.
.....	2,402	1 59	....	....	....	....	719	30	30 79	0.80	3,857 47	Nov. 15, 1906	Dec. 15, 1906	Cranford Company.
.....	3,584	1 48	....	....	....	....	1,075	30	33 86	0.63	5,341 26	Sept. 24, 1906	Oct. 30, 1906	Cranford Company.
.....	2,199	1 48	....	....	....	....	658	30	41 58	1.26	3,305 08	Nov. 12, 1906	Dec. 15, 1906	Cranford Company.
.....	2,177	1 48	....	....	....	....	748	30	74 79	2.03	3,634 99	Aug. 22, 1906	Sept. 29, 1906	Cranford Company.
.....	840	....	....	....	....	....	266	30	.....	.....	.....	.....	.....	Cranford Company.
.....	2,733	1 48	....	....	....	....	820	34	26 79	0.66	4,070 29	Sept. 20, 1906	Oct. 30, 1906	Cranford Company.
.....	978	....	....	....	....	....	269	f 44	.....	.....	.....	.....	.....	Cranford Company.
.....	1,660	....	....	....	....	....	454	f 44	.....	.....	.....	.....	.....	Cranford Company.
.....	1,901	....	....	....	....	....	505	34	.....	.....	.....	.....	.....	Cranford Company.
.....	2,142	1 38	....	....	....	....	744	30	36 00	1.21	2,983 50	May 8, 1906	May 29, 1906	Brooklyn Alcatraz Asphalt Company.
.....	1,357	1 52	880	....	214	....	407	30	84 00	2.20	3,825 50	April 16, 1906	July 16, 1906	Brooklyn Alcatraz Asphalt Company.
.....	2,599	1 32	....	....	....	....	778	30	40 00	1.15	3,473 45	April 2, 1906	April 27, 1906	Uvalde Asphalt Paving Com-pany.
.....	2,420	1 41	....	....	....	....	726	30	16 00	0.47	3,411 10	June 4, 1906	June 15, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble.....	7,129	1 79	3,593	448	....	....	2,155	30	340 00	1.99	17,103 60	Oct. 30, 1905	May 9, 1906	Interstate Paving Company.
.....	1,239	1 76	d 32	....	....	....	{ 371 30 }	.....	33 86	0.66	5,124 36	Oct. 1, 1906	Oct. 30, 1906	Cranford Company.
.....	1,182	2 44	....	....	....	....	{ 355 30 }	.....					
.....	8,567	....	....	....	....	....	1,751	44	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
Cobble.....	939	1 88	65	406	....	....	275	30	92 00	4.24	2,168 77	May 7, 1906	May 28, 1906	Interstate Paving Company.
.....	1,206	....	....	....	....	....	321	34	.....	.....	.....	.....	.....	Cranford Company.
Cobble, 389 feet; belgian, 681 feet.....	2,438	2 20	911	407	....	....	b 1,070	30	304 00	3.93	7,733 70	July 2, 1906	Aug. 25, 1906	Hastings Pavement Company.
Cobble, 843 feet; granite, 172 feet.....	3,169	1 40	1,321	411	....	....	1,015	30	60 00	0.97	6,169 14	Nov. 5, 1906	Dec. 3, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	2,058	1 83	1,227	....	....	....	617	30	192 00	3.64	5,273 64	May 1, 1906	June 12, 1906	Interstate Paving Company.
Cobble.....	2,000	2 21	1,071	149	....	....	610	29 1/2	88 00	1.51	5,826 00	Oct. 22, 1906	Dec. 15, 1906	Hastings Pavement Company.
Cobble.....	4,743	1 39	1,827	791	....	....	1,428	30	172 00	1.89	9,122 64	May 21, 1906	July 13, 1906	Barber Asphalt Paving Com-pany.
.....	3,495	1 49	....	....	....	....	1,036	30	28 00	0.53	5,247 50	June 25, 1906	July 21, 1906	Cranford Company.
.....	422	....	....	....	....	....	128	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	1,059	....	....	....	....	....	290	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	2,905	....	....	....	....	....	811	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	2,583	....	....	....	....	....	721	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	3,342	....	....	....	....	....	937	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
Cobble.....	2,306	2 10	828	558	....	....	694	30	65 58	1.05	6,225 18	Sept. 5, 1906	Dec. 4, 1906	Hastings Pavement Company.
.....	3,446	....	....	....	....	....	966	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	3,122	....	....	....	....	....	874	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	3,712	....	....	....	....	....	1,042	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	2,405	1 67	....	95	....	....	738	30	32 00	0.78	4,100 78	Oct. 26, 1906	Nov. 28, 1906	Barber Asphalt Paving Com-pany.
.....	4,280	....	....	....	....	....	1,202	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	4,858	....	....	....	....	....	1,364	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
Cobble.....	2,422	2 08	353	1,100	....	....	727	30	535 72	1.75	30,574 00	July 11, 1906	Dec. 27, 1906	Hastings Pavement Company.
	9,596	2 08	1,294	4,372	....	....	2,878	30						
Cobble.....	7,200	2 10	1,006	3,304	....	....	2,158	30	419 81	2.24	18,748 11	Oct. 26, 1906	Dec. 28, 1906	Hastings Pavement Company.
.....	448	1 95	9	28	....	....	216	24	32 00	3.05	1,049 32	Oct. 6, 1906	Oct. 27, 1906	Barber Asphalt Paving Com-pany.
Granite.....	3,409	1 21	1,647	140	....	....	898	34	68 00	1.18	5,777 23	Oct. 15, 1906	Nov. 28, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	2,321	1 42	1,234	172	....	....	701	30	48 00	1.00	4,776 65	July 5, 1906	July 16, 1906	Barber Asphalt Paving Com-pany.
.....	2,668	1 53	....	....	....	....	998	24	16 00	0.39	4,091 90	June 22, 1906	July 7, 1906	Cranford Company.
Macadam.....	7,782	....	....	....	....	....	2,575	30	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
Macadam.....	12,950	....	....	....	....	....	3,860	30	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	6,336	1 36	....	....	....	....	1,863	f 42	112 00	1.28	8,774 14	June 4, 1906	July 10, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	320	1 88	585	....	....	....	293	9 1/2	36 00	2.74	1,312 95	Oct. 16, 1906	Nov. 24, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	4,327	1 42	930	1,602	....	....	1,303	30	92 65	1.12	8,255 51	Oct. 8, 1906	Dec. 1, 1906	Uvalde Asphalt Paving Com-pany.
.....	5,176	1 64	....	....	....	....	1,526	30	36 00	0.42	8,518 20	June 4, 1906	June 16, 1906	Cranford Company.
Cobble.....	5,609	1 55	3,317	1,452	....	....	2,579	34	208 00	1.53	13,601 19	Aug. 15, 1906	Sept. 26, 1906	Cranford Company.
.....	1,390	....	....	....	....	....	416	30	.....	.....	.....	.....	.....	Uvalde Asphalt Paving Com-pany.

	Fund Paid From.	Character.	Foundation.	Thickness.	
				Binder.	Wearing Surface.
Hausman street, from 360 feet south of Nassau avenue to Meeker avenue.....	Street Improvement....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Herbert street, from Graham avenue to Kingsland avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Hewes street, from Marcy avenue to Broadway.....	Repaving Bond.....	Venezuela.....	Granite.....	1-inch	2-inch
Himrod street, from Bushwick avenue to Myrtle avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Hopkinson avenue, from Marion street to Somers street.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Hopkinson avenue, from Broadway to Marion street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
McDonough street, from Broadway to Howard avenue.....					
Hopkinson avenue, from Fulton street to 264 feet south of Herkimer street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Hopkinson avenue, from Eastern parkway extension to Blake avenue.....	Street Improvement....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Humboldt street, from Grand street to Meeker avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Humboldt street, from Engert avenue to Norman avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
India street, from West street to Oakland street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Intersection of State street and Bond street.....	Repaving Bond.....	Bermudez.....	Granite.....	1-inch	2-inch
Avenue J, from Flatbush avenue to Brooklyn avenue.....	Street Improvement....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Jefferson avenue, from Central avenue to Knickerbocker avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Jefferson street, from Bushwick avenue to Central avenue.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Jewell street, from Nassau avenue to Norman avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Joralemon street, from Clinton street to Court street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Junius street, from East New York avenue to Pitkin avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Kenilworth place, from Avenue G to Germania place.....	Street Improvement....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Kingston avenue, from Eastern parkway to President street.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Kosciusko place, from Kent avenue to easterly terminus.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Kosciusko street, from Bedford avenue to Throop avenue, and from Broadway to Bushwick avenue..	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Kosciusko street, from Lewis avenue to Broadway.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Lefferts avenue, from Rogers avenue to Nostrand avenue.....	Private Contract.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Lefferts avenue, from Rogers avenue to 106 feet westerly.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Lexington avenue, from Throop avenue to Broadway.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Linden street, from Broadway to Bushwick avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Logan street, from Jamaica avenue to Atlantic avenue.....	Street Improvement....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Luquer street, from Court street to Smith street.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Manhasset place, from Rapelye street to Coles street.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Rapelye street, from Henry street to Hamilton avenue.....					
Marcy avenue, from Gates avenue to Willoughby avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Marcy avenue, from Willoughby avenue to Flushing avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Marcy avenue, from Broadway to South Third street, and from South Second street to Metropolitan avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
McDougal street, from Fulton street to Rockaway avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Meserole avenue, from Guernsey street to Franklin street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Morgan avenue, from Bennett street to Beadel street.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Navy street, from Flushing avenue to Sands street.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Ninth street, from Third avenue to Fifth avenue.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
North Tenth street, from Driggs avenue to Union avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Norwood avenue, from Atlantic avenue to Jamaica avenue.....	Street Improvement....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Ocean avenue, west side, from 160 feet north of Avenue G to Manhattan Beach Railroad.....	Private Contract.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Pitkin avenue, from Linwood street to Lincoln avenue.....	Street Improvement....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Pleasant place, from Herkimer street to 295 feet southerly.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Plymouth street, from Hudson avenue to Little street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Prospect place, from Grand avenue to Franklin avenue.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Prospect place, from Troy avenue to Schenectady avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Prospect street, from Gold street to Navy street.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Putnam avenue, from Broadway to Hamburg avenue, and from 200 feet east of Hamburg avenue to Knickerbocker avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Radde place, from 115 feet north of Atlantic avenue to Atlantic avenue.....	Street Improvement....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Rogers avenue, from Bergen street to Park place.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Rogers avenue, from Malbone street to Montgomery street.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Sandford street, from Flushing avenue to DeKalb avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Sixteenth street, from Hamilton avenue to Fourth avenue.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Seventeenth street, from Sixth avenue to Prospect Park West.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Sixtieth street, from Second avenue to Third avenue.....	Street Improvement....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Sixty-second street, from Fourth avenue to Fifth avenue.....	Street Improvement....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Seventy-fourth street, from Third avenue to Fourth avenue.....	Street Improvement....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Sheffield avenue, from Blake avenue to Livonia avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Siegel street, from White street to 225 feet easterly.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
South Second street, from Havemeyer street to Marcy avenue, and from Keap street to Union avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
South Tenth street, from Kent avenue to Bedford avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Sterling place, from Brooklyn avenue to Kingston avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
St. Charles' place, from St. John's place to Degraw street.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
St. John's place, from Rogers avenue to Nostrand avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Sumpter street, from Fulton street to Hopkinson avenue.....	Repaving Bond.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Sumpter street, from Hopkinson avenue to Broadway.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Sutter avenue, from Alabama avenue to Sheffield avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Suydam place, from Atlantic avenue to Herkimer street.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Taaffe place, from Park avenue to Flushing avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Third place, from Henry street to Smith street.....	Repaving Bond.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Thirteenth street, from Fourth avenue to Eighth avenue.....	Repaving Bond.....	Asphalt block....	4-inch concrete.....	a ½-inch	3-inch
Sixteenth street, from Fourth avenue to Sixth avenue.....					
Throop avenue, from Halsey street to Macon street.....	Repaving Bond.....	Venezuela.....	Granite.....	1-inch	2-inch
Throop avenue, from Macon street to M Donough street.....	Repaving Bond.....	Venezuela.....	Granite.....	1-inch	2-inch

Pavement Replaced.	Pavement, Square Yards.	Price Per Square Yard, Including Foundation.	Curb, Linear Feet.		Excavation, Cubic Yards.	Em-bankment, Cubic Yards.	Length, Feet.	Width of Roadway.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
			New.	Old.					Amount.	P. r Cent.				
.....	1,343	1 87	803	....	960	....	402	30	44 00	1.28	3,430 92	April 20, 1906	May 12, 1906	Barber Asphalt Paving Company.
Cobble.....	4,180	1 45	1,167	1,219	....	....	1,250	30	56 00	0.69	8,133 72	Aug. 17, 1906	Sept. 11, 1906	Barber Asphalt Paving Company.
Granite.....	3,580	1 10	1,574	276	....	....	958	34	96 00	1.74	5,515 40	July 30, 1906	Sept. 15, 1906	Uvalde Asphalt Paving Company.
Cobble.....	6,463	1 35	3,003	616	....	....	1,951	30	108 00	0.87	12,379 10	July 30, 1906	Nov. 10, 1906	Barber Asphalt Paving Company.
Cobble.....	3,863	2 07	932	885	....	....	1,020	34	120 00	1.24	9,690 66	June 18, 1906	July 21, 1906	Hastings Pavement Company.
Cobble.....	5,385	1 47	657	1,849	....	....	1,351	34	280 00	1.24	22,489 97	May 16, 1906	June 27, 1906	Barber Asphalt Paving Company.
Cobble.....	6,721	1 47	1,480	2,010	....	....	1,772	34	40 00	1.07	3,745 91	Aug. 2, 1906	Aug. 27, 1906	Barber Asphalt Paving Company.
Cobble.....	1,881	1 45	829	157	....	....	494	34	87 72	0.57	15,261 21	July 23, 1906	Sept. 18, 1906	Brooklyn Alcatraz Asphalt Company.
.....	10,731	1 42	....	....	....	....	2,357	34	168 00	0.86	19,495 30	Aug. 8, 1906	Sept. 5, 1906	Uvalde Asphalt Paving Company.
Cobble.....	9,800	1 38	4,923	335	....	....	2,940	30	104 00	0.78	13,403 63	Aug. 24, 1906	Sept. 15, 1906	Barber Asphalt Paving Company.
Cobble.....	6,586	1 45	2,866	1,041	....	....	1,975	30	136 93	1.00	13,652 43	June 21, 1906	July 14, 1906	Barber Asphalt Paving Company.
Cobble.....	6,592	1 47	3,331	707	....	....	2,004	30	16 93	5.32	317 98	July 12, 1906	July 30, 1906	Cranford Company.
Granite.....	169	1 65	8	....	....	....	51	30	65 86	5.90	1,116 76	Nov. 12, 1906	Dec. 24, 1906	Cranford Company.
.....	396	2 03	d 204	....	....	....	98	42	76 00	0.90	8,419 09	Sept. 20, 1906	Oct. 12, 1906	Barber Asphalt Paving Company.
Cobble.....	4,170	1 46	1,526	954	....	....	1,246	30	172 00	2.73	6,298 25	May 7, 1906	June 9, 1906	Cranford Company.
Cobble.....	2,321	1 54	2,090	657	....	....	1,386	34	88 00	2.42	3,634 76	June 11, 1906	June 29, 1906	Barber Asphalt Paving Company.
Cobble.....	1,625	1 50	843	378	....	....	612	24	72 00	2.49	2,891 28	Sept. 17, 1906	Dec. 8, 1906	Barber Asphalt Paving Company.
Asphalt.....	1,531	1 80	....	....	....	....	534	26	80 00	0.85	9,390 82	July 2, 1906	Aug. 25, 1906	Uvalde Asphalt Paving Company.
Cobble.....	4,933	1 44	744	2,211	....	....	1,477	30	24 00	0.58	4,137 45	Nov. 13, 1906	Dec. 19, 1906	Uvalde Asphalt Paving Company.
.....	2,523	1 63	....	....	....	....	757	30	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	989	....	....	....	....	....	461	34	20 00	1.43	1,399 32	June 8, 1906	June 12, 1906	Barber Asphalt Paving Company.
Cobble.....	574	1 70	322	104	....	....	216	24	188 00	0.70	26,715 66	Aug. 7, 1906	Sept. 8, 1906	Barber Asphalt Paving Company.
Cobble.....	14,062	1 36	6,387	1,242	....	....	3,900	34	152 00	1.05	14,479 40	April 17, 1906	May 18, 1906	Cranford Company.
Cobble.....	8,147	1 29	2,529	1,734	....	....	2,151	34	.....	.....	.....	.....	.....	Barber Asphalt Paving Company.
.....	3,660	....	....	....	....	....	734	45	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	596	....	....	....	....	....	119	45	672 00	1.51	44,516 55	June 13, 1906	Oct. 6, 1906	Uvalde Asphalt Paving Company.
Cobble.....	c 17,452	1 51	7,702	1,365	....	....	c 4,672	34	37 86	0.92	4,086 10	Oct. 5, 1906	Nov. 24, 1906	Uvalde Asphalt Paving Company.
Cobble.....	1,948	1 54	1,061	122	....	....	594	30	128 00	0.99	12,937 61	June 7, 1906	July 4, 1906	Cranford Company.
.....	8,172	1 57	....	....	....	....	2,425	30	60 00	2.47	2,426 75	April 26, 1906	June 5, 1906	Cranford Company.
Cobble.....	1,138	1 29	732	103	....	....	429	24	112 00	1.37	8,133 95	April 30, 1906	June 12, 1906	Cranford Company.
Cobble.....	1,530	1 29	649	253	....	....	457	30	116 00	0.94	12,407 38	Aug. 1, 1906	Aug. 21, 1906	Barber Asphalt Paving Company.
Cobble.....	2,769	1 29	1,395	233	....	....	827	30	97 86	0.95	10,255 41	Sept. 17, 1906	Oct. 17, 1906	Uvalde Asphalt Paving Company.
Cobble.....	4,883	1 67	3,687	679	....	....	2,299	34	124 00	1.55	7,989 20	Oct. 16, 1906	Dec. 8, 1906	Uvalde Asphalt Paving Company.
Cobble.....	3,876	1 66	3,241	301	....	....	1,827	34	216 00	1.09	19,905 19	July 9, 1906	Aug. 18, 1906	Barber Asphalt Paving Company.
Cobble.....	2,766	1 66	2,800	345	....	....	1,709	30	40 00	0.91	4,401 85	Sept. 17, 1906	Oct. 4, 1906	Barber Asphalt Paving Company.
Cobble.....	10,528	1 36	4,337	1,236	....	....	2,794	34	.....	.....	.....	.....	.....	Uvalde Asphalt Paving Company.
Cobble.....	1,699	1 65	1,412	262	....	....	939	30	.....	.....	.....	.....	.....	Cranford Company.
.....	2,662	....	....	....	....	....	797	30	56 00	2.08	2,689 60	May 7, 1906	June 2, 1906	Cranford Company.
Cobble.....	1,006	1 78	743	144	....	....	476	24	164 00	1.67	9,833 28	April 23, 1906	June 8, 1906	Hastings Pavement Company.
Belgian.....	3,624	2 11	2,009	760	....	....	1,408	37 1/2	65 58	1.13	5,769 26	Sept. 25, 1906	Nov. 11, 1906	Uvalde Asphalt Paving Company.
Cobble.....	3,064	1 40	993	609	....	....	865	30	71 44	0.60	11,868 75	Sept. 24, 1906	Nov. 9, 1906	Brooklyn Alcatraz Asphalt Company.
.....	7,907	1 49	....	....	....	....	2,346	30	.....	.....	.....	.....	.....	Cranford Company.
.....	3,045	....	....	....	....	....	596	70	160 00	0.58	27,487 25	April 16, 1906	May 23, 1906	Brooklyn Alcatraz Asphalt Company.
.....	19,368	1 41	....	....	....	....	4,218	42	52 00	2.49	2,085 64	Sept. 27, 1906	Oct. 26, 1906	Barber Asphalt Paving Company.
Cobble.....	1,003	1 47	417	186	....	....	302	30	116 00	6.72	1,727 10	Aug. 13, 1906	Sept. 8, 1906	Barber Asphalt Paving Company.
Cobble.....	597	1 69	531	4	....	....	268	20	93 86	0.73	12,864 85	June 25, 1906	July 27, 1906	Cranford Company.
Cobble.....	6,403	1 40	2,913	457	....	....	1,692	34	52 00	0.96	5,428 80	Oct. 24, 1906	Dec. 15, 1906	Uvalde Asphalt Paving Company.
Cobble.....	2,715	1 54	451	987	....	....	720	34	120 00	2.93	4,086 90	May 21, 1906	June 14, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble.....	1,800	1 38	1,253	....	....	....	647	26	152 00	0.79	19,186 58	Sept. 10, 1906	Oct. 8, 1906	Barber Asphalt Paving Company.
Cobble.....	9,576	1 44	3,927	1,766	....	....	2,859	30	37 86	3.26	1,156 70	Nov. 12, 1906	Nov. 22, 1906	Uvalde Asphalt Paving Company.
.....	404	1 83	237	....	....	....	121	30	81 86	1.94	4,213 54	July 12, 1906	Aug. 6, 1906	Cranford Company.
Cobble.....	1,728	1 55	852	767	....	....	812	34	172 00	3.59	4,791 04	Aug. 13, 1906	Sept. 26, 1906	Hastings Pavement Company.
Cobble.....	1,672	2 27	1,062	249	....	....	759	34	184 00	1.08	16,992 49	Oct. 2, 1906	Nov. 14, 1906	Barber Asphalt Paving Company.
Cobble.....	7,362	1 53	4,644	905	....	....	2,774	24	240 00	2.01	11,956 57	Aug. 1, 1906	Sept. 21, 1906	Hastings Pavement Company.
Cobble.....	4,183	2 16	2,241	230	....	....	1,256	30	313 58	1.56	20,042 53	Sept. 26, 1906	Dec. 10, 1906	Hastings Pavement Company.
Cobble.....	7,095	2 15	3,650	655	....	....	2,159	30	141 67	1.83	7,731 70	Nov. 27, 1906	Dec. 29, 1906	Hastings Pavement Company.
.....	3,531	2 15	....	....	....	....	720	44	20 00	0.52	3,882 40	Sept. 17, 1906	Sept. 27, 1906	Brooklyn Alcatraz Asphalt Company.
.....	2,643	1 46	....	....	....	....	744	32	32 00	0.96	3,353 00	Aug. 7, 1906	Sept. 24, 1906	Brooklyn Alcatraz Asphalt Company.
.....	2,250	1 48	....	....	....	....	721	32	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	4,201	....	....	....	....	....	1,254	30	.....	.....	.....	.....	.....	Uvalde Asphalt Paving Company.
.....	820	....	....	....	....	....	247	30	72 00	0.89	8,052 10	July 13, 1906	July 31, 1906	Barber Asphalt Paving Company.
Cobble.....	4,117	1 36	1,913	531	....	....	1,249	30	53 86	0.77	7,014 38	Sept. 26, 1906	Nov. 20, 1906	Uvalde Asphalt Paving Company.
Cobble.....	3,417	1 40	1,817	243	....	....	1,031	30	92 00	1.79	5,147 20	Sept. 3, 1906	Oct. 30, 1906	Barber Asphalt Paving Company.
Cobble.....	2,744	1 46	311	1,144	....	....	727	34	52 00	2.51	2,072 35	Aug. 29, 1906	Oct. 25, 1906	Barber Asphalt Paving Company.
Cobble.....	936	1 55	476	79	....	....	279	30	56 00	1.39	4,027 90	Oct. 29, 1906	Dec. 11, 1906	Uvalde Asphalt Paving Company.
Cobble.....	1,511	1 69	1,212	218	....	....	717	34	196 00	0.79	24,703 52	Sept. 5, 1906	Oct. 29, 1906	Uvalde Asphalt Paving Company.
Cobble.....	12,667	1 39	6,087	476	....	....	3,329	34	92 00	0.82	11,158 28	July 25, 1906	Aug. 25, 1906	Barber Asphalt Paving Company.
Cobble.....	5,967	1 37	2,172	978	....	....	1,582	34	.....	.....	.....	.....	.....	Brooklyn Alcatraz Asphalt Company.
.....	2,106	....	....	....	....	....	560	34	20 00	0.78	2,562 20	April 25, 1906	May 19, 1906	Cranford Company.
Cobble.....	1,183	1 56	493	209	....	....	353	30	132 00	2.96	4,455 82	Nov. 15, 1906	Dec. 8, 1906	Barber Asphalt Paving Company.
Cobble.....	1,892	1 65	715	670	....	....	705	24	32 00	0.37	8,767 70	Sept. 3, 1906	Nov. 3, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble.....	3,881	1 38	2,943	....	....	....	1,473	24	345 86	0.92	37,744 63	Aug. 27, 1906	Nov. 28, 1906	Hastings Pavement Company.
Cobble.....	9,516	2 18	4,889	855	....	....	2,877	30	40 93	2.96	1,382 57	Oct. 23, 1906	Nov. 29, 1906	Uvalde Asphalt Paving Company.
Granite.....	906	1 27	....	425	....	....	241	34	40 00	2.36	1,696 50	July 18, 1906	July 28, 1906	Uvalde Asphalt Paving Company.
Granite.....	1,342	1 10	....	484	....	....	346	34	.....	.....	.....	.....	.....	.....

	Fund Paid From.	Character.	Foundation.	Thickness.	
				Binder.	Wearing Surface.
Tompkins avenue, from Pulaski street to Flushing avenue.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Troutman street, from Myrtle avenue to Evergreen avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Troutman street, from Evergreen avenue to Irving avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Twelfth avenue, from New Utrecht avenue to Fifty-fourth street.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Twenty-third street, from Third avenue to Sixth avenue.....	Repaving Bond.....	Asphalt block.....	4-inch concrete.....	a ½-inch	3-inch
Union street, from Kingston avenue to 644 feet easterly.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Vanderbilt avenue, from Park place to Plaza street.....	Repaving Bond.....	Alcatraz.....	Granite.....	1-inch	2-inch
Vandervoort avenue, from Division place to Lombardy street.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Van Siclen avenue, from Pitkin avenue to Dumont avenue.....	Street Improvement.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Vernon avenue, from Marcy avenue to Throop avenue.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch
Vernon avenue, from Sumner avenue to Stuyvesant avenue.....	Repaving Bond.....	Trinidad.....	5-inch concrete.....	1-inch	2-inch
Washington avenue, from Fulton street to Atlantic avenue.....	Repaving Bond.....	Alcatraz.....	Granite.....	1-inch	2-inch
West Ninth street, from Clinton street to Henry street.....	Street Improvement.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
White street, from Moore street to Siegel street.....	Private Contract.....	Venezuela.....	5-inch concrete.....	1-inch	2-inch
Williams avenue, from Sutter avenue to Livonia avenue.....	Private Contract.....	Alcatraz.....	5-inch concrete.....	1-inch	2-inch
Windsor place, from Tenth avenue to Fifteenth street.....	Repaving Bond.....	Bermudez.....	5-inch concrete.....	1-inch	2-inch

a. 1 to 4 mortar bed.

b. Includes 337 feet of granite laid by Bureau of Highways.

c. Includes 1,391 feet of granite (5,196 square yards).

d. New concrete curb.

TABLE
Statement Showing Amount of Stone Pavement Laid on

	Fund Paid From.	Character.	Foundation.	Filling in Joints.
Atlantic avenue, from Logan street to Chestnut street.....	Labor, Maintenance and Supplies, 1906..a	Granite.....	Sand.....	Sand.....
Centre street, from Smith street to Hamilton avenue.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Conway street, from Bushwick avenue to Norman place.....	Labor, Maintenance and Supplies, 1906..a	Granite.....	Sand.....	Sand.....
Eldert lane, from Ridgewood avenue to Rockaway road.....	Labor, Maintenance and Supplies, 1906..a	Granite.....	Sand.....	Sand.....
Engert avenue, from Graham avenue to Leonard street.....	Street Improvement.....	Granite.....	6-inch concrete....	Tar and gravel...
Fourth street, from Hoyt street to Bond street.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Hoyt street, from Third street to Fifth street.....				
Furman street, from Atlantic avenue to Fulton street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Garrison street, from Front street to York street.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Mercein street, from Garrison street to Brooklyn Bridge anchorage.....				
Johnson street, from Gold street to Raymond street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Bedford street, from Raymond street to Leo place.....				
Johnson street, from Duffield street to Pearl street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Junius street, from Pitkin avenue to 10 feet south of Belmont avenue.....	Private Contract.....a	Granite.....	6-inch concrete....	Cement.....
Kills path, from 252 feet north of Jamaica avenue to Queens County line.....	Labor, Maintenance and Supplies, 1906..a	Granite.....	Sand.....	Sand.....
Kingsland avenue, from Greenpoint avenue to bridge.....	Labor, Maintenance and Supplies, 1906..a	Granite.....	Sand.....	Sand.....
Mack place, from Bridge street to Gold street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Nevins street, from Flatbush avenue to Dean street.....	Repaving Bond.....	Iron slag.....	6-inch concrete....	Tar.....
New Jersey avenue, from Jamaica avenue to Highland boulevard.....	Street Improvement.....	Granite.....	6-inch concrete....	Tar and gravel...
Park avenue, from Classon avenue to Broadway.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Quay street, from Franklin street to West street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Richards street, from Beard street to Verona street.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Richardson street, from Union street to Leonard street.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Richardson street, from Graham avenue to Humboldt street.....				
Sackett street, from Bond street to Gowanus canal.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
South Eleventh street, from Kent avenue to Berry street.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Stagg street, from 313 feet east of Bushwick avenue to Morgan avenue.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...
Starr street, from Irving avenue to Wyckoff avenue.....	Street Improvement.....	Granite.....	Sand.....	Sand.....
Sullivan street, from Dwight street to Ferris street.....	Repaving Bond.....	Medina.....	6-inch concrete....	Cement.....
Talman street, from Bridge street to Charles street.....	Labor, Maintenance and Supplies, 1905..a	Granite.....	Sand.....	Sand.....
Truxton street, from Norman place to 48 feet westerly.....	Labor, Maintenance and Supplies, 1906..	Granite.....	Sand.....	Sand.....
Wilson street, from Wythe avenue to Kent avenue.....	Repaving Bond.....	Granite.....	6-inch concrete....	Tar and gravel...

a. Second-hand granite blocks used.

b. 2,225 square yards of old granite blocks used.

c. Railroad right of way, 49.5 feet wide, in centre.

TABLE
Showing Streets Graded, Curbed, Guttered and Macadamized on

	Fund Paid From.	Character.	Macadam Pavement, Square Yards.	Brick Gutter Pavement, Square Yards.
Alabama avenue, from Belmont avenue to Sutter avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Bay Twenty-sixth street, from Cropsey avenue to Eighty-sixth street.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	901
Belmont avenue, from Warwick street to Elton street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Belmont avenue, from Elton street to Chestnut street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Beverly road, from Flatbush avenue to Bedford avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Blake avenue, from Hopkinson avenue to Howard avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Church avenue, from Flatbush avenue to East Eleventh street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Cleveland street, from Pitkin avenue to Livonia avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Avenue D, from Flatbush avenue to Rogers avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Dean street, from Saratoga avenue to Rockaway avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....

Pavement Replaced.	Pave-ment, Square Yards.	Price Per Square Yard, Including Foundation.	Curb, Linear Feet.		Exca-vation, Cubic Yards.	Em-bankment, Cubic Yards.	Length, Feet.	Width of Road-way.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
			New.	Old.					Amount.	Per Cent.				
Cobble.....	4,868	1 55	3,568	838	....	....	2,269	34	198 79	1.60	12,396 87	July 23, 1906	Sept. 5, 1906	Cranford Company.
Cobble.....	2,691	1 46	1,712	308	....	....	1,016	24	40 00	0.66	6,015 20	Sept. 26, 1906	Oct. 13, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	6,487	1 48	4,531	587	....	....	1,943	30	152 00	0.80	19,028 45	Sept. 20, 1906	Nov. 3, 1906	Barber Asphalt Paving Com-pany.
Cobble.....	2,071	2 08												
.....	5,158	....	....	....	....	....	1,049	44	....	....	....	....	....	Brooklyn Alcatraz Asphalt Company.
Cobble.....	g 6,637	1 79	3,780	407	....	....	g 2,143	30	308 00	1.89	16,322 40	Nov. 6, 1905	April 21, 1906	Interstate Paving Company.
.....	1,836	....	....	....	....	....	662	25	....	....	....	....	....	Brooklyn Alcatraz Asphalt Company.
Granite.....	2,814	1 10	195	700	....	....	569	60	108 00	2.98	3,625 80	June 13, 1906	July 7, 1906	Brooklyn Alcatraz Asphalt Company.
.....	1,226	....	....	....	....	....	368	30	....	....	....	....	....	Uvalde Asphalt Paving Com-pany.
.....	6,981	1 63	....	....	....	....	2,078	30	100 00	0.87	11,449 66	Nov. 16, 1906	Dec. 29, 1906	Uvalde Asphalt Paving Com-pany.
Cobble.....	5,909	1 31	1,936	1,127	....	....	1,580	34	124 00	1.18	10,550 45	April 10, 1906	May 11, 1906	Cranford Company.
Cobble.....	5,558	1 37	1,398	1,643	....	....	1,538	34	92 00	0.89	10,310 82	July 20, 1906	Aug. 17, 1906	Barber Asphalt Paving Com-pany.
Granite.....	2,923	1 20	1,082	167	....	....	629	42	116 00	2.42	4,752 85	Oct. 29, 1906	Dec. 18, 1906	Brooklyn Alcatraz Asphalt Company.
.....	1,325	1 38	....	....	....	....	494	24	16 00	0.87	1,837 75	April 20, 1906	May 1, 1906	Brooklyn Alcatraz Asphalt Company.
.....	850	....	....	....	....	....	254	30	....	....	....	....	....	Uvalde Asphalt Paving Com-pany.
.....	5,925	....	....	....	....	....	1,770	30	....	....	....	....	....	Brooklyn Alcatraz Asphalt Company.
Cobble.....	4,954	1 39	2,359	488	....	....	1,487	30	119 72	1.18	10,134 16	June 29, 1906	July 31, 1906	Cranford Company.

e. Railroad right of way, 26 feet and 30 feet wide in centre.
f. 14 feet parkway in centre.

g. 4,750 square yards (1,500 linear feet) laid in 1905.

No. 5.

Completed Contracts During the Year Ending December 31, 1906.

Pavement Replaced.	Pave-ment, Square Yards.	Price Per Square Yard, Including Foundation.	Curb, Linear Feet.		Exca-vation, Cubic Yards.	Em-bankment, Cubic Yards.	Length, Feet.	Width of Road-way.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
			New.	Old.					Amount.	Per Cent.				
.....	2,030	....	....	....	....	....	624	c 80	....	....	....	....	....	City Repair Gangs.
Cobble.....	1,098	\$3 71	845	....	....	....	420	24	\$140 00	2.73	\$5,125 70	Aug. 13, 1906	Sept. 12, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble, 5 7 0 feet.....	2,816	....	....	....	....	....	812	30-34	....	....	....	....	....	City Repair Gangs.
.....	590	....	....	....	....	....	248	20	Strip.	....	....	....	....	City Repair Gangs.
.....	1,647	3 13	....	....	....	....	494	30	132 00	2.50	5,286 49	Nov. 8, 1906	Dec. 5, 1906	O'Grady Bros.
Cobble.....	{ 1,835	3 60	986	123	....	....	552	30	304 93	2.20	13,849 78	Sept. 3, 1906	Nov. 28, 1906	M. F. Hickey.
.....	{ 1,280	....	774	98	....	....	488	24						
Granite.....	b d 8,745	{ 3 05	3,484	2,497	....	....	d 4,223	33	552 00	1.93	28,677 89	July 24, 1905	July 20, 1906	James Quinn, Sr.
Cobble.....	{ 560	3 50	593	....	....	....	316	15-17	116 00	3.21	3,617 60	April 12, 1906	July 5, 1906	Norton, Gorman Con-tracting Company.
.....	{ 187	....	104	112	....	....	113	15						
Cobble.....	{ 2,353	3 15	1,580	185	....	....	897	24	288 00	2.41	11,072 75	July 2, 1906	Oct. 8, 1906	Norton, Gorman Con-tracting Company.
.....	{ 630	....	421	42	....	....	235	24						
Cobble.....	2,306	3 13	1,695	111	....	....	902	24	456 74	4.79	9,520 14	Oct. 18, 1906	Dec. 28, 1906	John E. Quinn.
.....	1,704	....	....	....	....	....	506	30	....	....	....	....	....	C. Tuckerwald, for Long Island Railroad.
.....	2,912	....	....	....	....	....	1,291	20	Strip.	....	....	....	....	City Repair Gangs.
.....	646	....	....	....	....	....	263	21	Strip.	....	....	....	....	City Repair Gangs.
Cobble.....	854	3 22	14	....	....	....	492	16	160 00	5.41	2,957 85	July 23, 1906	Oct. 6, 1906	Norton, Gorman Con-tracting Company.
Brick.....	4,001	3 66	447	155	....	....	1,382	26	128 00	1.03	12,449 28	Aug. 27, 1906	Nov. 5, 1906	Louis Lilley.
.....	970	3 56	....	....	....	....	366	24	192 00	5.18	3,710 35	Nov. 12, 1906	Dec. 29, 1906	E. J. Powers.
Cobble.....	14,256	3 30	11,342	307	....	....	6,059	36	1,377 86	2.29	60,009 38	July 30, 1906	Dec. 19, 1906	James Quinn, Jr.
Cobble.....	1,204	3 07	534	137	....	....	370	30	124 00	2.71	4,567 78	June 5, 1906	Aug. 18, 1906	George & Farrell.
Cobble.....	4,568	3 71	2,211	1,813	....	....	2,301	30	172 00	0.83	20,845 95	Aug. 31, 1906	Oct. 30, 1906	Brooklyn Alcatraz Asphalt Company.
Cobble.....	4,608	3 12	1,899	859	....	....	1,390	30	336 00	1.98	16,997 00	June 28, 1906	Aug. 25, 1906	John E. Quinn.
Cobble.....	1,010	3 00	607	....	....	....	303	30	96 00	2.52	3,816 00	May 9, 1906	July 2, 1906	Norton, Gorman Con-tracting Company.
Cobble.....	1,913	3 50	920	254	....	....	586	30	216 00	2.62	8,225 79	Mar. 29, 1906	May 12, 1906	Cunningham & Kearns.
Granite.....	4,992	3 02	1,644	1,217	....	....	1,507	30	680 00	3.71	18,323 51	April 20, 1906	July 21, 1906	George & Farrell.
.....	e 2,376	1 70	1,203	....	739	....	e 710	30	200 00	3.30	6,066 05	Nov. 20, 1905	Sept. 18, 1906	O'Grady Bros.
Cobble.....	6,509	3 52	3,588	313	....	....	1,957	30	516 00	1.89	27,199 69	Aug. 29, 1906	Nov. 27, 1906	John E. Quinn.
Cobble.....	424	....	....	....	....	....	257	15	....	....	....	....	1905	City Repair Gangs.
Cobble.....	180	....	....	....	....	....	48	34	....	....	....	....	....	City Repair Gangs.
Cobble.....	1,941	3 13	936	102	....	....	520	34	168 00	2.28	7,368 38	Sept. 26, 1906	Nov. 10, 1906	O'Grady Bros.

d. 4,200 square yards, 1,980 linear feet, laid in 1905.

e. 2,330 square yards, 700 linear feet, laid in 1905.

No. 6.

Contracts Completed During Year Ending December 31, 1906.

Price.	Curb, Linear Feet.		Excavation, Cubic Yards.	Embankment, Cubic Yards.	Length, Feet.	Width of Roadway, Feet.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
	New.	Old.					Amount.	Per Cent.				
....	841	....	1 356	....	434	30	\$36 00	1.84	\$1,960 14	Sept. 27, 1906	Oct. 13, 1906	Daniel Douglass.
\$2 25	3,882	....	....	1,562	2,027	32	304 00	3.34	9,108 85	Oct. 9, 1905	Feb. 5, 1906	E. M. Culp.
....	1,286	....	845	....	666	30	72 00	3.14	2,296 00	July 18, 1906	Aug. 7, 1906	Moran & Crowley.
....	4,635	....	1,258	5,203	2,617	30	132 00	1.31	10,062 73	May 17, 1906	June 7, 1906	Daniel Douglass.
....	1,643	....	658	....	863	42	92 00	3.30	2,791 63	Sept. 5, 1906	Oct. 11, 1906	Clinton Construction Company.
....	3,843	....	4,197	17,684	1,818	34	124 00	.99	12,490 90	Nov. 20, 1905	Apr. 18, 1906	Uvalde Asphalt Paving Company.
....	5,222	....	662	2,028	3,073	35	320 00	3.61	8,855 95	Aug. 13, 1906	Dec. 22, 1906	Bonacci & Vincelli.
....	4,736	....	1,304	2,563	2,470	24	224 00	2.45	9,154 01	Aug. 13, 1906	Oct. 31, 1906	P. McDermott.
....	2,121	....	600	1,540	1,132	42	52 00	1.25	4,146 61	July 6, 1906	Aug. 10, 1906	Daniel Douglass.
....	2,946	....	4,700	....	1,506	34	100 00	1.58	6,349 36	Aug. 13, 1906	Oct. 10, 1906	Daniel Douglass.

	Fund Paid From.	Character.	Macadam Pavement, Square Yards.	Brick Gutter Pavement, Square Yards.
Dumont avenue, from 75 feet west of Bristol street to Howard avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Fifth street, from Vanderbilt street to Greenwood avenue.....	Street Improvement....	Regulating, grading and curbing.....	....	....
East Fifth street, from Greenwood avenue to Fort Hamilton avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Fifth street, from Avenue C to Church avenue.....	Street Improvement....	Regulating, grading, curbing gutters and sidewalks.....	....	549
East Eighth street, from Avenue C to Avenue E.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Fifteenth street, from Beverley road to Cortelyou road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Fifteenth street, from Cortelyou road to Dorchester road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Thirty-first street, from Flatbush avenue to Glenwood road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
East Thirty-first street, from Avenue F to Glenwood road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Eckford street, from Engert avenue to Driggs avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Eighth avenue, from Bay Ridge avenue to Seventh avenue.....	Street Improvement....	Regulating and grading.....	....	....
Eightieth street, from First avenue to Second avenue.....	Street Improvement....	Regulating, grading, curbing gutters and sidewalks.....	....	328
Eightieth street, from Third avenue to Fifth avenue.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	....
Eightieth street, from Seventh avenue to 100 feet east of Tenth avenue.....	Private Contract.....	Regulating, grading, curbing, gutters and sidewalks.....	....	....
Eighty-first street, from Seventh avenue to 100 feet east of Tenth avenue.....	Private Contract.....	Regulating, grading, curbing, gutters and sidewalks.....	....	....
Eighty-first street, from Eleventh avenue to Thirteenth avenue.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	659
Eighty-fifth street, from First avenue to Fourth avenue.....	Street Improvement....	Regulating, grading, curbing and gutters.....	....	971
Eighty-fifth street, from Fourth avenue to Seventh avenue.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	1,056
Eleventh avenue, from Fifteenth street to Terrace place.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Eleventh avenue, from Sixty-fifth street to Sixty-ninth street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Elmore place, from Farragut road to Glenwood road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Engert avenue, from Graham avenue to Leonard street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Etna street, from Hale avenue to Norwood avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
First avenue, from Fifty-seventh street to a point midway between Sixtieth and Sixty-first streets..	Street Improvement....	Regulating and grading.....	....	....
Fifth avenue, from Sixty-fifth street to 100 feet north of Seventy-second street, and from 100 feet south of Seventy-third street to Eighty-sixth street.....	Street Improvement....	Curbing and sidewalks.....	....	....
Fifty-fourth street, from Thirteenth avenue to Fifteenth avenue.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	702
Forty-first street, from New Utrecht avenue to the old City line.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Foster avenue, from Coney Island avenue to East Eleventh street, and from East Seventeenth street to Flatbush avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Gatling place, from Eighty-sixth street to Ninety-second street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Glenwood avenue, from Flatbush avenue to Brooklyn avenue.....	Street Improvement....	Regulating, grading, curbing and sodding.....	....	....
Grafton street, from East New York avenue to Sutter avenue.....	Private Contract.....	Regulating, grading, curbing and sidewalks.....	....	....
Grant avenue, from Jamaica avenue to Liberty avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Hopkinson avenue, from Eastern parkway to Atlantic avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Hubbard lane, from Centre place to the bay.....	Labor, Maintenance and Supplies, 1906.....	Macadam	701	....
Huntington street, from Henry street to Hamilton avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Jerome avenue, from Manhattan Beach Railroad to East Twenty-third street.....	Common Land.....	Macadam	2,786	....
Johnson avenue, from First street to Coney Island avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Kenilworth place, from Avenue G to Germania place.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Lott street, from Vernon avenue to Beverley road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Neptune avenue, from end of present Neptune avenue improvement, near West Thirty-sixth street, to West Thirty-seventh street.....	Street Improvement....	Regulating and grading.....	....	....
New Jersey avenue, from Jamaica avenue to Highland boulevard.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
New Utrecht avenue, west side, from Thirty-ninth street to Kowenhoven lane, and Forty-ninth street, south side, from Second avenue to Third avenue (where not already laid).....	Street Improvement....	Sidewalks .....	....	....
New York avenue, from Clarkson street to Church avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Ninety-first street, from First avenue to Second avenue, and from Third avenue to Fifth avenue....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Norman avenue, from 100 feet west of Morgan avenue to Bridgewater street.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Nostrand avenue, from Flatbush avenue to Avenue U.....	Street Improvement....	Regulating and grading.....	....	....
Park place, from Eastern Parkway Extension to East New York avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Prospect place, from Ralph avenue to Eastern parkway.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Rockaway avenue, from Blake avenue to Hegeman avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Rockaway avenue, from Hegeman avenue to Stanley avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Senator street, from First avenue to Second avenue.....	Private Contract.....	Regulating, grading, curbing and sidewalks.....	....	....
Seventy-third street, from New Utrecht avenue to Eighteenth avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Seventy-fourth street, from Second avenue to Seventh avenue.....	Street Improvement....	Regulating, grading, curbing, gutters and sidewalks.....	....	1,671
Sheepshead Bay road, from Gravesend Neck road to Manhattan Beach Railroad.....	Common Land.....	Macadam	5,726	....
Sixth avenue, from Sixty-fifth street to Fort Hamilton avenue.....	Street Improvement....	Sidewalks .....	....	....
Sixth avenue, from Bay Ridge avenue to Seventy-first street.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Sixty-first street, from Third avenue to Fourth avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Sixty-first street, from Fifth avenue to Sixth avenue.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Sixty-second street, from Fourth avenue to Fifth avenue.....	Street Improvement....	Regulating, curbing and sidewalks.....	....	....
Sixty-fourth street, from Third avenue to Fourth avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Sixty-eighth street, north side, from First avenue to Second avenue.....	Private Contract.....	Regulating, grading, curbing and sidewalks.....	....	....
Stockholm street, from 335 feet west to 304 feet east of Cypress avenue.....	Private Contract.....	Regulating, grading, curbing and gutters.....	....	....
Sutter avenue, from Saratoga avenue to Howard avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Sutter avenue, from Warwick street to Elton street.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Tenth avenue, from Seventy-fifth street to Bay Ridge avenue.....	Street Improvement....	Regulating, curbing and sidewalks.....	....	....
Tenth avenue, from Seventy-ninth street to Eighty-first street.....	Private Contract.....	Curbing, gutters and sidewalks.....	....	....
Thirteenth avenue, both sides, from Eighty-second street to Eighty-third street, and west side, from Eighty-third street to Eighty-sixth street.....	Street Improvement....	Combination curbing and gutters.....	....	....
Thirty-eighth street, from Third avenue to Fifth avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Union street, from Bedford avenue to Rogers avenue.....	Street Improvement....	Regulating, grading and curbing.....	....	....
Washington avenue, from Gravesend avenue to First avenue.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
Weirfield street, from Knickerbocker avenue to the county line.....	Street Improvement....	Regulating, grading and curbing.....	....	....
West Fifth street, from Neptune avenue to Sheepshead Bay road.....	Street Improvement....	Regulating, grading, curbing and sidewalks.....	....	....
West Sixteenth street, from Mermaid avenue to Neptune avenue.....	Street Improvement....	Regulating, grading and curbing.....	....	....

Price.	Curb, Linear Feet.		Excavation, Cubic Yards.	Embankment, Cubic Yards.	Length, Feet.	Width of Roadway, Feet.	Inspection.		Total Cost.	When Commenced.	When Finished.	Contractor.
	New.	Old.					Amount.	Per Cent.				
....	3,799	....	469	34,172	2,094	34	228 00	1.66	13,707 50	Sept. 17, 1906	Nov. 21, 1906	Bracken & McAveny Company.
....	1,445	....	30	1,020	730	30	36 00	2.42	1,490 25	Oct. 16, 1906	Nov. 16, 1906	O'Hara Brothers.
....	1,206	....	110	270	621	30	52 00	2.58	2,011 28	June 28, 1906	July 26, 1906	Moran & Crowley.
2 20	2,457	....	290	1,220	1,240	30	272 00	4.73	5,753 84	Dec. 11, 1905	May 29, 1906	Norton & Gorman Construction Company.
....	3,368	....	1,065	....	1,677	28	196 00	3.22	6,083 61	Aug. 20, 1906	Nov. 16, 1906	Frederick Luck.
....	782	....	310	40	1,090	30	48 00	4.11	1,168 95	July 23, 1906	Aug. 17, 1906	Charles Cranford.
....	1,304	....	28	465	704	30	80 00	4.40	1,816 22	Oct. 1, 1906	Dec. 15, 1906	J. T. Rutan.
....	1,441	....	620	....	754	30	72 00	2.58	2,794 96	Oct. 29, 1906	Nov. 17, 1906	W. F. Burke.
....	1,564	....	792	....	788	30	88 00	3.10	2,842 97	Aug. 21, 1906	Nov. 3, 1906	W. F. Burke.
....	848	....	267	....	438	30	48 00	3.04	1,577 06	Oct. 4, 1905	Sept. 24, 1906	Donlon Contracting Company.
....	....	....	200	18,628	1,024	44	.....	....	4,980 42	Apr. 5, 1906	July 14, 1906	Owen O'Keefe.
2 20	1,467	....	167	1,923	736	32	104 00	2.63	3,948 40	Dec. 14, 1905	May 5, 1906	N. Schneider's Sons.
....	3,046	....	2,456	....	1,528	30	216 00	3.49	6,194 80	Apr. 12, 1906	July 3, 1906	Dominick Bonacci.
....	....	....	....	....	960	32	.....	....	.....	.....	.....	Ficklen & Seib.
....	....	....	....	....	860	32	.....	....	.....	.....	.....	Ficklen & Seib.
2 30	2,962	....	30,161	....	1,519	30	168 00	1.07	15,649 87	Sept. 17, 1906	Dec. 7, 1906	Robertson & Gerehardt.
2 30	4,386	....	27,365	....	2,193	32	224 00	1.87	11,988 30	May 7, 1906	Aug. 31, 1906	James Purcell.
2 10	4,460	268	7,243	....	2,320	32	364 00	3.02	12,052 09	July 2, 1906	Dec. 27, 1906	O'Hara Brothers.
....	2,766	....	13,798	....	1,750	42	168 00	2.29	7,350 00	Nov. 27, 1905	July 14, 1906	Ed. E. Peirson.
....	1,943	....	5,663	....	998	44	92 00	2.00	4,591 30	Aug. 6, 1906	Nov. 8, 1906	W. K. Putnam.
....	864	....	60	300	378	32	56 00	4.15	1,346 99	Sept. 14, 1906	Nov. 3, 1906	Seaboard Construction Company.
....	890	....	190	....	491	30	164 00	9.00	1,833 48	Oct. 2, 1905	Aug. 20, 1906	Donlon Contracting Company.
....	538	....	766	....	288	34	8 00	.68	1,167 68	May 16, 1906	May 28, 1906	Daniel Douglass.
....	....	....	170	4,452	812	44	.....	....	785 74	May 1, 1906	Dec. 22, 1906	Vofrei & O'Hearn.
....	9,210	....	....	....	5,057	44	416 00	2.51	16,543 11	May 1, 1906	Nov. 23, 1906	W. K. Putnam.
1 90	2,797	....	1,269	....	1,515	32	212 00	3.32	6,381 01	June 13, 1906	Oct. 20, 1906	Dominick Bonacci.
....	1,992	....	....	18,979	1,022	32	64 00	1.14	5,614 96	Oct. 2, 1906	Nov. 26, 1906	Mangieri Company.
....	5,740	....	1,850	1,790	3,232	42	208 00	2.28	9,109 30	June 7, 1906	Aug. 25, 1906	Daniel Douglass.
....	2,822	....	8,655	....	1,439	28	228 00	3.03	7,518 82	Sept. 1, 1905	June 16, 1906	P. J. Donlin.
....	3,306	*3,085	497	1,903	1,788	42	156 00	2.33	6,688 35	Apr. 11, 1906	July 3, 1906	Brooklyn Alcatraz Asphalt Com- pany.
....	....	....	....	....	845	30	.....	....	.....	.....	.....	National Trading Company.
....	8,381	....	10,618	....	4,314	24	540 00	3.40	15,877 20	July 19, 1906	Dec. 3, 1906	John B. Reimer.
....	2,594	....	1,909	....	1,443	34	140 00	2.80	4,994 52	Sept. 7, 1906	Oct. 17, 1906	Moran & Crowley.
....	....	....	....	....	426	15	Strip.	....	.....	.....	.....	City repair gangs.
....	464	11	42	72	291	24	16 00	2.63	607 79	Aug. 27, 1906	Sept. 12, 1906	Moran & Crowley.
....	....	....	....	....	1,538	16	Strip.	....	.....	.....	.....	J. P. Graham.
....	883	....	1,255	....	444	32	68 00	3.56	1,907 05	May 28, 1906	July 26, 1906	Frank Luck.
....	1,551	....	70	580	771	30	44 00	1.66	2,655 40	Sept. 28, 1906	Nov. 10, 1906	Clinton Contracting Company.
....	1,283	....	....	1,940	631	24	60 00	2.05	2,916 88	July 16, 1906	Aug. 10, 1906	Daniel Douglass.
....	....	....	....	13,050	315	44	.....	....	4,498 99	Feb. 20, 1906	Apr. 3, 1906	Murphy Brothers.
....	724	....	564	405	370	24	60 00	4.14	1,450 17	Oct. 2, 1906	Oct. 24, 1906	Seaboard Construction Company.
....	....	....	....	....	....	..	68 00	6.45	1,055 16	June 11, 1906	Aug. 20, 1906	Clinton Construction Company.
....	*3,004	....	....	2,710	1,664	44	168 00	4.07	4,122 60	Sept. 24, 1906	Dec. 31, 1906	J. T. Rutan & Co.
....	3,661	....	13,304	....	1,826	28	144 00	1.44	10,025 36	May 17, 1906	Sept. 4, 1906	Robertson & Gerehardt.
....	1,041	....	2,785	5,483	621	34	120 00	7.22	1,661 60	June 3, 1905	June 23, 1906	John Monahan.
....	....	....	12,560	13,370	11,860	44	.....	....	13,917 10	Oct. 13, 1905	Sept. 14, 1906	Murphy Brothers.
....	836	....	893	....	471	34	20 00	1.12	1,776 42	Sept. 19, 1906	Sept. 27, 1906	Daniel Douglass.
....	4,571	....	10,700	....	2,358	34	124 00	1.15	10,852 01	July 24, 1906	Sept. 1, 1906	Daniel Douglass.
....	4,704	....	16,740	....	3,438	34	172 00	1.33	12,956 72	Apr. 16, 1906	May 19, 1906	Daniel Douglass.
....	943	....	75	5,687	1,138	34	68 00	1.79	3,797 10	Oct. 8, 1906	Nov. 7, 1906	Seaboard Construction Company.
....	....	....	....	....	720	32	.....	....	.....	.....	.....	W. K. Putnam.
....	1,466	....	910	478	717	32	56 00	1.86	3,007 20	July 13, 1906	Nov. 9, 1906	M. F. Hickey.
2 25	7,458	....	9,076	....	3,786	32	716 00	3.59	19,962 55	Aug. 29, 1905	Sept. 28, 1906	N. Schneider's Sons.
....	....	....	....	....	3,014	16	.....	....	.....	.....	.....	J. P. Graham.
....	....	....	....	....	....	26	104 00	1.9	5,487 61	Apr. 18, 1906	May 21, 1906	W. L. Castle.
....	....	610	1,020	....	314	44	8 00	2.14	375 00	Oct. 31, 1906	Nov. 30, 1906	Mangieri Company.
....	1,414	....	1,082	....	710	32	44 00	1.73	2,541 60	Nov. 20, 1906	Dec. 21, 1906	J. L. Hickey.
....	1,503	....	16,928	578	736	30	44 00	.77	5,753 08	Nov. 20, 1906	Dec. 26, 1906	Vofrei & O'Hearn.
....	1,504	....	....	....	748	32	36 00	1.67	2,153 20	Nov. 16, 1905	June 29, 1906	Vofrei & O'Hearn.
....	1,410	....	570	160	710	32	112 00	4.24	2,640 22	July 5, 1906	Nov. 2, 1906	M. F. Hickey.
....	....	....	....	....	720	32	.....	....	.....	.....	.....	W. K. Putnam.
....	....	....	....	....	640	30	.....	....	.....	.....	.....	C. Cranford.
....	1,388	....	5,073	....	732	34	52 00	1.47	3,522 22	Sept. 20, 1906	Oct. 5, 1906	Daniel Douglass.
....	1,284	....	416	....	666	34	48 00	2.18	2,239 44	Aug. 8, 1906	Aug. 21, 1906	Moran & Crowley.
....	2,779	....	....	....	1,541	44	220 00	4.38	5,020 05	June 11, 1906	Aug. 29, 1906	M. F. Hickey.
....	....	....	....	....	490	44	.....	....	.....	.....	.....	Ficklen & Seib.
....	*1,163	....	....	....	1,014	44	164 00	20.41	803 65	July 30, 1906	Oct. 16, 1906	Norton-Gorman Contracting Com- pany.
....	2,586	....	2,341	....	1,449	30	168 00	3.08	5,458 72	July 30, 1906	Nov. 19, 1906	Clinton Construction Company.
....	1,147	....	28,913	....	583	34	60 00	.39	15,281 42	Nov. 10, 1905	July 31, 1906	Bedford Construction Company.
....	4,963	....	7,409	....	2,478	28	224 00	2.14	10,481 15	Apr. 20, 1906	Aug. 30, 1906	F. Luck.
....	1,651	....	1,258	....	852	30	112 00	4.63	2,418 72	Nov. 24, 1905	Jan. 3, 1906	George & Farrell.
....	1,422	....	715	....	775	32	120 00	4.24	2,829 68	Aug. 27, 1906	Nov. 20, 1906	J. P. Graham.
....	1,520	....	3	4,596	786	32	88 00	2.15	4,091 70	Oct. 15, 1906	Nov. 27, 1906	J. P. Graham.

* New concrete curb.

† Fourteen-foot parkway.

TABLE No. 7.
Showing Streets Upon Which Work Was in Progress December 31, 1906.

	Kind of Improvement.	Total Amount Pavement, Square Yards.	Total Amount Laid, Square Yards.	Total Length, Feet.	Length Completed, Feet.	Grading Completed, Cubic Yards.	Contractor.
Ashford street, Pitkin avenue to Livonia avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	2,624	.....	5,000	George & Farrell.
Atlantic avenue, Henry street to Flatbush avenue.....	Medina	27,130	11,440	5,751	2,305	.....	Brooklyn Alcatraz Asphalt Company.
Bath avenue, Fourteenth avenue to Bay Eighteenth street, and Bay Nineteenth street to Twenty-first avenue.....	Asphalt	17,565	.....	5,311	.....	8,000	Uvalde Asphalt Paving Company.
Bay Eleventh street, Eighty-sixth street to Cropsey avenue..	Regulating and grading.....	.....	.....	2,258	.....	15,000	Uvalde Asphalt Paving Company.
Broadway, Patchen avenue to Monroe street.....	Granite	7,630	5,340	2,527	1,770	.....	Reasoner & Henning.
Clay street, Manhattan avenue to Commercial street.....	Granite	2,750	.....	826	.....	.....	O'Grady Brothers.
Dean street, Troy avenue to Schenectady avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	736	.....	1,000	J. T. Rutan.
Degraw street, Classon avenue to Franklin avenue.....	Regulating, grading and curbing.....	.....	.....	936	.....	500	Chas. Cranford.
East Fifth street, Fort Hamilton avenue to Albemarle road..	Regulating, grading, curbing and sidewalks .....	.....	.....	1,302	.....	1,000	J. T. Rutan & Co.
East Nineteenth street, Avenue L to Avenue M.....	Regulating, grading, curbing and sidewalks .....	.....	.....	880	.....	1,000	D. Douglass.
Eastern Parkway, Plaza at Prospect Park to Ralph avenue..	Asphalt (side roadways).....	75,400	36,700	12,740	6,200	.....	Brooklyn Alcatraz Asphalt Company, for Park Department.
Eighty-sixth street, Fifth avenue to Thirteenth avenue.....	Regulating, grading, curbing, guttering and sidewalks.....	.....	.....	4,337	.....	6,500	Brooklyn Alcatraz Asphalt Company.
Farragut road, Rogers avenue to 120 feet east of East Thirty-fourth street	Regulating, grading, curbing, sodding and sidewalks.....	.....	.....	2,003	.....	2,000	Bracken & McAveny Company.
Fifty-fourth street, Sixth avenue to Fort Hamilton avenue..	Curbing and sidewalks.....	.....	.....	3,104	.....	.....	J. L. Hickey.
Fifty-fifth street, Eleventh avenue to Kouwenhoven lane....	Regulating, grading, curbing and sidewalks .....	.....	.....	1,314	.....	1,000	M. F. Hickey.
Flatlands avenue, Mill lane to Lott's lane.....	Regulating, grading, curbing and sidewalks .....	.....	.....	1,250	.....	3,000	D. Douglass.
Fortieth street, Sixth avenue to New Utrecht avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	2,783	.....	7,500	Mangieri Company.
Glenmore avenue, Eldert lane to Queens County line.....	Regulating, grading, curbing and sidewalks .....	.....	.....	717	.....	2,400	D. Douglass.
Heyward street, Wythe avenue to Wallabout street.....	Asphalt	540	500	136	125	.....	Cranford Company.
Lincoln avenue, Atlantic avenue to Glenmore avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	1,876	.....	2,500	D. Douglass.
Livingston street, Court street to Flatbush avenue.....	Asphalt block.....	10,820	.....	3,462	.....	.....	Brooklyn Alcatraz Asphalt Company.
Martense street, Rogers avenue to Nostrand avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	761	.....	400	Bracken & McAveny Company.
Rogers avenue, Park place to Montgomery street.....	Regulating, grading, curbing and sidewalks .....	.....	.....	2,913	.....	2,500	Bracken & McAveny Company.
Seventy-second street, Second avenue to Shore road.....	Regulating, grading, curbing and sidewalks .....	.....	.....	2,164	.....	500	Volfrie & O'Hearn.
Sixty-second street, Fifth avenue to Sixth avenue.....	Regulating, grading, curbing, guttering and sidewalks.....	.....	.....	780	.....	14,000	Volfrie & O'Hearn.
Utica avenue, East New York avenue to Church avenue....	Regulating, grading, curbing, guttering and sidewalks.....	.....	.....	4,124	.....	500	Seaboard Construction Company.
Warehouse avenue, Surf avenue to Neptune avenue.....	Regulating, grading, curbing and sidewalks .....	.....	.....	1,462	.....	1,500	Murphy Brothers.

Summary.			Amount of Work to be Done on Uncompleted Contracts.		
Amount of Work Done on Uncompleted Contracts.					
	Length, Miles.	Square Yards.		Length, Miles.	Square Yards.
Asphalt	1.198	37,200	Asphalt	2.247	56,305
Granite	0.335	5,340	Asphalt block	0.655	10,820
Medina	0.437	11,440	Granite	0.300	5,040
			Medina	0.653	15,690
Total.....	1.970	53,980	Total.....	3.855	87,855

TABLE No. 8.
Showing Streets Upon Which Contracts Are in Force and Work Not Begun December 31, 1906.

Character of Improvement.	Total Amount Pavement, Square Yards.	Grading.		Estimated Cost.	Contractor.
		Excavation, Cubic Yards.	Embankment, Cubic Yards.		
Bay Ridge parkway, Shore road to Seventh avenue, where not done	Regulating, curbing, guttering and sidewalks .....	.....	.....	\$10,360 83	Bonacci & Vincelli.
Church avenue, Flatbush avenue to East Eleventh street....	Asphalt	6,750	.....	10,960 00	Uvalde Asphalt Paving Company.
Dumont avenue, Van Sicklen avenue to Schenck avenue.....	Regulating, grading, curbing and sidewalks .....	.....	618	1,600 54	Bracken & McAveny Company.
East Fifth street, Greenwood avenue to Fort Hamilton avenue	Asphalt	2,015	.....	3,353 50	Uvalde Asphalt Paving Company.
East Fifth street, Fort Hamilton avenue to Albemarle road..	Asphalt	4,350	.....	6,454 30	Cranford Company.
East Thirty-first street, Flatbush avenue to Glenwood road...	Asphalt	2,450	.....	4,160 00	Uvalde Asphalt Paving Company.
East Thirty-first street, Avenue F to Glenwood road.....	Asphalt	2,580	.....	3,941 40	Uvalde Asphalt Paving Company.
Eighth street, Second avenue to Fifth avenue.....	Asphalt	7,110	.....	14,810 10	Brooklyn Alcatraz Asphalt Company.
Elton street, Atlantic avenue to Blake avenue.....	Asphalt	7,791	8,564	21,553 04	Uvalde Asphalt Paving Company.
Farragut road, Rogers avenue to 120 feet east of East Thirty-fourth street	Asphalt	7,820	.....	12,943 05	Barber Asphalt Paving Company.
Fifty-first street, Third avenue to Fourth avenue.....	Asphalt block.....	2,310	.....	6,124 20	Hastings Pavement Company.
Fifty-fourth street, Fifth avenue to Sixth avenue.....	Asphalt block.....	2,430	.....	6,393 00	Hastings Pavement Company.
Fourteenth avenue, Seventy-fifth street to Seventy-ninth street	Regulating, grading, curbing and sidewalks .....	.....	1,504	3,677 27	Bracken & McAveny Company.
Forty-seventh street, Sixth avenue to Seventh avenue.....	Asphalt	2,403	.....	4,624 65	Brooklyn Alcatraz Asphalt Company.
Hunt's alley, Henry street to easterly terminus.....	Asphalt	800	.....	1,809 00	Brooklyn Alcatraz Asphalt Company.
Lott's lane, intersections Forty-second and Forty-third streets.	Crosswalks .....	.....	.....	457 92	W. F. Burke.
Milford street, Atlantic avenue to Glenmore avenue.....	Asphalt	4,335	.....	6,758 55	Uvalde Asphalt Paving Company.
Newkirk avenue, Flatbush avenue to East Seventeenth street.	Regulating, grading, curbing and sidewalks .....	.....	840	4,623 00	J. T. Rutan.
Newkirk avenue, Flatbush avenue to East Seventeenth street.	Asphalt	6,990	.....	10,394 00	Cranford Company.
Prescott place, Herkimer street to Atlantic avenue.....	Asphalt	783	.....	1,655 25	Uvalde Asphalt Paving Company.
Repose place, Schenck avenue to Jerome street.....	Regulating, grading and curbing.....	.....	340	2,490 00	Bracken & McAveny Company.
Seventh avenue, Bay Ridge avenue to Seventy-fifth street....	Curbing, guttering and sidewalks.....	.....	.....	4,734 35	Bonacci & Vincelli.
South Elliott place, DeKalb avenue to Hanson place.....	Asphalt	5,120	.....	7,687 00	Brooklyn Alcatraz Asphalt Company.

Character of Improvement.	Total Amount Pavement, Square Yards.	Grading.		Estimated Cost.	Contractor.
		Excavation, Cubic Yards.	Embankment, Cubic Yards.		
Tenth avenue, Prospect avenue to Twentieth street.....	Asphalt	3,490	.....	5,391 50	Brooklyn Alcatraz Asphalt Company.
Willoughby street, Bridge street to Gold street, and Fleet place to Raymond street.....	Asphalt	3,280	.....	11,792 50	Uvalde Asphalt Paving Company.
Willoughby street, Raymond street to St. Edwards street....	Asphalt block.....	1,120	.....	

Summary.

	Length, Miles.	Square Yards.	Cost.
Asphalt	4.254	68,067	\$125,339 72
Asphalt block	0.358	5,860	15,465 32
Regulating and grading, etc.....	1.796	.....	27,943 91
Total.....	6.408	73,927	\$168,748 95

TABLE No. 9.

Showing Contracts Awarded, But Not Certified, December 31, 1906.

Character of Improvement.	Pavement, Square Yards.	Grading, Cubic Yards.	Estimated Cost.	Contractor.
St. Francis place, from Degraw street to St. John's place.....	Asphalt.....	930	\$1,987 15	Barber Asphalt Paving Company.
Seventieth street, from Fourteenth avenue to Fifteenth avenue.....	Regulating, grading, curbing and sidewalks.....	405	2,425 40	N. Schneider's Sons.
Sixty-fifth street, from Third avenue to Fourth avenue.....	Regulating, grading, curbing and sidewalks.....	7,931	2,791 90	M. O'Sullivan.
Spencer street, from Flushing avenue to DeKalb avenue; Spencer court, from DeKalb avenue to Kosciusko street	Asphalt.....	7,980	18,526 40	Barber Asphalt Paving Company.
Stuyvesant avenue, from Fulton street to Gates avenue.....	Asphalt.....	12,540	17,404 80	Brooklyn Alcatraz Asphalt Company.

SUMMARY.

	Miles.	Square Yards.	Cost.
Asphalt	1.250	21,450	\$37,918 35
Regulating, grading, etc.....	0.278	.....	5,217 30
Total	1.528	21,450	\$43,135 65

TABLE No. 10.

Showing Improvements Authorized by the Board of Estimate and Apportionment, for Which Bids Have Not Been Received December 31, 1906.

	Character of Improvement.	Estimated Cost.	Length, Linear Feet.	Area, Square Yards.
Ashford street, from Glenmore avenue to Pitkin avenue.....	Asphalt	\$2,600 00	420	1,120
Bath avenue, from Bay Eighteenth street to Bay Nineteenth street.....	Asphalt	1,400 00	210	600
Bay Ridge parkway, from Shore road to First avenue, and from Second avenue to Seventh avenue..	Macadam	17,000 00	4,860	22,100
Calyer street, from Newell street to Diamond street.....	Asphalt	3,000 00	216	720
Douglass street, from Underhill avenue to Washington avenue.....	Asphalt	12,800 00	1,090	6,056
East Second street, from Greenwood avenue to Vanderbilt street.....	Regulating, grading, curbing and sidewalk.....	3,700 00	726	.....
East Third street, from Vanderbilt street to Fort Hamilton avenue.....	Regulating, grading, curbing and sidewalk.....	5,300 00	1,380	.....
East Fourth street, from Vanderbilt street to Fort Hamilton avenue.....	Regulating, grading, curbing and sidewalk.....	5,700 00	1,380	.....
East Fourth street, from Avenue C to Church avenue.....	Regulating, grading, curbing and sidewalk.....	5,400 00	1,150	.....
East Fifth street, from Albemarle road to Church avenue.....	Regulating, grading, curbing and sidewalk.....	1,400 00	372	.....
Eighty-fourth street, from Fourth avenue to Seventh avenue.....	Curbing, gutter and sidewalk.....	11,600 00	2,400	.....
Eighty-sixth street, from Thirteenth avenue to Gravesend avenue.....	Regulating, grading, curbing and sidewalk.....	84,000 00	14,000	.....
Etna street, from Dresden street to Hale avenue, and from Norwood avenue to city line.....	Regulating, grading, curbing and sidewalk.....	21,000 00	3,800	.....
Fifty-third street, from Sixth avenue to Seventh avenue.....	Regulating, grading, curbing and sidewalk.....	3,800 00	720	.....
Fifty-third street, from Fort Hamilton avenue to Eleventh avenue.....	Regulating, grading, curbing and sidewalk.....	3,900 00	500	.....
Fourth avenue, from Eighty-sixth street to Shore road.....	Sidewalks	6,000 00	3,800	.....
Forty-first street, from Thirteenth avenue to New Utrecht avenue.....	Regulating, grading, curbing and sidewalk.....	7,600 00	3,100	.....
Forty-sixth street, from Sixth avenue to Seventh avenue.....	Regulating, grading, curbing and sidewalk.....	3,400 00	736	.....
Gelston place, from Eighty-sixth street to Ninety-fourth street.....	Regulating, grading, curbing, gutter and sidewalk.....	13,000 00	2,100	.....
Gravesend avenue, from Fort Hamilton avenue to Twenty-second avenue.....	Regulating, grading, curbing and sidewalk.....	50,600 00	9,800	.....
Gravesend avenue, from Twenty-second avenue to Shell road.....	Regulating, grading, curbing, gutter and sidewalk.....	82,000 00	11,300	.....
Hinsdale street, from Sutter avenue to Riverdale avenue.....	Regulating, grading and curbing.....	5,600 00	2,280	.....
Kenmore place, from Woodruff avenue to Caton avenue.....	Asphalt	5,000 00	633	2,110
Kenmore place, from Woodruff avenue to Caton avenue.....	Regulating, grading, curbing and sidewalk.....	2,200 00	633	.....
Kingston avenue, from St. John's place to Eastern parkway.....	Asphalt	2,700 00	500	760
Lincoln avenue, from Atlantic avenue to Glenmore avenue.....	Asphalt	11,300 00	1,800	4,800
Main street, from Fifteenth avenue to Eighteenth avenue.....	Regulating, grading, curbing, gutter and sidewalk.....	13,300 00	2,430	.....
Ninety-fifth street, from Fourth avenue to Marine avenue.....	Regulating, grading, curbing and sidewalk.....	7,000 00	1,500	.....
Ninety-sixth street, from Shore road to Marine avenue.....	Asphalt	10,700 00	680	2,400
President street, from Schenectady avenue to Utica avenue.....	Regulating, grading, curbing and sidewalk.....	3,800 00	726	.....
President street, from Utica avenue to Buffalo avenue.....	Regulating, grading, curbing and sidewalk.....	10,400 00	1,500	.....
Rogers avenue, from Park place to Montgomery street.....	Asphalt block	15,000 00	2,730	6,300
Sixty-first street, from Third avenue to Fourth avenue.....	Asphalt	5,800 00	690	2,450
Sixty-fifth street, from Third avenue to Fourth avenue.....	Asphalt	8,000 00	696	3,380
Sutter avenue, from Sheffield avenue to Pennsylvania avenue.....	Asphalt	3,400 00	240	930
Warehouse avenue, from Neptune avenue to Surf avenue.....	Asphalt	12,500 00	1,460	5,200
Webster avenue, from Coney Island avenue to Gravesend avenue.....	Asphalt	16,500 00	3,120	7,000

SUMMARY.

	Miles.	Square Yards.	Cost.
Asphalt	2.226	37,526	\$95,700 00
Asphalt block	0.517	6,300	15,000 00
Macadam	0.921	22,100	17,000 00
Regulating, grading, etc.....	12.563	.....	350,700 00
Total	16.227	65,926	\$478,400 00

TABLE No. 11.

Showing Cost of Maintaining Asphalt Pavements During 1906.

Time Out of Guarantee.	Square Yards.	Total Cost.	Cost per Square Yard.	Cost per Square Yard, Car Track Streets Excluded.	Cost per Square Yard, Car Track Streets.
One year.....	175,936	\$1,468 95	.008	.008	....
Two years.....	57,929	429 17	.007	.006	.066
Three years.....	82,937	365 75	.004	.003	.036
Four years.....	421,274	13,301 88	.032	.027	.067

Time Out of Guarantee.	Square Yards.	Total Cost.	Cost per Square Yard.	Cost per Square Yard, Car Track Streets Excluded.	Cost per Square Yard, Car Track Streets.
Five years.....	189,415	3,212 28	.017	.017	.024
Six years.....	209,937	9,098 90	.043	.045	.016
Seven years.....	44,056	1,743 66	.039	.036	.053
Eight years.....	41,187	1,406 85	.034	.034	....
Nine years.....	36,706	1,984 84	.054	.054	....
Ten years.....	27,419	2,270 31	.083	.021	.128
Eleven years.....	5,278	169 70	.032	.025	.130
Twelve years.....	29,069	2,577 53	.089	.100	.072
Thirteen years.....	79,249	8,934 86	.113	.105	.231
Fourteen years.....	20,504	2,862 72	.140	.140	....
Fifteen years.....	235	.....	....	....	....
Sixteen years.....	3,448	42 44	.012	.012	....
Total	1,424,579	\$49,869 84	....	....	....
Average .....	.....	.....	.0350	.0321	.0630

Average Cost.

Car track streets excluded, 3.21 cents per square yard.
 Car track streets, 6.30 cents per square yard.
 All streets, 3.50 cents per square yard.

TABLE No. 12.

Showing Work Done by Corporations During the Year 1906.
By Gas Companies.

	1-inch.	1¼-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	16-inch.	20-inch.	24-inch.	30-inch.	Total.
Brooklyn Union Gas Company—															
Total mileage of mains in system.....	....	....	0.73	1.60	57.98	326.40	260.09	62.46	26.10	58.70	20.49	28.12	5.60	0.09	848.36
Mileage laid in 1906.....	....	....	....	....	....	1.65	13.29	0.81	0.11	1.38	0.11	3.69	0.10	....	21.14
Mileage removed in 1906.....	....	....	....	....	0.14	0.13	0.63	....	....	....	....	....	....	....	0.90
Brooklyn Borough Gas Company—															
Total mileage of mains in system.....	....	....	....	0.63	0.37	19.87	14.48	9.71	1.59	2.30	0.05	....	....	....	49.00
Mileage laid in 1906.....	....	....	....	....	....	0.53	1.65	0.71	0.84	....	....	....	....	....	3.73
Mileage removed in 1906.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Flatbush Gas and Illuminating Company—															
Total mileage of mains in system.....	0.25	0.10	0.08	....	14.10	28.78	17.64	6.11	0.84	2.79	3.18	0.07	....	....	73.94
Mileage laid in 1906.....	....	....	....	....	....	1.66	2.15	0.06	....	0.71	1.85	....	....	....	6.43
Mileage removed in 1906.....	....	....	....	....	0.49	....	0.10	....	....	....	....	....	....	....	0.59
Kings County Gas and Illuminating Company—															
Total mileage of mains in system.....	0.05	0.04	0.31	0.05	2.51	67.71	52.55	5.58	....	5.88	1.32	1.77	....	....	137.77
Mileage laid in 1906.....	....	....	....	....	....	0.08	3.20	....	....	....	0.09	0.01	....	....	3.38
Mileage removed in 1906.....	....	....	....	0.09	....	0.01	....	....	....	....	....	....	....	....	0.10

By Railroads.

Company.	Mileage of Single Track in System.	Mileage of New Single Track Laid in 1906.	Mileage of Single Track Relaid in 1906.	Number of New Connections Between Existing Lines.	Number of Connecting Curves or Crossings Renewed.
Brooklyn Rapid Transit Company.	*543.27	1.93	1.62	20	60
Coney Island and Brooklyn Railroad Company.....	31.51	....	0.18	....	10
Van Brunt Street and Erie Basin Railroad Company	2.12	....	....	....	....
Total	576.90	1.93	1.80	20	70

*This includes private rights of way.

By Electric Companies.

Company.	Total Number Miles Single Duct Subway in System.	Total Number Miles Single Duct Subway Laid in 1906.	Total Number Miles Iron Pipe Subway Laid in 1906.
Edison Electric Illuminating Company.....	338.94	60.32	39.84
New York and New Jersey Telephone Company.....	434.31	110.31	.....
Flatbush Gas and Illuminating Company.....	48.44	10.46	.....
Brooklyn Rapid Transit Company.....	383.80	37.54	0.01
Coney Island and Brooklyn Railroad Company.....	21.15	.....	.....
Total	1,226.64	218.63	39.85

TABLE No. 12—(Continued).

Showing Pavement Laid by Corporations During the Year 1906.

Square Yards of Pavement Laid.

Company.	Asphalt.	Asphalt Block.	Belgian.	Brick.	Cobble.	Granite on Concrete.	Granite on Sand.	Macadam.	Medina.	Wood.	Total.
Brooklyn Rapid Transit Company.....	1,440	.....	3,926	.....	4,691	110,684	22,178	.....	.....	.....	142,919
Coney Island and Brooklyn Railroad Company.....	33	.....	1,176	.....	.....	.....	4,798	.....	.....	.....	6,007
Edison Electric Illuminating Company.....	2,071	226	5,672	226	2,240	.....	4,198	.....	127	170	14,930
New York and New Jersey Telephone Company.....	2,170	.....	3,422	27	1,171	.....	7,168	77	.....	.....	14,035
Brooklyn Union Gas Company.....	1,022	.....	5,993	.....	7,720	.....	7,331	.....	1,804	.....	23,870
Kings County Lighting Company.....	.....	.....	44	.....	.....	.....	.....	176	.....	.....	220
Flatbush Gas and Illuminating Company.....	123	.....	78	.....	.....	.....	.....	223	.....	.....	424
Brooklyn Borough Gas Company.....	.....	.....	.....	.....	.....	.....	12	42	.....	.....	54
Total	6,859	226	20,311	253	15,822	110,684	45,685	518	1,931	170	202,459

Streets That Have Been Repaved Between Tracks with Granite on Concrete, with Cement Joints, During Year 1906.

By Brooklyn Rapid Transit Company—

Atlantic avenue, from Court street to Flatbush avenue.
Beaver street, from Park avenue to Bushwick avenue.
Bergen street, from Schneckady avenue to Buffalo avenue.
Buffalo avenue, from Bergen street to St. Mark's avenue.
Central avenue, from Jefferson street to Palmetto street.
Columbia street, from Atlantic avenue to Woodhull street.
Concord street, from Duffield street to Navy street.
Flatbush avenue, from Church avenue to Nostrand avenue.
Fulton street, from Ferry to Sands street.
Furman street, from Fulton street to Atlantic avenue.
Graham avenue, from Richardson street to Driggs avenue.
Grand street, from Bushwick avenue to Newtown creek.
Gwinnett street, from Lee avenue to Broadway.
Hamburg avenue, from Flushing avenue to Myrtle avenue.
Harrison avenue, from Division avenue to Flushing avenue.
Jefferson street, from Bushwick avenue to Central avenue.
Lee avenue, from Division avenue to Penn street.
Lorimer street, from Driggs avenue to Nassau avenue.
Lorimer street, from Grand street to Bayard street.
Marcy avenue, from Monroe street to Flushing avenue.
Marcy avenue, from Metropolitan avenue to Broadway.
Meserole avenue, from Guernsey street to Franklin street.
Navy street, from Flushing avenue to Sands street.
Navy street, from Myrtle avenue to DeKalb avenue.
Nostrand avenue, from Eastern parkway to Malbone street.
Park avenue, from Classon avenue to Broadway.
Ralph avenue, from St. John's place to Eastern parkway.
Rockaway avenue, from Broadway to Bainbridge street.
Rockaway avenue, from McDougal street to Atlantic avenue.
Rogers avenue, from Bergen street to Park place.
Rogers avenue, from Malbone street to Montgomery street.
Sumner avenue, from Broadway to Lafayette avenue.
St. Nicholas avenue, from Palmetto street to Myrtle avenue.
Tompkins avenue, from Pulaski street to Flushing avenue.
Vanderbilt avenue, from Park place to Plaza street.
Washington avenue, from Park place to Sterling place.
Willoughby street, from Bridge street to Raymond street.

REPORT OF THE TOPOGRAPHICAL BUREAU FOR THE TWELVE MONTHS ENDING DECEMBER 31, 1906.

Topographical Bureau, Borough of Brooklyn,
Office of the Assistant Engineer in Charge.
December 31, 1906.

Hon. DESMOND DUNNE, Commissioner of Public Works:

Dear Sir—I transmit herewith the annual report of this bureau for the twelve (12) months ending December 31, 1906.

The duties of the Topographical Bureau are as follows:

First—To make topographical surveys and computations and to prepare the necessary maps, plans and profiles, sketches, etc., for altering the map or plan of The City of New York, and for acquiring title to streets, avenues, public parks, places, etc.

Second—To mark on the ground, by means of monument stones, etc., the lines of streets, etc., and to protect the monuments, etc., when improvements in streets are being made.

Third—To prepare maps and technical descriptions for the Local Boards, the Board of Estimate and Apportionment, the Corporation Counsel's office and the Commissioners of Estimate and Assessment in the matter of altering the map or plan of The City of New York and of acquiring title to streets, avenues, etc.

Fourth—To prepare certificates of dedication for streets in which the City has an easement for the use of the public; and also statements of facts for submission to the Corporation Counsel in order that he can determine upon the facts presented whether improvements may be made without instituting condemnation proceedings in the streets for which the statements of facts are submitted.

Fifth—To furnish when requested reports upon the legal status of all the streets in this borough, not only for the other bureaus of this department, but for the Department of Taxes and Assessment, Department of Bridges, Department of Street Cleaning, Department of Water Supply, Gas and Electricity, and also for the public generally.

Sixth—To connect the traverse lines, monumented street lines and monumented lines holding the triangulation stations to the several secondary stations or towers in this borough.

Seventh—To make surveys and to prepare plans and profiles for all original improvements that are made by the Bureau of Highways; to determine for all contracts let by the Bureau of Highways the amount of excavation, the amount of fill, the number of linear feet of curbing, the number of square feet of sidewalks, the number of cubic yards of concrete and the number of square yards of asphalt, and to furnish the contractors with line stakes, grade stakes and monthly estimates.

There has never existed a map of the Borough of Brooklyn showing all the changes that have been made in the street system of the various sections of the borough since the original Commissioners' maps were adopted. I am now preparing such a map on a uniform scale of two hundred feet to the inch. Upon this map it is intended to note all the changes in street lines that were made in the past, and also such changes in the map of the City as may be hereafter adopted. As a result of this work there will be in this office a map which will be complete and always up to date. About 50 per cent. of this work has been completed during the past six months.

In this office the records relating to the legal status of streets have been found to be incomplete in many respects. These records are being completed by means of a systematic search through the records in the various City departments, and as a result much data heretofore unrecorded are being brought to light. It is intended to compile in such a form all the records of streets that there will be in this office a complete history of each street in the Borough of Brooklyn. This is a large work, but it is now well under way.

The following report gives in as much detail as the nature of the work will permit the kind and the amount of work accomplished during the year. In this report neither the work started nor the work not yet completed is included. A great deal of the routine work of the office, which took considerable time, such as the care and preservation of monument stones, the keeping of the detail records of the office, the accumulation of records which had been missing, the numerous investigations necessary to make reports on the legal status of streets, the many replies, both oral and written, to inquiries as to the legal status of streets, etc., are not, and cannot well be, included in this report.

A—FIELD WORK.

The field work, which was required for and which is included in the maps and reports under the head of "Office Work," consists of chaining, line work, angular measurement, leveling and damage survey work. The amount of this work, which was done as required, completed during this year, is as follows:

882,000 feet of chaining (563,000 feet of precise chaining and 319,000 feet of approximate chaining).
452,000 feet of precise line work.
817 precise angles measured.
8,348 feet of leveling for profile maps.
2 surveys to determine encroachments.
120,378 feet for 42 damage maps surveys for the following-named streets:
1. Cornelia street, from Knickerbocker avenue to county line.
2. Sixty-third street, from Seventh avenue to New Utrecht avenue.
3. Condit street, from Railroad avenue to Nichols avenue.
4. Forty-first street, from old city line to New Utrecht avenue.

5. Seeley street, from approach to the bridge over Prospect avenue on line of Seeley street.

6. East Thirty-fourth street, from Church avenue to Clarkson street.
7. Otsego street, from Dwight street to Beard street.
8. Bay Fourteenth street, from Eighty-sixth street to Cropsey avenue.
9. Schenck avenue, from New Lots road to Stanley avenue.
10. Church avenue, from Flatbush avenue to East Eleventh street.
11. Fiftieth street, from Eighth avenue to Twelfth avenue.
12. Forty-sixth street, from West street to Twelfth avenue.
13. Fourteenth avenue, from Sixty-fifth street to Sixty-eighth street.
14. Repose place, from Schenck avenue to Jerome street.
15. Avenue T, from Ocean parkway to Coney Island avenue.
16. Public Park, bounded by Classon avenue, Washington avenue and Eastern parkway.

17. Fourteenth avenue, from West street to Sixty-fifth street.
18. Forty-third street, from West street to New Utrecht avenue.
19. Carroll street, from Albany avenue to East New York avenue.
20. Crown street, from Albany avenue to East New York avenue.
21. Sterling street, from Brooklyn avenue to Washington avenue.
22. Foster avenue, from Coney Island avenue to Gravesend avenue.
23. Benton street, from Kingsland avenue to Vandervoort avenue.
24. Bedford avenue, from Pacific street to Dean street.
25. Beadle street, from Kingsland avenue to Gardner avenue.
26. Ralph avenue, from Remsen avenue to Avenue N.
27. Senator street—Location of Railroad tracks at Third avenue.
28. Forty-fourth street, from New Utrecht avenue to West street.
29. Forty-seventh street, from New Utrecht avenue to Gravesend avenue.
30. Sixty-fourth street, from New Utrecht avenue to First avenue.
31. Owl's Head Park.
32. Senator street, from First avenue to Fifth avenue.
33. New Utrecht avenue, from Thirty-ninth street to Sixtieth street.
34. Vandervoort avenue, from Meeker avenue to Maspeth avenue.
35. Williams avenue, from Livonia avenue to Fresh creek.
36. Emmer's lane, from Ocean avenue to East Thirteenth street.
37. Scott avenue, from Flushing avenue to Troutman street.
38. Henry street, from Ocean parkway to East Eighth street.
39. Van Siclen avenue, from Dumont avenue to New Lots road.
40. Newell street, from Meserole avenue to Greenpoint avenue.
41. Avenue L, from Ocean avenue to Ocean parkway.
42. Thirteenth avenue, from Thirty-sixth street to Seventy-third street.

Surveys for Preliminary Hearings in Matter of Street Widening.

1. Lawrence avenue, from Ocean avenue to Forty-seventh street.
2. Washington avenue, from First street to Forty-seventh street.
3. Webster avenue, from Coney Island avenue to Forty-seventh street.
4. First street, from Foster avenue to Eighteenth avenue.
5. Third street, from Foster avenue to Eighteenth avenue.
6. Ocean avenue, from Locust avenue to Kings Highway.
7. Bay avenue, from Locust avenue to Kings Highway.
8. Locust avenue, from Coney Island avenue to Ocean avenue.
9. Chestnut avenue, from Coney Island avenue to Bay avenue.
10. Liberty street, from Elm avenue to Locust avenue.
11. Lafayette street, from Elm avenue to Cedar street.
12. Elm avenue, from Coney Island avenue to Bay avenue.
13. Cedar street, from Ocean avenue to Lafayette street.
14. Franklin street, from Ocean avenue to Bay avenue.
15. Spruce street, from Ocean avenue to Bay avenue.
16. Amersfort place, from Germania place to Avenue F.
17. Village road.
18. Gravesend Neck road, from Ocean parkway to Van Siclen street.
19. West Twentieth street, from Surf avenue to mean high-water line.
20. Degraw street, from Brooklyn avenue to New York avenue.
21. West Second street, from Neptune avenue to Canal avenue.

1. Monument Lines Fixing Streets.

	No.
Monument points set.....	65
Monuments referenced	294
Monuments reset	108
Monument covers set.....	173
Miles of which Surveyors' private cuts were referenced.....	44
Cement walks cut to render monuments accessible.....	65
Monuments dug for that were not previously reported found.....	88
Monuments found that were not previously reported.....	43

2. Triangulation of the Borough of Brooklyn.

In accordance with chapter 406 of the Laws of 1903, the Board of Estimate and Apportionment, in co-operation with the United States Coast and Geodetic Survey, is authorized to extend and complete the triangulation of The City of New York. The work, under the superintendence of the Chief Engineer of the Board of Estimate and Apportionment, is in charge of Mr. A. T. Mosman, Assistant Coast and Geodetic Survey, who was assigned for that purpose by the Superintendent of the United States Coast and Geodetic Survey.

During this year the following triangulation points in and around Jamaica bay have been set, in order permanently to retain the positions of the triangulation stations which were previously selected by this Department, and whose relative positions have been accurately determined by the United States Coast and Geodetic Survey: Rugby Avenue U, Duck Marsh, Ruffle Bar, Island Channel, Canarsie Pol, Mill Creek, Riches Point, Point Breeze, Rockaway Point, Spring Creek, Berriman and Fresh Creek.

The following towers were built: Rugby, 54 feet high; Avenue U, 68 feet high; Ruffle Bar, 30 feet high, and Duck Marsh, 20 feet high.

In addition to the above mentioned work, the field parties have been engaged in reducing the triangulation stations to the ground, or, in other words, tying each triangulation station to the street lines or the monument lines in its immediate neighborhood. This is the most difficult and tedious part of the triangulation and requires a great amount of work and of care; because the triangulation points, as a rule, are points upon high buildings, and, therefore, it is impossible to bring them down to the ground except by a small system of triangulation. The following triangulation stations were connected with the street lines in the neighborhood of each station:

Centennial Tower (Coney Island).
Avenue K School.
Avenue U.
Blake Avenue School.
Atkins Avenue School.
Twenty-third Regiment armory.
Thirteenth Regiment armory.
Kings County Asylum.
Rugby.
Canarsie.

During the year there was laid down on the Ocean parkway a standard of 150 feet in length.

This standard was laid down in a modern and scientific manner under the direction of Mr. Frederick W. Koop, Principal Assistant Engineer on the triangulation of The City of New York, by the United States Coast and Geodetic Survey. The tape used was one of the four New York City base line tapes, made and tested in Washington especially for the triangulation of The City of New York. These tapes were also standardized four times with three most valuable United States Coast and Geodetic Survey base line tapes that were used to measure nine bases along the 98 meridian, and also used to measure the Ocean parkway base and the Unionport base, together with the New York City base line tapes.

The high accuracy and reliability of this standard are therefore unquestionable. The technical work was done at 8 p. m., so as to obtain absolutely correct temperature. This was done by lashing two base line thermometers to the tape and supporting it from the ground. The tension used was 15 kilograms, about 35 pounds. This standard was later subdivided into a 50-foot and a 100-foot standard.

One of the most difficult things to contend with in this borough has been the lack of an official standard of measurement. This difficulty has now been removed. Hereafter all measurements can be compared with this standard.

B—OFFICE WORK.

Maps were completed as follows:

I. Maps Forwarded for Adoption.

- (a) Maps affecting changes in lines of streets and closing and laying out streets:
 1. Locating and laying out an extension to Scott avenue, from Flushing avenue to St. Nicholas avenue.
 2. Narrowing Malbone street, from New York avenue to Schenectady avenue.
 3. Changes in street system in district bounded by Twenty-fifth avenue, Cropsey avenue, Twenty-seventh avenue and the bulkhead line of Gravesend Bay.
 4. Closing and discontinuing an old lane between Avenue M at East Ninety-third and East Ninety-fourth streets and Rockaway avenue.
 5. Closing and discontinuing Greene street, from North Henry street to Whale Creek canal; Freeman street, from Paidge avenue to Whale Creek canal; Paidge avenue, from Henry place to Whale Creek canal; North Henry street, from Greene street to Paidge avenue; Holland street, from Paidge avenue to high-water line of Newtown creek; Henry place, from Paidge avenue to high-water line of Newtown creek, and street on east side of Whale Creek canal, from Greene street to high-water line of Newtown creek.
 6. Locating and laying out an extension to East One Hundredth street, from its present terminus at the bulkhead line to Canoe creek, and Sea View avenue, from its present terminus at the bulkhead line to East One Hundredth street.
 7. Locating and laying out Oakland place, between Tilden avenue and Butler street.
 8. Closing and discontinuing Lawrence street, between Snyder avenue and Tilden avenue.
 9. Change in street system in district bounded by Twenty-fifth avenue, Cropsey avenue, Twenty-seventh avenue and bulkhead line of Gravesend Bay.
 10. Closing and discontinuing Thirteenth street, from the southerly side of First avenue to the Gowanus canal.
 11. Locating and laying out of Second avenue, from the westerly prolongation of the south side of Twenty-eighth street to Thirty-ninth street.
 12. Locating and laying out Twenty-ninth street, from the high-water line to the bulkhead line.
 13. Locating and laying out Thirtieth street, from the high-water line to the bulkhead line.
 14. Locating and laying out Thirty-first street, from the high-water line to the bulkhead line.
 15. Locating and laying out Thirty-second street, from the high-water line to the bulkhead line.
 16. Locating and laying out Thirty-third street, from the high-water line to the bulkhead line.
 17. Locating and laying out Thirty-fourth street, from the high-water line to the bulkhead line.
 18. Locating and laying out Thirty-fifth street, from the high-water line to the bulkhead line.
 19. Locating and laying out Thirty-sixth street, from the high-water line to the bulkhead line.
 20. Locating and laying out Thirty-seventh street, from the high-water line to the bulkhead line.
 21. Locating and laying out West Second street, between Neptune avenue and Sheepshead Bay road.
 22. Closing and discontinuing De Bruyn's lane, from Benson avenue to Cropsey avenue.
 23. Locating and laying out Foster avenue, between Coney Island avenue and Gravesend avenue, and its adjoining streets, in Parkville.
 24. Striking from the map of the City Hemlock street, from Ridgewood avenue to Fulton street.
 25. Striking from the map of the City East Sixteenth street, from Albemarle road to the land of the Brooklyn and Brighton Beach Railroad Company.
 26. Narrowing East Eleventh street, from Avenue D to Ditmas avenue.
 27. Locating and laying out an extension to Terrace place, from Prospect avenue to Coney Island avenue, and widening to 80 feet, from Seventeenth street to Prospect avenue; locating and laying out Sherman street, from Seeley street to the proposed Terrace place; and closing and discontinuing Prospect avenue, from Prospect avenue to the proposed Terrace place, and of Sherman street, from Seeley street to the old City line, and from the old City line to the proposed Sherman street and Terrace place.
 28. Striking from the map of the City Eighty-ninth street, from Narrows avenue to the Shore road.
 29. Locating and laying out Canarsie avenue, from Flatbush avenue to Schenectady avenue.
 30. Striking from the map of the City Clove road, from Clarkson street to Winthrop street.
 31. Closing and discontinuing Dinsmore place, from Logan street to Chestnut street.
 32. Locating and laying out Canarsie avenue, from Flatbush avenue to Schenectady avenue (supplementary map or plan showing the buildings affected by the locating and laying out).
 33. Locating and laying out three courts in Block 5559, Section 17, to be known as Duryea court, Ovington court, Cameron court, the said courts to be 40 feet in width and extending from Sixty-sixth street to Ovington avenue and parallel to Sixteenth avenue.
 34. Locating and laying out Block 1114, bounded by Windsor place, Tenth avenue, Prospect avenue and Prospect Park West.
 35. Locating and laying out an extension to Terrace place, from Prospect avenue to Coney Island avenue, and widening to 80 feet from Seventeenth street, to Prospect avenue.
 36. Locating and laying out Sherman street, from Seeley street to the proposed Terrace place.
 37. Closing and discontinuing Prospect avenue, from Prospect avenue to the proposed Terrace place, and of Sherman street, from Seeley street to the old City line, and from the old City line to the proposed Sherman street and Terrace place.
 38. Striking from the map of the City Sixty-eighth street, between Tenth avenue and Eleventh avenue, and locating and laying out Ovington avenue, 60 feet wide, between Tenth avenue and New Utrecht avenue.
 39. Locating and laying out Oakland place, between Tilden avenue and Butler street.
 40. Closing and discontinuing Lawrence street, between Butler street and Tilden avenue.
 41. Widening Union street, from New York avenue to East New York avenue.
 42. Widening Degraw street, from New York avenue to East New York avenue.
 43. Proposed changes in street system between Bridgewater street and Newtown creek.
 44. Streets proposed to be opened in the district bounded by Fifth avenue, Greenwood Cemetery, Fort Hamilton avenue and Thirty-ninth street.
 45. Locating and laying out a public place bounded by Forty-seventh street, Eleventh avenue, Forty-sixth street and New Utrecht avenue.
 46. Locating and laying out a public place bounded by New Utrecht avenue, Eleventh avenue and Forty-sixth street.
 47. Locating and laying out a public place bounded by New Utrecht avenue, Twelfth avenue and Fifty-first street.
 48. Locating and laying out a public place bounded by Fort Hamilton avenue, New Utrecht avenue and Forty-fifth street.
 49. Locating and laying out Kings highway for a width of 100 feet, extending from Twenty-second avenue to East New York avenue.
 50. Locating and laying out Fifty-seventh street, from First avenue to high-water line.
 51. Locating and laying out Thirty-eighth street, from high-water line to bulkhead line.

52. Locating and laying out Rutherford place, from Seventeenth avenue to Eighteenth avenue.
53. Closing and discontinuing Sherman street, between Rogers avenue and Lawrence street, and of Lawrence street, between Canarsie road and Butler street.
54. Widening, by adding 20 feet to the northerly side, of Bayard street, from Union avenue to a point between Leonard street and Manhattan avenue, and extending Bayard street for a width of 80 feet in a direct line to the junction of Meeker and Graham avenues.
55. Locating and laying out Rockaway parkway to a width of 120 feet, where not now laid out to that width, so as to conform to the original lines of Rockaway parkway as laid out on the Town Survey Commissioners' Map of Kings County, also to extend the lines of Rockaway parkway to intersect with the lines of Buffalo avenue.
56. Proposed widening First street, from Eighteenth avenue to Foster avenue. Proposed widening street system in Parkville.
57. Closing and discontinuing Amersfort place, from Nostrand avenue to Flatbush avenue; Wyckoff avenue, from East Eighty-third street to Avenue D; Canarsie road, from East Ninety-second street to Ditmas avenue; Johnson's lane, from East Fifteenth street to East Sixteenth street.
58. Closing and discontinuing that portion of East Twenty-seventh street, as now laid out on the map of The City of New York; between Avenue G and the westerly boundary line of property of the Germania Real Estate and Improvement Company, and the locating and laying out of Amersfort place, between Avenue F and Avenue G.
59. Locating and laying out Bay Forty-seventh street, Twenty-eighth avenue, Bay Forty-ninth street, and Bay Fiftieth street, from the easterly line of Harway basin to Harway avenue; of Avenue Y, from the easterly line of Harway basin to Bay Fiftieth street; of West Fifteenth street, from Avenue Z to Avenue Y; of West Sixteenth street and West Seventeenth street, from Avenue Z to Bay Fiftieth street, and the closing and discontinuing of Bay Forty-seventh street, Bay Forty-eighth street, Bay Forty-ninth street and Bay Fiftieth street (as laid out on the map of the City) from the westerly line of Harway basin to the easterly line of Harway avenue.
60. Locating and laying out Bay Forty-seventh street, Twenty-eighth avenue, Bay Forty-ninth street, and Bay Fiftieth street, from the easterly line of Harway basin to their intersection with the lines of Bay Forty-seventh street, Bay Forty-eighth street, Bay Forty-ninth street and Bay Fiftieth street, as now laid out on the map of the City; of West Sixteenth street and West Seventeenth street, from Avenue Z to Bay Fiftieth street, and the closing and discontinuing of those triangular portions of Bay Forty-seventh street, Bay Forty-eighth street, Bay Forty-ninth street and Bay Fiftieth street, between the westerly line of Harway basin and the easterly line of Harway avenue, not included in the above streets as herewith laid out.
61. Locating and laying out East New York avenue, from the easterly boundary line of the Twenty-ninth Ward to the westerly end of said avenue at Canarsie avenue, formerly known as Old Clove road, to a width of 80 feet.
62. Locating and laying out West Twentieth street, from Surf avenue to mean high-water line of the Atlantic Ocean.
63. Closing and discontinuing Clove road, between Rutland road and Lincoln road.
64. Locating and laying out an extension to Neptune avenue in a direct line from its present terminus at West Sixth street to Ocean parkway.
65. Locating and laying out West Second street, between Canal avenue and Sheepshead Bay road.
66. Widening Fifth street between Gowanus canal and Second avenue.
- (b) Maps affecting changes of the established elevation of streets:

No maps of this kind were made during the year by this Bureau.

II. Maps Forwarded for Filing.

- (a) Maps affecting changes in lines of streets and closing and laying out streets:
 1. Locating and laying out Lincoln avenue, from Atlantic avenue to Jamaica avenue.
 2. Locating and laying out Neptune avenue, from West Thirty-sixth street to West Thirty-seventh street.
 3. Locating and laying out Conway street, from Norman place to Fulton street.
 4. Reducing the width of East Sixty-fifth street, between Avenue U and Ralph avenue.
 5. Locating and laying out Eighty-seventh street, from Narrows avenue to the Shore road.
 6. Locating and laying out an extension to Park street, from Beaver street to Garden street.
 7. Locating and laying out Jerome avenue (Voorhies lane) from land of the Manhattan Beach Railroad to East Twenty-fourth street.
 8. Locating and laying out Suydam place, Columbus place, Bancroft place, Louis place, Radde place, Gunther place, Oliver place, Kane place, Prescott place, Dewey place, Russell place, Ocean place, Pleasant place, Sherlock place, between Atlantic avenue and Herkimer street.
 9. Locating and laying out as a public place the small triangle bounded by Fourth avenue, Fifth avenue and Ninety-fourth street.
 10. Closing and discontinuing Martense street, from New York avenue to Clove road.
 11. Closing and discontinuing Condit street, from Railroad avenue to Nicholas avenue.
 12. Locating and laying out as a public place the triangular plot, bounded by Bushwick avenue, Myrtle avenue, and Willoughby avenue.
 13. Locating and laying out Carroll street, between Rogers avenue and Nostrand avenue.
 14. Locating and laying out Seventy-fourth street, from Narrows avenue to Shore road.
 15. Striking from the map that portion of East Sixteenth street, from Avenue K to Avenue L.
 16. Closing and discontinuing that portion of Johnson's road, between East Seventeenth street and the tracks of the Manhattan Beach Railroad.
 17. Laying out an extension of Scott avenue, from Flushing avenue to St. Nicholas avenue.
 18. Locating and laying out Fuller place and Howard place, between Windsor place and Prospect place.
 19. Widening Eighteenth avenue, from the old New Utrecht town line to Coney Island avenue.
 20. Change in lines of Amos street, Bennett street, Parker street, Benton street and Bullion street, between Morgan and Kingsland avenues.
 21. Closing and discontinuing Bennett's lane, from Eighty-fourth street to Gravesend Bay.
- (b) Maps affecting changes of the established elevation of streets:
 1. Change of grades in Eleventh avenue, from Eighteenth street to Terrace place; Nineteenth street, from Tenth avenue to Vanderbilt street; Seeley street, from Bridge over Prospect avenue to Gravesend avenue; Eighteenth street, from Eleventh avenue to Vanderbilt street; Terrace place, from Seventeenth street to Gravesend avenue; Vanderbilt street, from Prospect avenue to East Fourth street.
 2. Change of grade in Avenue I, from East Fifth street to Ocean parkway.
 3. Change of grade in East Twenty-first street, from Cortelyou road to Dorchester road.
 4. Change of grade in Rugby road, from Cortelyou road to Dorchester road.
 5. Change of grades in Ovington avenue, from Fifth avenue to Seventh avenue, and Sixth avenue from Bay Ridge avenue to Seventy-first street.
 6. Change of grade in Seventy-second street and Seventy-third street, from First avenue to Second avenue.
 7. Change of grade in Avenue C, from East Ninth street to Coney Island avenue; Coney Island avenue, from Albemarle road to Cortelyou road; East Eleventh street, from Beverley road to Cortelyou road; East Twelfth street, from Beverley road to Cortelyou road; Lewis place, from Coney Island avenue to East Eleventh street; Matthews place, from Coney Island avenue to East Eleventh street; Slocum place, from Coney Island avenue to East Twelfth street; Turner place, from East Eighth street to East Eleventh street; Hinckley place, from East Eighth street to East Eleventh street.
 8. Change of grade in Windsor place, from Eighth avenue to Prospect Park West.

9. Change of grade in Nineteenth street, from Third avenue to bulkhead line.
10. Change of grade in Ninety-first street, from Third avenue to Fourth avenue.
11. Change of grade in Ninety-fourth street, from Third avenue to Shore road.
12. Change of grade in Ninety-seventh street, from Third avenue to Shore road.
13. Change of grade in Bay Twenty-sixth street, from Bath avenue to Benson avenue.
14. Change of grade in Seventy-second street, from First avenue to Second avenue and in Seventy-third street, from First avenue to Second avenue.
15. Change of grade in Eighty-fifth street, from First avenue to Second avenue.
16. Change of grade in East Thirty-second street, from Farragut road to Glenwood road.
17. Change of grade in Eighty-third street and Eighty-fourth street, from Second avenue to Third avenue.
18. Change of grade of Bath avenue, between Seventeenth avenue and Bay Seventeenth street, and of Bay Sixteenth street, between Cropsey avenue and Benson avenue.
19. Change of grade of Newkirk avenue, from East Sixteenth street to East Nineteenth street; East Seventeenth street, from Foster avenue to Ditmas avenue; East Eighteenth street, from Foster avenue to Ditmas avenue.
20. Change of grade of Atkins avenue, between Blake avenue and Sutter avenue.
21. Change of grade of Fifty-second and Fifty-third street, between Eleventh and New Utrecht avenues, and Twelfth avenue, between Fifty-first and Fifty-fourth streets.
22. Change of grade of Avenue G, between East Twenty-fourth street and Amersfort place; East Twenty-fifth street, between Farragut road (Avenue F) and Avenue H; East Twenty-sixth street, between Farragut road (Avenue F) and Avenue H.
23. Change of grade of First avenue, between Fifty-seventh street and Sixtieth street.
24. Change of grade of Sixty-fourth street, between Second and Fourth avenues.
25. Change of grade of Rockaway avenue, between Vienna avenue and Stanley avenue.
26. Change of grade of Livingston street, between Gallatin place and Hoyt street.

III. Miscellaneous Maps.

These comprise maps, or general sketches, for special reports, and copies of maps previously prepared and forwarded.

1. Map showing old lane from Canarsie avenue and Avenue M to Rockaway avenue and Sea View avenue.
2. Map showing location of the triangulation stations at Jamaica Bay, Brooklyn.
3. Map or plan showing the locating and laying out of Avenue F, from Ocean avenue to Foster avenue.
4. Map or plan showing Degraw street, from Ralph avenue to East New York avenue.
5. Sketch showing streets taken from map of the City—King street, Sullivan street, and Walcott street, from Conover street westerly to the bulkhead line.
6. Map or plan showing changes in street system in district bounded by Twenty-fifth avenue, Cropsey avenue, Twenty-seventh avenue and bulkhead line of Gravesend Bay.
7. Map or plan showing the locating and laying out of an extension to Terrace place, from Prospect avenue to Coney Island avenue.
8. Map or plan showing the approximate street system in the district bounded by Provost street, Newtown creek and Greenpoint avenue.
9. Copy of draft damage map in the matter of acquiring title to the extension of Montrose avenue, from Union avenue to Broadway.
10. Copy of draft damage map in the matter of widening Roebling street on the westerly side from the Bridge plaza at South Fourth street to Union avenue.
11. Copy of map showing encroachments on the extension of Grand street as an approach to the Williamsburg Bridge, from Hooper street to Havemeyer and South Fourth streets.
12. Map showing the proposed extension of Flatbush avenue, from its present southerly terminus to the southerly shore of Barren Island.
13. Map showing alternate plans for proposed extension of Flatbush avenue, from its present southerly terminus to the Atlantic Ocean at Rockaway Beach.
14. Map showing the street lay-out for the district known as Sea Gate.
15. Map showing the lay-out of Stryker court, Southgate court and West First street.
16. Map showing East Twenty-third street, from Avenue D to Flatbush avenue.
17. Map or plan showing Dinsmore place, between Logan street and Chestnut street.
18. Copy of map of South Ninth street, between First street and bulkhead line.
19. Copy of map or plan showing the locating and laying out of Church avenue, from East Eleventh street to Ocean parkway.
20. Copy of map furnished by the Dock Department showing new streets at Whale creek.
21. Copy of map made in relation to proposed opening of East Twenty-ninth street, from Vernon avenue to Canarsie avenue or road, and the proposed closing of Lawrence street, from Vernon avenue to Beverley road.
22. Map showing the proposed rapid transit routes (nine blue prints and four black prints).
23. Copy of rule map of Thirteenth avenue, from Thirty-sixth street to Seventy-third street.
24. Copy of rule map of Forty-fourth street, from New Utrecht avenue to West street.
25. Copy of rule map of Fourteenth avenue, from West street to Sixty-fifth street.
26. Legally opened streets in the Twenty-ninth Ward.
27. Showing location of proposed Kings highway, from Coney Island avenue to Ocean avenue.
28. Change of line and extension of Neptune avenue, from West Fifteenth street to Ocean parkway.
29. Sketch showing East Sixteenth street, from Avenue H to Avenue L.
30. Sketch showing building at northwest corner of West Second street and Neptune avenue.
31. Improvements in Thirteenth street, from Second avenue to Gowanus canal.
32. Copy of map or plan of the district bounded by Provost street, Newtown creek and Greenpoint avenue.
33. Copy of map showing Flatbush avenue, from its present southerly terminus to the Atlantic Ocean at Rockaway Beach.
34. Copy of map showing alternate plans for proposed extension of Flatbush avenue from its present southerly terminus to the Atlantic Ocean at Rockaway Beach.
35. Proposed board walk at Coney Island, extending from Ocean parkway to West Thirty-seventh street (two copies).
36. Banker street, from Calyer street to Meserole avenue and from Meserole avenue to Franklin avenue.
37. Showing lands at Prospect Park plaza and Eastern parkway.
38. Proposed widening of Degraw street, between New York and Brooklyn avenues.
39. Union street, between New York avenue and Albany avenue.
40. Union street, between New York avenue and East New York avenue.
41. Board walk, at Coney Island, showing thereon the three (3) additional water lines as shown on Voorhies map, with Atlantic avenue, Coney Island.
42. Proposed Interborough Rapid Transit route.
43. Proposed Interborough Rapid Transit route, with addition of Coney Island extension.
44. Proposed Interborough Rapid Transit route.
45. Streets proposed to be opened in the district bounded by Fifth avenue, Greenwood Cemetery, Fort Hamilton avenue and Thirty-ninth street.
46. Proposed improvements in Harway avenue, from Bay Forty-eighth street to Avenue Z, and in West Eighteenth street, from Avenue Z to the bridge.

IV. Maps Showing Encroachments on Streets Prepared for Bureau of Incumbrances.

1. Extension of Grand street as an approach to the Williamsburg Bridge, from Hooper street to Havemeyer and South Fourth streets.
2. Montgomery street, from the division line between the former City of Brooklyn and the Town of Flatbush where the same crosses Montgomery street, between Franklin avenue and Bedford avenue.
3. Sixty-eighth street, from Third avenue to Fourth avenue.
4. Sterling place (Butler street), from Utica avenue to Schenectady avenue.
5. Tenth avenue, between Sixty-first and Sixty-second streets.
6. Tenth avenue between Sixty-first and Sixty-second streets (duplicate).
7. East Seventh street, from Church lane to Caton avenue.
8. Gubner street, extending from Eighty-sixth street to Seventh avenue.

V. Streets and Street Openings.

This work, in addition to furnishing a mass of oral information, consists in preparing certificates of dedication and statements of facts for submission to the Corporation Counsel. It requires an accurate search of all records in this and the other public offices, besides a thorough examination on the ground of the physical condition of each street. As completed this work is divided as follows:

A—Certificates of Dedication to Public Use of Streets.

These certificates are prepared to prove that the public has an easement to the use of the street, thus avoiding street opening proceedings preliminary to needed improvements.

1. East Third street, between Avenue E and Avenue F.
 2. Sixty-seventh street, between Eleventh avenue and Fourteenth avenue.
 3. Thirteenth avenue, between Sixty-seventh street and Seventy-third street.
 4. Eighty-second street, between First avenue and Second avenue.
 5. Avenue V, between East Eighth street and a point 160 feet westerly.
 6. Avenue V, between Ocean avenue and East Sixteenth street.
 7. Avenue V, between East Thirteenth street and East Twelfth street.
 8. Seventy-sixth street, between Third avenue and Fourth avenue.
 9. East Fifteenth street (Marlborough road), between Beverley road and Cortelyou road.
 10. Benson avenue, between Bay Twenty-sixth street and Twenty-first avenue.
 11. East Twenty-ninth street, between Clarendon road and Avenue D.
 12. East Thirty-fourth street, between Clarendon road and Newkirk avenue.
 13. Bath avenue, between DeBruyn's lane and Twenty-first avenue, excepting the right-of-way of the Brooklyn, Bath and West End Railroad.
 14. East Twenty-ninth street, between Foster avenue and Glenwood avenue.
 15. Bay Thirteenth street, between Eighty-sixth street and Cropsey avenue.
 16. Newkirk avenue, between Flatbush avenue and East Seventeenth street.
 17. Barbey street, between Belmont avenue and Dumont avenue.
 18. Fifty-sixth street, between Fourteenth avenue and Fifteenth avenue.
 19. Eighty-second street, between Twenty-third avenue and Stillwell avenue.
 20. Eighty-third street, between Twenty-fourth avenue and Stillwell avenue.
 21. Bay Thirty-eighth street, between Eighty-sixth street and Bath avenue.
 22. Forty-eighth street, between Fifteenth avenue and Sixteenth avenue.
 23. Fiftieth street, between Fourteenth avenue and Fifteenth avenue.
 24. Prospect place, between Albany avenue and Troy avenue.
 25. Bay Nineteenth street, between Cropsey avenue and Gravesend Bay.
 26. Elton street, between Atlantic avenue and Liberty avenue.
 27. Sheffield avenue, between Pitkin avenue and New Lots road.
 28. Caton avenue, between Ocean parkway and East Fifth street.
 29. Fifty-eighth street, between Fourteenth avenue and Fifteenth avenue.
 30. Newkirk avenue, between East Thirty-fifth street and New York avenue.
 31. Thirteenth avenue, between Forty-fifth street and Forty-sixth street.
 32. Forty-eighth street, between Twelfth avenue and Thirteenth avenue.
 33. St. Nicholas avenue, between Hart street and borough line.
 34. St. Nicholas avenue, between Troutman street and Starr street.
 35. Forty-second street, between a point about 400 feet east of Twelfth avenue and Fourteenth avenue.
 36. East Twelfth street, between Cortelyou road and Dorchester road.
 37. Sheffield avenue, between Pitkin avenue and Blake avenue.
 38. Dobbin street, between Norman avenue and Nassau avenue.
 39. Kenmore place, between Woodruff avenue and Caton avenue.
 40. Forty-second street, between a point about 400 feet east of Twelfth avenue and Fourteenth avenue.
 41. East Twenty-ninth street, between Avenue D and Newkirk avenue.
 42. Van Sicklen avenue, between Pitkin avenue and Dumont avenue.
 43. Milford street, between Glenmore avenue and Pitkin avenue.
 44. Newkirk avenue, between East Twenty-sixth street and Rogers avenue.
 45. First avenue, between Fifty-eighth street and Sixtieth street.
 46. Kingston avenue, between St. John's place and Eastern parkway.
 47. Montauk avenue, between Liberty avenue and New Lots avenue.
 48. Jefferson avenue, between Hamburg avenue and Knickerbocker avenue.
 49. Stanhope street, between St. Nicholas avenue and the borough line.
 50. Eighteenth street, between Third avenue and a point 400 feet west of Third avenue.
 51. Montrose avenue, between Bushwick avenue and Bushwick place.
 52. Shepherd avenue, between Arlington avenue and Jamaica avenue.
 53. Central avenue, between Moffatt street and Chauncey street.
- #### B—Statements of Facts for Submission to Corporation Counsel.
- In these statements of facts is included all obtainable information, documentary and physical, that tends to prove a dedication of each street to public use.
1. East Sixteenth street, between Beverley road (Avenue B) and Dorchester road (Avenue D).
 2. Bay Twenty-eighth street, between Eighty-sixth street and Cropsey avenue.
 3. Java street, between Provost street and Oakland street.
 4. Newkirk avenue, between East Twenty-sixth street and Nostrand avenue.
 5. Newkirk avenue, between East Twenty-eighth street and Nostrand avenue.
 6. Twelfth avenue, between Thirty-eighth street and Thirty-ninth street.
 7. Hopkinson avenue, between Blake avenue and Dumont avenue.
 8. East Twenty-ninth street, between Newkirk avenue and Foster avenue.
 9. East Twenty-eighth street, between Newkirk avenue and Foster avenue.
 10. Forty-third street, between Twelfth avenue and Thirteenth avenue.
 11. Thirty-ninth street, between Fourteenth avenue and Fifteenth avenue.
 12. Newkirk avenue, between New York avenue and East Thirty-fifth street.
 13. Forty-fourth street, between Fort Hamilton avenue and Fourteenth avenue.
 14. Thirteenth avenue, between Forty-second street and Forty-fourth street.
 15. Kent street, between Oakland street and Provost street.
 16. Brooklyn avenue, between Avenue D and Foster avenue.
 17. East Fourteenth street, between Avenue H and Avenue J, excepting the tracks of the Long Island Railroad.
 18. East Thirteenth street, between Avenue H and Avenue J, excepting the tracks of the Long Island Railroad.
 19. East Twelfth street, between Avenue H and Avenue J, excepting the tracks of the Long Island Railroad.
 20. Avenue H, between East Fifteenth street and East Sixteenth street, except the land occupied by the tracks of the Brooklyn and Brighton Beach Railroad.
 21. Avenue H, between East Twelfth street and East Fourteenth street.
 22. East Fifteenth street, between Avenue H and Avenue J, excepting the tracks of the Long Island Railroad.
 23. East Sixteenth street, between Avenue I and Avenue J.
 24. Avenue I, between Coney Island avenue and East Sixteenth street, except the land of the Brooklyn and Brighton Beach Railroad.
 25. East Twelfth street, between Kings Highway and Avenue S.
 26. East Thirteenth street, between Cortelyou road and Dorchester road.
 27. Tenth avenue, between Thirty-seventh street and Thirty-eighth street, except the tracks of the Prospect Park and Coney Island Railroad.
 28. Magenta street, between Crescent street and Railroad avenue.
 29. Atkins avenue, between Blake avenue and Sutter avenue.

30. Milford street, between Glenmore avenue and Pitkin avenue.
31. East Eighteenth street, between Avenue J and Avenue K.
32. Avenue J, between East Eighteenth street and Ocean avenue.
33. Atkins avenue, between Pitkin avenue and Sutter avenue.
34. Fortieth street, between Fourteenth avenue and Fort Hamilton avenue.
36. Farragut road, between Flatbush avenue and East Twenty-sixth street.
36. Seventy-eighth street, between Second avenue and Third avenue.
37. Hawthorne street, between Rogers avenue and Nostrand avenue.
38. Farragut road (Avenue F), between Flatbush avenue and Amersfort place.
39. Lynch street, between Bedford avenue and Wallabout street.
40. Montgomery street, between Franklin avenue and former City line.
41. Winthrop street, between Rogers avenue and Nostrand avenue.
42. Bay Ridge avenue, between Fourteenth avenue and New Utrecht avenue.
43. Stillwell avenue, between Eightieth street and Eighty-first street.
44. Eighty-first street, between Twenty-third avenue and Stillwell avenue.
45. Eightieth street, between Twenty-third avenue and Stillwell avenue.
46. Jefferson avenue, between Knickerbocker avenue and Irving avenue.
47. Eighty-first street, between Second avenue and Third avenue.
48. Kenilworth place, between Farragut road (Avenue F) and Avenue G.
49. Ovington avenue, between Fifth avenue and Seventh avenue.
50. Dewey place, between Herkimer street and Atlantic avenue.
51. East Thirty-second street, between Avenue H and Glenwood road.
52. Hopkinson avenue, between Atlantic avenue and a point about 75 feet north of same.
53. Pleasant place, between Atlantic avenue and a point about 50 feet north of same.
54. Bay Ridge avenue, between Seventeenth avenue and Eighteenth avenue.
55. Fifty-seventh street, between Eighth avenue and a point 460 feet southeast of Eighth avenue and from Cowenhoven lane to Twelfth avenue.
56. Shepherd avenue, between Atlantic avenue and Arlington avenue.
57. Avenue I, between Ocean avenue and East Twenty-first street.
58. East Fifteenth street, between Avenue H and Avenue I, excepting the tracks of the Long Island Railroad.
59. East Fourteenth street, between Avenue H and Avenue I, excepting the tracks of the Long Island Railroad.
60. One Hundredth street, between Third avenue and Fourth avenue.
61. Avenue I, between Coney Island avenue and the Brooklyn and Brighton Beach Railroad.
62. One Hundred and First street, between Fourth avenue and Fort Hamilton avenue.
63. East Twelfth street, between Avenue H and Avenue I, excepting the tracks of the Long Island Railroad.
64. Benson avenue, between Bay Twenty-fourth street and Twenty-second avenue.
65. East Thirteenth street, between Avenue H and Avenue J, excepting the tracks of the Long Island Railroad.
66. East Thirty-eighth street, between Avenue D and Foster avenue.
67. Foster avenue, between East Thirty-seventh street and Albany avenue.
68. Hinckley place, between Coney Island avenue and East Eleventh street.
69. East Thirty-ninth street, between Avenue D and Foster avenue.
70. Albany avenue, between Foster avenue and Paerdegat avenue.
71. Eleventh street, between Fifty-seventh street and Fifty-eighth street.
72. Fifty-seventh street, between Cowenhoven lane and Twelfth avenue.
73. East Thirty-seventh street, between Avenue I and Flatbush avenue.
74. Bay Thirteenth street, between Benson avenue and Cropsey avenue.
75. Twenty-fifth avenue, between the north line of land of Ehard Schmidt (100 feet north of Bath avenue) and Eighty-sixth street.
76. Twenty-fourth avenue, between Benson avenue and Bath avenue.
77. Montauk avenue, between Atlantic avenue and Liberty avenue.
78. Bay Thirty-seventh street, between Bath avenue and Eighty-sixth street.
79. Thirty-ninth street, between old city line and Thirteenth avenue.
80. Newell street, between Calyer street and Meserole avenue.
81. Hendrix street, between New Lots avenue and Vienna avenue.
82. Stockholm street, between Wyckoff avenue and the borough line.
83. Butler place, between Sterling place and Plaza street.
84. DeKalb avenue, between Wyckoff avenue and the borough line.
85. Himrod street, between St. Nicholas avenue and the borough line.
86. Harman street, between St. Nicholas avenue and the borough line.
87. East Twenty-ninth street, between Newkirk avenue and Foster avenue.
88. Newkirk avenue, between East Twenty-eighth street and Nostrand avenue.
89. East Twenty-eighth street, between Newkirk avenue and Foster avenue.
90. West Fourth street, between Kings highway and Avenue T.
91. Avenue T, between Van Sicklen street and Gravesend avenue.
92. Avenue T, between West Fourth street and Van Sicklen street.
93. Avenue S, between East Eighteenth street and Ocean avenue.
94. Avenue T, between East Eighteenth street and East Nineteenth street.
95. East Eighteenth street, between Avenue S and Avenue R.
96. Twenty-first avenue, between Kings highway and Eighty-fourth street.
97. East Twelfth street, between Dorchester road and Ditmas avenue.
98. West street, between Forty-second street and Forty-third street.
99. Forty-second street, between West street and Sixteenth avenue.
100. East Fourth street, between Avenue D and Avenue F.
101. East Second street, between Avenue D and Avenue F.
102. Avenue D, between East Second street and East Fourth street.
103. East Twenty-third street, between Beverley road and 220 feet north.
104. East Twenty-second street, between Beverley road and Duryea place.
105. East Thirty-fifth street, between Avenue I and Flatbush avenue.
106. Sixty-seventh street, between Second avenue and Third avenue.
107. East Twenty-fifth street, between Avenue F and Avenue G.
108. East Seventh street, between Church avenue and Beverley road.
109. Newtown street, between Manhattan avenue and Graham avenue.
110. Fortieth street, between West street and Sixteenth avenue.
111. Seventy-fourth street, between Fifteenth avenue and Sixteenth avenue.
112. Benson avenue, between Twentieth avenue and Bay Thirty-fifth street.
113. East Third street, between Avenue C and Avenue D.
114. Benson avenue, between Eighteenth avenue and Twentieth avenue.
115. Sixty-sixth street, between Twelfth avenue and Thirteenth avenue.
116. East Twenty-eighth street, between Foster avenue and Farragut road.
117. Washington avenue, between Third street and Forty-seventh street.
118. Turner place, between Coney Island avenue and East Eleventh street.
119. Twenty-fifth avenue, between Eighty-sixth street and Stillwell avenue.
120. Fortieth street, between Fort Hamilton avenue and Twelfth avenue.
121. Eightieth street, between Twenty-second avenue and Twenty-third avenue.
122. West street, between Thirty-ninth street and Forty-third street.
123. Seventy-first street, between Fort Hamilton avenue and Tenth avenue.
124. East Fourth street, between Avenue D and Avenue F.
125. Cortelyou road (Avenue D), between East Second street and Ocean parkway.
126. Forty-second street, between West street and Eleventh avenue.
127. West street, between Thirty-ninth street and Forty-third street.
128. Eleventh avenue, between Fifty-eighth street and Cowenhoven lane.
129. East Third street, between Avenue C and Avenue D (Cortelyou road).
130. East Third street, between Cortelyou road and Ditmas avenue.
131. East Second street, between Avenue D and Avenue F.
132. East Fourth street, between Church avenue and a point about 100 feet north of Albemarle road.
133. Sterling place, between Troy avenue and Utica avenue.
134. Seventy-second street, between Fifteenth avenue and New Utrecht avenue.
135. Fifty-second street, between Nineteenth avenue and West street.
136. Bay Seventh street, from a point about 100 feet south of Benson avenue to Cropsey avenue.
137. Seventy-eighth street, between Third avenue and Fourth avenue.
138. Forty-sixth street, from New Utrecht avenue to the old road between Flatbush and New Utrecht.
139. Forty-third street, between New Utrecht avenue and Twelfth avenue.

140. Forty-second street, between New Utrecht avenue and a point about 430 feet east of Twelfth avenue.
141. Fortieth street, between New Utrecht avenue and a point about 100 feet east of Twelfth avenue.
142. Fifty-first street, from a point about 200 feet west of Thirteenth avenue to the old road between Flatbush and New Utrecht.
143. Fiftyth street, between New Utrecht avenue and Fourteenth avenue.
144. Forty-eighth street, between Twelfth avenue and a point about 100 feet west of Seventeenth avenue.
145. Forty-fourth street, between Fort Hamilton avenue and Fourteenth avenue.
146. Fifty-eighth street, between New Utrecht avenue and a point about 220 feet east of Fifteenth avenue.
147. Fifty-seventh street, between New Utrecht avenue and a point about 200 feet east of Fifteenth avenue.
148. Fifty-sixth street, between New Utrecht avenue and a point about 200 feet east of Fifteenth avenue.
149. Fifty-fifth street, between New Utrecht avenue and a point about 200 feet east of Fifteenth avenue.
150. Fifty-fourth street, between Thirteenth avenue and Fifteenth avenue.
151. Fourteenth avenue, between Forty-fourth street and New Utrecht avenue.
152. Thirteenth avenue, between Forty-third street and New Utrecht avenue.
153. Twelfth avenue, between Fortieth street and New Utrecht avenue.
154. Fifty-ninth street, between New Utrecht avenue and a point about 225 feet east of Fifteenth avenue.
155. Sixty-fifth street, between West street and Gravesend avenue.
156. West street, between Avenue O and Sixty-fifth street.
157. Bath avenue, between Twenty-first avenue and Twenty-second avenue.
158. Eighty-first street, between Eighteenth avenue and Nineteenth avenue.
159. East Thirty-seventh street, between Glenwood road and Avenue H.
160. Avenue I, between Flatbush avenue and East Thirty-fifth street.
161. Seventy-fourth street, between Thirteenth avenue and Fourteenth avenue.
162. Stratford road (East Eleventh street), between Cortelyou road and Dorchester road.
163. Seeley street, between Eighteenth street and Nineteenth street.
164. Shepherd avenue, between Glenmore avenue and Pitkin avenue.
165. Nineteenth avenue, between Seventy-ninth street and Eighty-sixth street.
166. Sixty-seventh street, between First avenue and Second avenue.
167. East Eighth street, between Caton place and Johnson street.
168. East Eighth street, between Johnson street and Church avenue.
169. Johnson street, between Coney Island avenue and East Eighth street (south-east intersection).
170. Rugby road, between Dorchester road and Ditmas avenue.
171. East Thirteenth street, between Dorchester road and Ditmas avenue.
172. Fifty-eighth street, between Kowenhoven lane and New Utrecht avenue.
173. Ditmas avenue, between Brooklyn and Brighton Beach Railroad and Coney Island avenue.
174. East Twenty-third street, between Beverley road and Canarsie lane.
175. Cortelyou road, between Ocean parkway and Coney Island avenue.
- VI. Maps Prepared for the Corporation Counsel's Office in Condemnation

Proceedings.

- This work comprises the preparation of the following maps:
- (a) Rule maps in triplicate and technical descriptions of land to be taken in street opening proceedings.
 - (b) Rule maps and technical descriptions for acquiring easements in streets for sewer purposes.
 - (c) Draft damage maps, which give the dimensions of every plot of land to be taken, the encroachments on the streets, the names of the property owners, and any other information that will be of service to the Commissioners of Estimate and Assessment.
 - (d) Draft benefit maps, showing lot included within the limits of the assessment for the opening, and giving dimensions and block and lot numbers.
 - (e) Final damage maps in duplicate and final benefit maps in triplicate.
 - (f) Rule maps and technical descriptions for closing avenues and streets.
 - (g) Profiles made in connection with street openings.
 - (h) Inspection and testimony.
 - (i) Amendments and additions to street opening maps.

(a)—Rule Maps and Technical Descriptions.

These maps are sent in triplicate, and have technical descriptions, showing the land taken in street opening proceedings.

	Feet.
1. Beadel street, from Kingsland avenue to Gardner avenue.....	2,946
2. Vandervoort avenue, from Meeker avenue to Maspeth avenue.....	2,639
3. Public place bounded by Lee avenue, Hewes street, and the extension of Bedford avenue.....	62
4. Public place bounded by Division avenue, Marcy avenue, Ross street and the extension of Bedford avenue.....	65
5. Public park known as Owl's Head Park, bounded by First avenue, Shore road, Wakeman place and Bay Ridge avenue, about.....	1,500
6. Forty-fourth street, from New Utrecht avenue to West street.....	5,571
7. Forty-third street, from New Utrecht avenue to West street.....	5,497
8. Benton street, from Kingsland avenue to Vandervoort avenue.....	1,388
9. Fourteenth avenue, from West street to Sixty-fifth street.....	8,101
10. Thirteenth avenue, from Thirty-sixth street to Seventy-third street.....	9,474
11. Roebling street (widening of) from South Eighth street to Lee avenue.....	688
12. Forest street, from Central avenue to Flushing avenue.....	354
13. Thatford avenue, from Riverdale avenue to Avenue D.....	3,658
14. Conway street, from Broadway to Norman place.....	221
15. Snediker avenue, from Dumont avenue to bulkhead line of Fresh creek....	3,920
16. Midwood street, from Nostrand avenue to Kingston avenue.....	2,135
17. Ninety-sixth street, from Third avenue to Fourth avenue.....	800
18. Thirty-seventh street, from Fort Hamilton avenue to Fourteenth avenue..	2,163
19. Sullivan street, from Washington avenue to Nostrand avenue.....	2,732
20. Lombardy street, from Kingsland avenue to United States bulkhead line of Newtown creek.....	3,840
21. Robinson street, from Rogers avenue to New York avenue.....	1,530
22. Junius street, from Pitkin avenue to Dumont avenue.....	2,070
23. East Twenty-fifth street, from Beverley road to Avenue D.....	1,450
24. Avenue C, from Gravesend avenue to Coney Island avenue.....	2,582
25. Vienna avenue, from East Ninety-eighth street to Williams avenue.....	4,309
26. Bay Forty-third street, from Stillwell avenue to Harway avenue.....	2,705
27. Twenty-third avenue, from West street to Sixty-fifth street, and from Stillwell avenue to Gravesend Bay.....	6,629
28. Seventy-first street, from Thirteenth avenue to New Utrecht avenue.....	2,136
29. Hendrix street, from Dumont avenue to New Lots road (avenue).....	983
30. Seventy-eighth street, from Narrows avenue to Stillwell avenue.....	16,947
31. Sixty-first street, from Fort Hamilton avenue to Eighteenth avenue..	6,282
32. East Eighteenth street, from Foster avenue to Avenue M.....	3,983
33. Malbone street, from the line between the Twenty-fourth and Twenty-ninth Wards, at New York avenue, to Lefferts avenue, and not heretofore acquired by the City.....	4,740
34. Roebling street, from Broadway to South Eighth street.....	19
35. Scott avenue, from Flushing avenue to St. Nicholas avenue.....	411
36. Roebling street, from Broadway to Lee avenue, including the triangle bounded by Division avenue, Lee avenue and the proposed extension of Roebling street.....	768
	115,298

Total—Thirty-six streets, comprising one hundred and forty-four maps, and covering 115,298 feet, or 21.837 miles of streets.

(b)—Rule Maps and Technical Descriptions for Easements for Sewer Purposes in Streets.

	Feet.
1. Vienna avenue, from Williams avenue to Malta street.....	668
2. Malta street, between Vienna avenue and Wortman avenue.....	1,310
3. Wortman avenue, from Malta street to New Jersey avenue.....	1,360
4. Gravesend basin, from a line 300 feet southerly and parallel to Avenue V, between West Thirteenth street and West Twelfth street to the Gravesend ship canal.....	5,360
5. Gravesend Ship Canal, from Gravesend Basin to Gravesend Bay.....	3,950
6. Gravesend Ship Canal and a portion of Sheepshead Bay, in the Thirty-first Ward.....	7,534
7. Stryker basin, from Avenue Y to Gravesend Ship Canal.....	2,481
8. Tapscott street, between Blake avenue and East Ninety-eighth street....	852
9. Vienna avenue, from Snediker avenue to Hinsdale street.....	320
10. Tapscott street, from Blake avenue to East Ninety-eighth street.....	852
11. Vienna avenue, from Snediker avenue to Hinsdale street, and from Malta street to Williams avenue.....	997
12. Malta street, from Vienna avenue to Wortman avenue.....	1,310
13. Wortman avenue, from Malta street to New Jersey avenue.....	1,360
	<u>28,354</u>

Total—Thirteen streets, comprising fifty-two maps and covering 28,354 feet, or 5.370 miles of streets.

(c)—Draught Damage Maps.

These maps are used by the Commissioners of Estimate and Assessment to determine the amount of award for land and buildings taken in the opening of the street.

	Number of Plots.	Area in Square Feet.
1. East Fortieth street, from Canarsie avenue to Foster avenue (formerly Avenue E).....	64	119,295
2. Avenue D, from Flatbush avenue to Rogers avenue.....	3	87,126
3. Grant avenue, from Atlantic avenue to Liberty avenue.....	36	71,453
4. Approach to the bridge over Prospect avenue on the line of Seeley street.....	2	14,757
5. Fortieth street, from the former city line to New Utrecht avenue.....	38	44,921
6. Cornelia street, from Knickerbocker avenue to the borough line of Queens.....	13	68,430
7. East Thirty-fourth street, from Clarkson street to Church avenue....	17	97,840
8. East Twenty-fifth street, from Foster avenue to Flatbush avenue....	1	1,729
9. Condit street, from Railroad avenue to Nichols avenue.....	6	20,000
10. Sixty-third street, from Seventh avenue to New Utrecht avenue....	88	341,873
11. Otsego street, from Dwight street to Beard street.....	25	68,429
12. Wolcott street, from Dwight street to Otsego street.....	3	6,262
13. Oak street (widening of), on south side, immediately adjoining Guernsey street.....	1	1,152
14. Bay Fourteenth street, from Eighty-sixth street to Cropsey avenue....	51	149,253
15. Fourteenth avenue, from Sixty-fifth street to Sixty-eighth street (Ovington avenue).....	36	60,892
16. Public park bounded by Eastern parkway, Washington avenue and Classon avenue.....	15	59,218
17. Repose place, from Schenck avenue to Jerome street.....	21	34,800
18. Schenck avenue, from New Lots avenue (road) to Wortman avenue.....	168	165,000
19. Forty-eighth street, from Twelfth avenue to Seventeenth avenue....	163	239,400
20. Avenue T, from Coney Island avenue to Ocean parkway.....	21	89,458
21. Eighty-fourth street, from First avenue to Fourth avenue; from Seventh avenue to Tenth avenue; from Twelfth avenue to Seventeenth avenue, and from Eighteenth avenue to Stillwell avenue. (Supplementary map).....	5	163,760
22. Bedford avenue, between Dean street and Pacific street.....	1	1,752
23. Sterling street, from Washington avenue to Brooklyn avenue.....	76	298,277
24. Public park known as Owl's Head Park, bounded by First avenue, Shore road, Wakeman place and Bay Ridge avenue.....	16	2,106,191
25. Fiftieth street, from old city line to New Utrecht avenue.....	67	201,216
26. Vandervoort avenue, from Meeker avenue to Maspeth avenue.....	74	162,331
27. Carroll street, from Albany avenue to East New York avenue.....	89	266,030
28. Crown street, from Albany avenue to East New York avenue....	71	232,114
29. Fourteenth avenue, from West street to Sixty-fifth street.....	312	639,520
30. Forty-fourth street, from New Utrecht avenue to West street.....	125	334,318
31. Forty-third street, from New Utrecht avenue to West street.....	139	329,813
32. Beadel street, from Kingsland avenue to Gardner avenue.....	61	176,786
33. Sixty-fourth street, from Sixth avenue to New Utrecht avenue....	191	396,319
34. Benton street, from Kingsland avenue to Vandervoort avenue....	11	83,301
35. Williams avenue, from Livonia avenue to Fresh creek.....	100	207,000
36. Ralph avenue, from Remsen avenue to Avenue N.....	122	1,227,657
37. Forty-seventh street, from Eighteenth avenue to Gravesend avenue.....	22	60,888
38. Church avenue, from East Eleventh street to Flatbush avenue....	60	220,202
39. Senator street, from First avenue to Fifth avenue.....	63	176,062
Total.....	<u>2,377</u>	<u>9,024,825</u>

Total—Thirty-nine streets, comprising one hundred and seventeen maps and covering 2,377 plots, 9,024,825 square feet in area, or 3,609,927 city lots, and a total length of 19.192 miles of streets.

(d)—Draught Benefit Maps.

These maps show the limits of assessment for opening a street and give block numbers and block dimensions.

	No. of Plots.
1. Union street, from Bedford avenue to Rogers avenue.....	9
2. President street, from Bedford avenue to Rogers avenue.....	9
3. East Thirty-fifth street, from Kings highway to Flatbush avenue.....	65
4. East Thirty-first street, from East Broadway (Church avenue) to Flatlands avenue.....	325
5. Fortieth street, from former City line to New Utrecht avenue.....	43
6. Fifty-first street, from Ninth avenue to New Utrecht avenue.....	32
7. Brooklyn avenue, from Paerdegat basin to Clarkson street.....	163
8. Grant avenue, from Atlantic avenue to Liberty avenue.....	58
9. Cornelia street, from Knickerbocker avenue to borough line.....	18
10. Avenue D, from Flatbush avenue to Rogers avenue.....	41
11. East Fortieth street, from Canarsie avenue to Foster avenue.....	67
12. East Twenty-fifth street, from Foster avenue to Flatbush avenue.....	101
13. Repose place, from Schenck avenue to Jerome street.....	42
14. Bay Fourteenth street, from Eighty-sixth street to Cropsey avenue.....	68

	No. of Plots.
15. Fourteenth avenue, from Sixty-fifth street to Sixty-eighth street (Ovington avenue).....	36
16. Schenck avenue, from New Lots avenue (road), to Wortman avenue....	168
17. Nineteenth street, from high water mark to bulkhead line.....	3,014
18. Wolcott street, between Dwight street and Otsego street.....	3
19. Otsego street, from Dwight street to Beard street.....	25
20. Oak street, on the south side, immediately adjoining Guernsey street....	1
21. Avenue T, extending from Coney Island avenue to Ocean parkway.....	21
22. Forty-first street, from New Utrecht avenue to old City line.....	37
	<u>4,337</u>

Total—Twenty-two streets, comprising twenty-two maps and covering 4,337 plots.

(e)—Final Damage and Benefit Maps.

The final damage maps are made in duplicate and the final benefit maps in triplicate. These are the last maps made for street opening proceedings. They are copies of the draught damage maps and of the draught benefit maps with the addition of any modifications that may have been decided upon by the Commissioners' report, which is placed on file at the confirmation of each street opening proceeding.

	Sheets.
1. Union street, from Bedford avenue to Rogers avenue.....	5
2. President street, from Bedford avenue to Rogers avenue.....	5
3. Public park, bounded by Avenue I, Avenue J, East Thirty-eighth street and East Thirty-ninth street.....	2
4. East Thirty-fifth street, from Kings highway to Flatbush avenue.....	17
5. East Thirty-first street, from East Broadway (Church avenue) to Flatlands avenue.....	61
6. Approach to the bridge over Prospect avenue on the line of Seeley street..	2
7. Fortieth street, from former City line to New Utrecht avenue.....	5
8. Fifty-first street, from Ninth avenue to New Utrecht avenue.....	13
9. Brooklyn avenue, from Paerdegat basin to Clarkson street.....	33
10. Grant avenue, from Atlantic avenue to Liberty avenue.....	10
11. Extension of Grand street, from Hooper street to Havemeyer and South Fourth streets (final damage map).....	22
12. Cornelia street, from Knickerbocker avenue to borough line.....	8
13. Avenue D, from Flatbush avenue to Rogers avenue.....	8
14. East Fortieth street, from Canarsie avenue to Foster avenue.....	13
15. East Twenty-fifth street, from Foster avenue to Flatbush avenue.....	11
16. Repose place, from Schenck avenue to Jerome street.....	5
17. Bay Fourteenth street, from Eighty-sixth street to Cropsey avenue.....	16
18. Fourteenth avenue, from Sixty-fifth street to Sixty-eighth street (Ovington avenue).....	2
19. Schenck avenue, from New Lots avenue (road) to Wortman avenue....	4
20. Wolcott street, between Dwight street and Otsego street.....	2
21. Montrose avenue, from Union avenue to Broadway.....	4
22. Otsego street, from Dwight street to Beard street.....	4
23. Oak street, on the south side, immediately adjoining Guernsey street..	2
24. Avenue T, from Coney Island avenue to Ocean parkway.....	2
25. Public park, bounded by Eastern parkway, Washington avenue, and Classon avenue.....	2
26. Forty-first street, from New Utrecht avenue to old City line.....	3
Total—Twenty-six streets, comprising 261 sheets.....	<u>261</u>

(F)—Rule Maps and Technical Descriptions for Closing Avenues and Streets.

No rule maps of this nature were requested by the Corporation Counsel during the year.

(G)—Profiles Made in Connection with Street Openings.

1. Brooklyn avenue, from Clarendon road to Foster avenue.
2. Grant avenue, from Atlantic avenue to Liberty avenue.

(H)—Inspection and Testimony.

Whenever a draft damage map of a street was completed it was taken on the ground, and the existing conditions were carefully inspected and compared with the map.

(I)—Amendments and Additions to Street Opening Maps.

As circumstances require it, amendments and additions are made to street opening maps that were previously forwarded.

1. Draft Damage Maps.
None.
2. Draft Benefit Maps.
None.
3. Final Damage and Benefit Maps.
None.

VII. Reports and Letters.

In the course of the year ending December 31, 1906, 715 communications were received, and 2,263 reports and letters were sent. The reports and letters are as follows:

1. Reports on conditions of streets in relation to opening proceedings or improvements.....	1,300
2. Reports for Department of Water Supply, etc., whether certain streets are legally opened or not.....	178
3. Reports accompanying street opening maps.....	168
4. Reports on change of lines, laying out, closing, etc., and change of grades.....	199
5. Miscellaneous reports.....	418
Total.....	<u>2,263</u>

VIII. Statement of Proceedings Pending, Maps Requested, Maps Sent, and Maps on Which Work is Pending.

Opening proceedings pending January 1, 1906.....	112
Initiated to December 31, 1906.....	32
Proceedings discontinued to December 31, 1906.....	12
	<u>20</u>
Total.....	<u>132</u>
Streets confirmed to December 31, 1906.....	42
Total proceedings pending to December 31, 1906.....	<u>90</u>
Rule maps requested to January 1, 1906.....	8
Requested to December 31, 1906.....	28
Total.....	<u>36</u>
Furnished to December 31, 1906.....	<u>36</u>
Total maps on which work is still pending.....	<u>0</u>
Rule maps for sewer easements requested to January 1, 1906.....	2
Requested to December 31, 1906.....	11
Total.....	<u>13</u>
Furnished to December 31, 1906.....	<u>13</u>
Total maps on which work is still pending.....	<u>0</u>

Draft damage maps requested to January 1, 1906.....	29
Requested to December 31, 1906.....	14
Maps discontinued to December 31, 1906.....	3
Total	40
Furnished to December 31, 1906.....	39
Total maps on which work is still pending.....	*1
Draft benefit maps requested to January 1, 1906.....	0
Requested to December 31, 1906.....	22
Total	22
Furnished to December 31, 1906.....	22
Total maps on which work is still pending.....	0
Final damage and benefit maps requested to January 1, 1906.....	0
Requested to December 31, 1906.....	26
Total	26
Furnished to December 31, 1906.....	26
Total maps on which work is still pending.....	0
Profile maps requested to January 1, 1906.....	0
Requested to December 31, 1906.....	2
Total	2
Furnished to December 31, 1906.....	2
Total maps on which work is still pending.....	0

IX From January 1, 1898, to December 31, 1906, a Total of 164 Street Opening Proceedings Were Confirmed.

Summary.

The following summary shows in a brief and general way the quantities and the kinds of work completed during the year ending December 31, 1906.

(A)—Field Work.

1. Eight hundred and eighty-two thousand feet of precise and approximate chaining; 452,000 feet of precise line work; 817 precise angles measured; 8,348 feet of leveling for profile maps; 2 surveys to determine encroachments; and 120,378 feet of damage survey for forty-two streets.
2. Surveys for preliminary hearings in the matter of twenty-one street openings.
3. Sixty-five monument points set; 294 monuments referenced; 108 monuments re-set; 174 monument covers set; 44 miles of surveyor's private cuts referenced; 65 cement walks cut to render monuments accessible; 88 monuments dug for that were not previously reported found; 43 monuments found that were not previously reported.
4. Triangulation points were set in and around Centennial Tower, Coney Island, Avenue K school, Avenue U, Blake avenue school, Atkins avenue school, Twenty-third Regiment armory, Thirteenth Regiment armory, Kings County asylum, Rugby, and Canarsie. There was, also, laid down on the Ocean parkway a standard of 150 feet in length.

(B)—Office Work.

1. One hundred and ninety-eight maps for adoption for sixty-six streets; two hundred and thirty-five maps for filing for forty-seven streets; ninety-two miscellaneous maps for forty-six streets; and sixteen maps showing encroachments for eight streets; making a total of five hundred and forty-one maps for one hundred and sixty-seven streets.
2. Fifty-three certificates of dedication for fifty-three streets and one hundred and seventy-five statements of facts for one hundred and seventy-five streets.
3. One hundred and ninety-six rule maps for forty-nine streets; one hundred and seventeen draft damage maps for thirty-nine streets; twenty-two draft benefit maps for twenty-two streets; two hundred and sixty-one sheets of final damage and benefit maps for twenty-six streets; four profile maps for two streets; making a total of three hundred and thirty-nine maps, two hundred and sixty-one sheets, and one hundred and thirty-eight sheets.
4. Seven hundred and fifteen communications were received and 2,263 letters and reports were sent.

Respectfully submitted,

CHAS. R. WARD, Assistant Engineer in Charge.

BUREAU OF PUBLIC BUILDINGS AND OFFICES.

Brooklyn, December 31, 1906.

The Hon. DESMOND DUNNE, Commissioner of Public Works, Borough Hall, Brooklyn, New York City, N. Y.:

Dear Sir—The twelvemonth just ended has been productive of considerable improvement in the condition and surroundings of all the quarters of the various branches of the municipal and county governments of which the Bureau of Public Buildings and Offices has jurisdiction, and good headway has been made, in the main, with the construction work—of which no small amount is in progress—with which the bureau has been entrusted. When it is considered that new buildings intended for public uses, approximating a total cost of \$4,500,000, are being planned or supervised by this bureau, in addition to the care of purchasing, repairing and installing propositions footing up annually over \$500,000, it will be realized that the responsibility incident to a proper administration of this arm of your department is one to be reckoned with.

I have not been unmindful of this obligation. I have sought faithfully to meet the requirements of the head of this bureau, and although I took up the reins of office at the beginning of the year totally unfamiliar with the practical details of the bureau, I have tried, with the ready assistance of the bureau force—and I believe not without some success—to make the opening year of this part of the work of your administration compare at least favorably with the operations of other bureaus of the Department of Public Works, wherein, perhaps, more experienced, but no less earnest, hands were selected to superintend affairs.

In presenting to you the annual report of the bureau for the year 1906 I would respectfully direct your attention to the fact that it is made as complete as possible at this time. Some of the figures, by reason of our inability to obtain final bills from tradesmen and mechanics who have received bureau orders, in some instances because of delay in completing the work comprehended, are set forth approximately. In the main, however, they are correct, and inasmuch as the report of the General Book-keeper of the department will include a detailed statement of the expenditures of this bureau, I have not delayed this report by waiting for figures which you will receive in time from the department Accountant.

During the year this bureau has expended on open orders, as purchasing agent of the entire Department of Public Works, all told, as closely as can be reckoned, \$154,790.31.

Orders covering this expenditure were divided as follows:

Bureau of Public Buildings and Offices—	
Supplies	\$47,643 91
Repairs	39,542 86
Bureau of Highways—	
Supplies	31,599 83
Bureau of Sewers—	
Supplies	25,868 07

* Map completed for Sixtieth street, from Third avenue to First avenue, but held back awaiting an opinion by the Corporation Counsel.

General Administration—	
Supplies	2,077 18
Bureau of Incumbrances—	
Supplies	1,254 57
Topographical Bureau—	
Supplies	6,803 89
	<u>\$154,790 31</u>

The total appropriations for the year for the Bureau of Public Buildings and Offices were divided as follows:

Salaries and Wages.....	\$271,914 75
Transfers to other bureaus during the year.....	12,000 00
Final appropriations	\$283,914 75
Expended 1906	281,273 98
Unexpended	<u>\$2,640 77</u>

Supplies and Repairs—	
Original appropriation	\$156,912 92
By transfers	8,000 00

Final appropriation	\$148,912 92
Expended	148,912 92
Unexpended	<u>0 00</u>

Supplies and Contingencies—	
Appropriation	\$1,000 00
Expended	843 00

Unexpended	<u>\$157 00</u>
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The total expenditures on contracts was..... \$250,159 81

For the purpose of an orderly presentation of facts and figures I have subdivided the subjects of this report under various subheads.

The cost of supplies and repairs is divided among the different offices and buildings as follows:

Buildings and Offices.	Supplies.	Repairs.	Total.
Borough President.....	\$13,112 78		\$13,112 78
Commissioner of Public Works.....	620 24		620 24
Assistant Commissioner of Public Works.....	1,992 75		1,992 75
Topographical Bureau.....	50 93		50 93
Bureau of Highways.....	1,351 84		1,351 84
Bureau of Sewers.....	3,671 89		3,671 89
Bureau of Public Buildings and Offices.....	5,294 37		5,294 37
Bureau of Incumbrances and Permits.....	4 50		4 50
Bureau of Buildings.....	474 14		474 14
Borough Hall.....	4,679 09	\$9,569 25	14,248 34
Municipal Building.....	6,375 86	8,335 44	14,711 30
Court House.....	6,905 35	2,850 27	9,755 62
Hall of Records.....	4,922 63	3,766 33	8,688 96
Kings County Jail.....	4,471 18	2,580 12	7,051 30
Disciplinary Training School.....	2,204 00	1,097 58	3,301 58
First District City Magistrates' Court.....	94 77	376 00	470 77
Second District City Magistrates' Court.....	332 42		332 42
Third District City Magistrates' Court.....	316 89	142 96	459 85
Fourth District City Magistrates' Court.....	95 94	526 58	622 52
Fifth District City Magistrates' Court.....	232 66		232 66
Sixth District City Magistrates' Court.....	208 92	21 45	230 37
Seventh District City Magistrates' Court.....	108 06	90 37	198 43
Eighth District City Magistrates' Court.....	74 18	77 05	151 23
First District Municipal Court.....	370 95		370 95
Second District Municipal Court.....	82 52	177 90	260 42
Third District Municipal Court.....	357 83	175 31	533 14
Fourth District Municipal Court.....	169 38		169 38
Fifth District Municipal Court.....	54 99		54 99
Sixth District Municipal Court.....	329 05	293 34	622 39
Seventh District Municipal Court.....	6 85	79 00	85 85
Children's Court.....	338 28	16 65	354 93
Gates Avenue Court House.....	186 00	21 75	207 75
Atheneum Building.....	45 00	34 50	79 50
Bath No. 1.....	3,170 69	830 22	4,000 91
Bath No. 2.....	6,331 99	1,135 83	7,467 82
Bath No. 3.....	6,935 58	2,168 72	9,104 30
Bath No. 4.....	4,460 16	470 52	4,930 68
Bath No. 5.....	3,945 69	828 28	4,773 97
Public Comfort Station No. 1.....	387 15	285 79	672 94
Public Comfort Station No. 2.....	230 80	194 60	425 40
Public Comfort Station No. 3.....	244 25	228 84	473 09
Public Comfort Station No. 4.....	265 95	316 34	582 29
Public Comfort Station No. 5.....	239 40	516 38	755 78
Public Comfort Station No. 6.....	231 15	176 40	407 55
Store Room.....	5,272 81		5,272 81
Floating Baths.....	628 96	8,663 66	9,292 62
Administration Building, Wallabout Market.....	272 05	201 43	473 48
Street Cleaning, Wallabout Market.....	1,245 75		1,245 75
Transportation	770 00		770 00
Paint Shop.....	229 71		229 71

Building and Offices.	Supplies.	Repairs.	Total.
Miscellaneous	150 00	.....	150 00
Telephone Switchboard.....	3,402 55	.....	3,402 55
Supplies and Contingencies.....	803 00	.....	803 00
Total.....	\$98,753 88	\$46,248 86	\$145,002 74

Supplies and Repairs Ordered During the Year.

Article or Repair.	Amount.
Automobiles	\$6,970 00
Automobiles, maintenance of	4,399 87
Awnings, hanging, taking down and repairing.....	740 40
Badges	5 60
Bath and comfort stations supplies (on contract).....	4,516 26
Bath and comfort stations supplies (open order).....	4,098 55
Board of horses	1,185 75
Carfare tickets	1,585 00
Carpenter work	6,319 12
Carpets, linoleum, etc.	1,055 49
Carpet cleaning	364 15
Cleaning windows	63 00
Clipping horses	18 00
Clocks, winding and repairing	230 86
Coal (on contract).....	41,748 40
Draughtsmen's supplies	1,008 19
Dockage of baths.....	2,300 00
Electric work and supplies	3,316 10
Elevator repairs	736 33
Enginemens' supplies	920 52
Flags	126 75
Floating bath repairs (on contract).....	4,473 00
Floating bath repairs (open order).....	570 00
Furnishing heat to court.....	250 00
Furniture	5,705 11
Furniture, repairing	1,193 73
Furniture, removing	492 00
Glazing	733 94
Grate bars	416 00
Halyards	53 80
Hardware	1,061 86
Harness and repairs	192 05
Horseshoeing	244 89
Hose, steam	205 00
Ice (on contract)	1,547 99
Iron work	1,410 40
Janitors' supplies (on contract).....	1,816 98
Janitors' supplies (open order).....	3,964 31
Laundering towels (on contract).....	1,468 74
Laundering towels (open order).....	67 93
Locksmithing	542 85
Lumber	656 08
Maps, etc.	510 50
Mason work	1,908 06
Office supplies	1,024 07
Painters' supplies	343 90
Painting	6,219 25
Photographs	164 00
Plastering	847 43
Plumbing	4,643 03
Postage	809 50
Printed books	47 00
Printing	127 50
Rental of registers	300 00
Repairing bicycle	16 00
Roofing	1,164 20
Rubber hose and boots	215 50
Safes, repairs to.....	35 00
Shades and curtains	17 40
Sidewalk elevator	525 00
Special stenographic services	184 24
Steamfitting	5,679 26
Storage of floating baths.....	389 00
Stoves, repairs to.....	654 00
Street cleaning supplies	219 10
Street sweeper, repairs to.....	297 25
Survey of property	150 00
Table water	253 40
Telephone services	4,914 97
Tiling (contract)	2,133 00
Tower clocks, repairs to.....	228 00
Towing baths	350 00
Typewriting machines and repairs	841 25
Ventilators	90 50
Veterinary services	33 75
Wagons	300 00
Wagons, repairs to.....	203 35
Wood	235 25
Total.....	\$145,002 74

Contracts Entered Into and Registered During 1906.

Contractor.	Nature of Contract.	Date of Registration.	Amount of Contract.
American Ice Company.....	Supplying ice during 1906	Feb. 7, 1906	\$1,547 99
Clarke & Stowe.....	Bath at Fourth avenue and President street...	Feb. 1, 1906	157,200 00
J. P. Taaffe.....	Relaunders towels during 1906.....	Mar. 13, 1906	1,468 74
M.-O.-W. Coal Company.....	Supplying coal during 1906.....	Mar. 17, 1906	41,760 00
Otto Metz.....	Tile floor—Borough Hall.	April 4, 1906	2,133 03
P. M. Haran.....	Headstones for veterans.	April 23, 1906	1,099 03
Alex. Pearson.....	Supplies for Sixth Municipal Court.....	April 23, 1906	*1,277 13
Alex. Pearson.....	Supplies for Seventh Municipal Court.....	April 23, 1906	*1,442 71
Cavanagh Bros. & Co.....	Janitors' supplies during 1906.....	May 28, 1906	6,333 24
John F. Walsh, Jr.....	Repairs to floating baths.	May 29, 1906	4,573 03
Nichols Gas Fixture Manufacturing Company.....	Lighting fixtures for Gates Avenue Court.....	Nov. 8, 1906	1,425 00
Rufus H. Brown.....	Alterations, etc., to make additional rooms for Supreme Court Judges.	Nov. 20, 1906	4,900 00
Total.....			\$225,159 81

* Five per cent.

Contracts Completed During 1906.

Year of Contract.	Contractor.	Nature of Contract.	Final Payment.	Amount of Contract.
1905.....	American Ice Company...	Supplying ice during 1906	Jan. 9, 1906	\$1,047 12
1905.....	Peter J. Constant.....	Janitors' supplies during 1905.....	Jan. 6, 1906	7,789 84
1905.....	Neptune B. Smyth.....	Painting in County Court House	Jan. 6, 1906	11,739 00
1903.....	Myron C. Rush.....	Duffield Street Bath....	Jan. 31, 1906	95,733 90
1903.....	Axel S. Hedman.....	Duffield Street Bath....	Jan. 31, 1906	4,786 70
1905.....	J. W. Pratt Company....	Engineer's and Draughtsman's supplies, 1905...	Mar. 19, 1906	1,933 92
1901.....	R. L. Daus.....	Telephone wiring, etc...	Mar. 14, 1906	14 75
1901.....	R. L. Daus.....	Judges' bench and railing, Hall of Records.....	Mar. 27, 1906	31 60
1901.....	R. L. Daus.....	Commission on carpet for Surrogate's Stenographer	Mar. 27, 1906	43 95
1905.....	A. Pearson.....	Furniture for Commissioner of Records.....	April 6, 1906	5,895 13
1904.....	T. Frederick Jackson....	Electric wiring, Hall of Records	May 14, 1906	12,400 00
1901.....	R. L. Daus.....	Commission on above....	May 14, 1906	1,033 50
1904.....	Cassidy & Son Manufacturing Company.....	Lighting fixtures, Hall of Records	May 14, 1906	8,964 90
1901.....	R. L. Daus.....	Commission on above....	May 15, 1906	448 24
1904.....	Neptune B. Smyth.....	Painting, Hall of Records	May 14, 1906	6,983 00
1901.....	R. L. Daus.....	Commission on above....	May 14, 1906	559 15
1905.....	M.-O.-W. Coal Company..	Supplying coal during 1905	June 15, 1906	39,384 00
1906.....	A. Pearson.....	Supplies for Sixth Municipal Court.....	June 27, 1906	1,277 13
1906.....	A. Pearson.....	Supplies, Seventh Municipal Court.....	June 27, 1906	1,442 71
1905.....	A. Pearson.....	Furniture for County Clerk	July 20, 1906	3,993 75
1906.....	Otto Metz.....	Tile floor, Borough Hall.	July 27, 1906	2,133 00
1904.....	Van Dorn Iron Works....	Metallic cases, Hall of Records	Aug. 13, 1906	116,997 00
1901.....	R. L. Daus.....	Commission on above....	Aug. 13, 1906	5,849 85
1906.....	John F. Walsh, Jr.....	Repairs to floating baths.	Sept. 27, 1906	4,573 00
1905.....	Siegel Cooper Company...	Furniture, rugs, etc., for Gates Avenue Court House	Sept. 28, 1906	3,240 24
1905.....	F. Loeser & Co.....	Book cases, rugs, etc., Hall of Records.....	Oct. 17, 1906	2,777 75
1906.....	P. M. Haran.....	Headstones for veterans.	Oct. 17, 1906	1,099 00
1906.....	Cavanagh Bros. & Co....	Janitors' supplies during 1906	Oct. 30, 1906	6,333 24
1901.....	R. L. Daus.....	Commission on furniture for County Clerk.....	Dec. 3, 1906	199 69
1901.....	R. L. Daus.....	Commission on furniture for Commissioner of Records	Dec. 3, 1906	294 76
1901.....	R. L. Daus.....	Commission on book cases, rugs, etc., Hall of Records.....	Dec. 3, 1906	138 89
Total.....				\$349,138 71

Incompleted Contracts Pending from Previous Years.

Year of Contract.	Contractor.	Nature of Contract.	Amount of Contract.
1905.....	Halmle, Huberty & Huds-worth	Nostrand Avenue Bath.....	\$3,750 00
1905.....	Bernstein & Bernstein....	Hamburg Avenue Bath.....	4,250 00
1905.....	R. L. Almirall.....	Fourth Avenue Bath.....	5,400 00
1905.....	E. J. Gleason.....	Furniture for County Register.....	3,097 12
1901.....	R. L. Daus.....	Commission on above.....	154 86
Total.....			\$16,651 98

Public Buildings in Charge of This Bureau.

The buildings of which this Bureau has had charge during the year are set forth in the subjoined statement:

Building and Location.	Leased or Owned.
Borough Hall, Fulton and Joralemon streets.....	Owned
Municipal Building, Joralemon and Fulton streets.....	Owned
Kings County Court House, Joralemon and Fulton streets.....	Owned
Hall of Records, Fulton and Court square.....	Owned
Disciplinary Training School, Eighteenth avenue and Fifty-sixth street.....	Owned
Fireman's Hall (E. D.), Bedford avenue and North First street.....	Owned
Administration Building, East avenue, Wallabout Market.....	Owned
Gates Avenue Court House, Gates avenue, near Marcy avenue.....	Owned
Atheneum Building (Ct. S. S.), No. 171 Atlantic avenue.....	Leased
Children's Court, No. 102 Court street.....	Leased
Kings County Jail, Raymond and Willoughby streets.....	Owned
Municipal Courts—	
First District, State and Court streets.....	Leased
Second District, Gates avenue, near Marcy avenue.....	Owned
Third District, Lee avenue and Clymer street.....	Owned
Fourth District, No. 14 Howard avenue.....	Leased
Fifth District, Third avenue and Fifty-second street.....	Leased
Sixth District, old Montauk Theatre Building (Fulton street).....	Owned
Seventh District, Pennsylvania avenue and Fulton street.....	Leased
Magistrates' Courts—	
First District, Adams street, near Myrtle avenue.....	Owned
Second District, Court and Butler streets.....	Leased
Third District, Vanderbilt and Myrtle avenues.....	Owned
Fourth District, No. 8 Lee avenue.....	Owned
Fifth District, Manhattan avenue and Powers street.....	Leased
Sixth District, Gates avenue, near Marcy avenue.....	Owned
Seventh District, No. 31 Snyder avenue.....	Owned
Eighth District, West Eighth street, Coney Island.....	Owned
Store House, Bath and C. S. supplies, No. 757 Myrtle avenue.....	Leased
Free Floating Baths—	
No. 1, foot of Fifty-eighth street	Owned
No. 2, foot of North First street.....	Owned
No. 3, foot of Noble street	Owned
No. 4, foot of Conover street	Owned
No. 5, foot of Dock street	Owned

Building and Location.	Leased or Owned.
Interior Baths—	
Hicks Street, Hicks street near Degraw street.....	Owned
Pitkin avenue, Pitkin avenue near Watkin street.....	Owned
Montrose Avenue, Montrose avenue near Union.....	Owned
Huron Street, Huron street near Manhattan avenue.....	Owned
Duffield Street, Duffield street near Concord street.....	Owned
Public Comfort Stations—	
Borough Hall, Fulton and Joralemon streets.....	Owned
Hamilton Avenue, Hamilton avenue and Richards street.....	Owned
Manhattan Avenue, Manhattan and Greenpoint avenues.....	Owned
Liberty Avenue, Liberty and East New York avenues.....	Owned
Reid Avenue, Reid avenue and Pulaski street.....	Owned
Lorimer Street, Lorimer street near Broadway.....	Owned
Bureau of Sewers, Mechanics' Bank Building, ninth and tenth floors, Montague and Court streets.....	Leased
Topographical Bureau, Jefferson Building, Court square.....	Leased

Borough Hall.

The occupants during the year were:

First Floor (Basement)—

Memorial Committee of the Grand Army of the Republic.
Veteran Firemen and Soldiers.
Police of Eighty-second Precinct.
Engine and boiler rooms.
Reporters' rooms.

Second Floor—

President of the Borough.
Commissioner of Public Works.
Deputy City Clerk.
Members of the Board of Aldermen.
Bureau of Licenses.
Coroner's offices and court room.
Clerks of the Appellate Division and Judges' Chambers.

Third Floor—

Stenographers, Presiding Justice Appellate Division Supreme Court.
Clerks and court room of the Appellate Division, Supreme Court.
Law Department.

Fourth Floor—

Bureau of Buildings.

Vast improvements were made to this building, which, with its site, is probably the most valuable parcel of real estate owned by the municipality in this Borough, during the year. This property is to-day assessed on the records of the Department of Taxes as valued at \$1,750,000. The building itself cost, nearly sixty years ago, when the population of Brooklyn was only one hundred thousand, \$715,000. As the City Hall in 1848, it was originally planned to cost from \$750,000 to \$1,000,000. Nearly fifteen years elapsed between the time that the site was begun to be built on and the completion of the structure. The project originated in 1834, in which year the park on the end of which the building stands, was purchased for \$52,900. The cornerstone of the original building was laid two years later. Constructed of marble and planned on a magnificent scale, it was intended to cover the whole of the land, consisting of one and one-half acres, of which the then City had become the purchaser. The dimensions of the site are 269 feet on Fulton street, 250 feet on Court street and 222 feet on Joralemon street. After the first story was erected, however, the panic of 1837 occurred and caused the work to be suspended. The walls were then covered. The total expense down to that time, including the cost of the site, was \$184,494. In 1838, a resolution to discontinue further work on the building on the ground that it was too expensive a proposition, was defeated in the Common Council, but in 1845, the walls of the original building were torn down, and the erection of the present less expensive building was begun. In 1848 the present building was so far completed that the municipal offices began to be transferred to it. Despite its old time architectural complexion, it is to-day considered one of the most imposing public buildings in this country and that its fame in this respect has extended, is evidenced by the fact that the municipal authorities of Cleveland, Ohio, a few years ago, when they were considering the erection of a Cleveland City Hall, sent on here for plans and figures descriptive of the now Borough Hall, so that it could be duplicated in Ohio's second city.

The Main Corridor Made Entirely New.

The most important work during 1906 in connection with the improvement of this building was comprehended by a contract let to Otto Metz, early in the summer, at his bid of \$2,133, the lowest of the bidders received, for remodeling the first floor corridor. This improvement, you will recall, was suggested by yourself, and to you more than any other one person is due the credit for the present attractive appearance of that corridor, which is used daily as a thoroughfare to and from Joralemon, Fulton and Court streets, by more people than pass through any other public structure in the main business section of the borough. Mr. Metz's contract included the removal of the entire old wooden floor and floor beams, the furnishing and setting of new floor beams, and the covering of the entire floor surface of the corridor with mosaic tiling. He was also obliged to remove the hardwood base attached to the panel wainscoting on the side walls and to substitute therefore new marble base and to place new marble saddles on the floor at all openings. In addition, by your directions, the ceilings and side walls of this corridor were enameled after the plastering had been thoroughly repaired, and the hardwood panel wainscoting, base, door jambs, door trim and doors were thoroughly cleaned off to the surface, then treated to a coat of wood filler, varnished three coats and rubbed to a dull finish. The hardware on all the main entrance and elevator doors was taken off and rebronzed and the old iron door saddles were removed from the three main entrances and brass door saddles substituted. Then, too, the old dilapidated doors leading from the various rooms to the corridor were removed and new hardwood doors, equipped with new bright fixings, were placed in their stead. The old and dim like gas lighting fixtures were also removed and new electric lamps substituted. Why these much needed improvements were not undertaken years ago, seems singular to comprehend. The cost of this work was intended to have been charged to a special bond issue of \$17,000 for general repairs to the building, but the appropriation not becoming accessible until some time after the contract was registered, it necessarily became a charge against our yearly Supplies and Repairs Fund, a contingency which we did not anticipate, and which interfered somewhat with the undertaking of some other desirable repairs towards the close of the year.

Most Offices Thoroughly Renovated.

Other repairs to the building during the year were individually less expensive but in the aggregate more costly. At an expense of \$200, I had the old panel and glass partition at the stair landing on the second floor removed and replaced with new hardwood and Florentine glass, and then had the wood work filled, varnished and rubbed, and Consulting Engineer Cruetzbar's room, Borough President Coler's private office, offices of the Commissioner of Public Works, Borough Secretary Adams' rooms, Secretary to the Borough President Mr. Heffernan's room, the quarters of the Appellate Division, Supreme Court, and the rooms of the Law Department, thoroughly renovated, so that the interior of the Borough Hall to-day will compare favorably with that of any of the older public buildings in Greater New York.

Further, very necessary repairs to the building included the thorough overhauling of the structure's copper roofing and stone coping and the renovating of the skylights, the brick work of the two boilers was repaired and new grate bars furnished; a new pump to carry water to the upper floor tanks was furnished; various repairs to the steam pipes throughout the building were made; the plumbing fixtures were repaired as occasion required, and in the offices of the Superintendent of Buildings on the top floor, partitions were erected to form small rooms for the engineers, plan examiners, chief inspector and assistant superintendent; a new window for ventilating purposes

was cut in the wall dividing two of the Corporation Counsel's offices, and a new skylight to increase the light in the Law Department's stenographers' office was placed in the roof of the building.

Another important matter in connection with this building attended to during the year, which at first had the appearance of a very serious and costly proposition, was called to your notice by the Bureau of Buildings by means of a violation notice on February 14. The Building Bureau's Inspector alleged that the section of the second floor over the City Clerk's office seemed to be carrying a load of 29,250 pounds, while the safe carrying capacity of the beams holding the floor was 10,800 pounds. It looked like a matter involving an expenditure, if the floor had to be strengthened, of about \$20,000. My Chief Inspector, however, with Superintendent Moore's Inspectors, held a conference which resulted in this bureau's carpenters remedying the condition, under the supervision of both bureaus' Inspectors, at a comparatively insignificant cost.

Cupola Clock's Improved Illumination.

A decided improvement to the building, and one which has attracted general attention from the public, has been the installation of a number of oval glass reflectors at the back of the four clock dials in the cupola. The Borough Hall clock, perhaps, is used more than any other timepiece in Brooklyn as a guide for regulating watches and household clocks, and toward the latter part of the year the Department of Water Supply, Gas and Electricity, which has jurisdiction over the payment of public building lighting bills, saw fit to substitute 25-candle power electric lamps for the 32-candle power lamps that have for years illuminated the faces of the clock. The result was that for practical purposes the clock was valueless after nightfall. The Department of Water Supply, Gas and Electricity did not seem inclined, at my protest, to return to the old order of lighting the clock, and at an expense of \$145 I had placed in the cupola, by a Manhattan electric fixture firm, four distinct electric circles, each with eight units of light and each unit of light backed up by a strong reflector shade. They are erected so as to face the four clock dials, one for each dial. Besides, there were erected four transparent white curtains, or shades, close to and back of each dial, and so arranged that each unit of light is directed with shades upon the back of the white curtains. This plan gives a smooth, even diffusion of light on each dial, so as to be seen at any angle, and entirely conceals the source of light. I issued the order under a guarantee. An idea of the plan may be obtained from the photograph herewith.

New Elevator System Planned.

I very much desire, and I expect to carry out the thought this year, to improve the passenger elevator in this building. The Building Bureau, on the ground of safety, has frequently requested it. The elevator is of an electric pattern which dates back many years. The present method of operation and control—a wheel in the car—has been superseded in more modern machines of recent installation by a magnet-controlled device, operated by a switch in the car. Under the present system the machine is constantly requiring expensive attention. I have received estimates for substituting the latest improved magnet control with switch varying from \$1,122 to \$1,400, and Borough President Coler, I believe, has asked the Board of Aldermen for permission to undertake the work without an advertised contract. The cost will be charged to the \$17,000 bond issue appropriation recently secured for bettering the condition of the building.

New Lamps for Borough Hall Entrance.

A sketch in connection with this report will show a project now well in hand for improving the appearance of the exterior of the building after dark. It consists of the erection of electroliers or candelabra, equipped with arc lamps in globes, for the front of the structure. They can be made of statuary bronze, or of cast iron galvanized, and then electro-bronzed. If constructed of statuary bronze they will cost approximately \$5,000. About \$2,000 will cover the cost if they are made of cast iron galvanized and electro-bronzed. The plans will be ready for the consideration of the Municipal Art Commission early next year. Similar lamps on the stoop of the Hall of Records have elicited general public commendation.

Kings County Court House.

The Court House was occupied during the year as follows:

Basement—

Boiler and engine room.
Storerooms.
Paint shop (Bureau of Public Building and Offices).

First Floor—

District Attorney.
Commissioner of Jurors.
Sheriff.
Grand Jury.
Newspaper reporters.
Janitor's office.
Naturalization Bureau.
County Court.
Clerks, Supreme Court

Second Floor—

Supreme Court.
Law Library.

Third Floor—

Jury rooms.
Janitor's apartments.
Offices Stenographers, Supreme Court.

The matter of providing quarters for five of the eight new Supreme Court Justices, Second Department, who were elected this year was by far the most important work done in this building during 1906. In view of the fact that almost every inch of available space in the Court House was occupied, and that there was no other building accessible for the purpose at the outset, the project seemed one fraught with considerable difficulty. Then, too, the rooms had to be provided within a comparatively brief time, so as to be in readiness for the new Justices at the beginning of the new year. We expected, as you will recall, to in time obtain a special appropriation with which to add two additional stories to the building, so as to accommodate these Justices, but it was absolutely necessary to provide at least some quarters for the new Justices at the opening of the year. I may say, parenthetically, that the proposition to add two additional stories to the building has now been abandoned, because the Board of Estimate and Apportionment, in keeping with a report of Chief Engineer Withington of the Finance Department, denied Borough President Coler's request for an issue of Corporate Stock to the amount of \$10,000 to cover the necessary expenses of preparing preliminary plans and specifications for the enlargement of the building.

Enlarged Supreme Court Quarters Quickly Arranged.

We proceeded in October, as soon as we had secured an appropriation of \$18,000 for the purpose of changing the interior of the building to make room for these Justices, to advertise a contract. The preparatory work was awarded to Rufus H. Brown, whose bid of \$4,900 was the lowest of six estimates, running from that figure to \$8,490, that were submitted for the bulk of the changes. Mr. Brown's contract did not include all of the work to be done in the Courthouse. New furniture, carpets, etc., had to be provided at a cost approximately between \$6,000 and \$7,000, and decorating and plumbing work costing several thousand dollars additional had to be provided for. The plans and specifications for the additional room proposition, were prepared by Inspector Peter Walsh of this Bureau, a practical builder, and the entire undertaking from start to finish was under Mr. Walsh's personal supervision. In the rear, and on the east side of the old corridor, a flight of iron stairs leading from the first to the third floor was removed, and these floors were extended on the second and third corridors. In this way we secured one new room on the first floor, which is now occupied as the headquarters of one of the new Justices; a new room on the second floor for the use of the Court Officers and a new room on the third floor, which is used as a jury room. Room 46 on the second floor, which was formerly

used by Chief Clerk of the Supreme Court McGee, was thoroughly renovated and made into a private chamber for four of the new local Justices. Rooms 19 and 20, on the first floor, which were formerly used for naturalization purposes by the County Court, and later by the Chief Clerk of the County Court, were placed in A No. 1 condition, and assigned to Chief Clerk McGee of the Supreme Court and his staff. Room 17, formerly occupied by Sheriff Flaherty's Deputies, was fixed up for County Court Chief Clerk Devoy and his Assistants, and the Sheriff's Deputies were transferred to Room 16, which was formerly used by the County Court.

To make these changes, so as to give satisfaction, generally required no little work, and I wish to give full credit in this connection to Inspector Walsh, whose mechanical generalship solved the problem. The comparatively little time we had in which to make this transformation, combined with the objections of the occupants of the building to the necessary noise incident to the contractor's operations, made the proposition one requiring considerable tact and good judgment. However, the work was successfully carried out and the new Judges are now comfortably, if not entirely satisfactorily situated. I would like to say, nevertheless, that the building should certainly be enlarged. The new Supreme Court Justices, instead of having separate offices, such as the officials of equal prominence in Manhattan enjoy, are crowded several in a room, and I have heard that they themselves are meditating a movement looking to the securing of a special appropriation which will bring about more commodious quarters for their private offices.

Proposed New Coal Vault for This Building.

The lack of room for the storage of coal in this building, which in the winter months consumes about eight tons per day, and approximately from nine hundred to one thousand tons a year, became apparent to me as soon as I had inspected the premises in January. I found that efforts to secure more stock room for fuel in this structure had been made by my immediate predecessor in office, and had resulted in the conversion for the purpose of some of the cellar compartments, which were needed for other uses, and which, being far removed from the furnaces, necessitated in the coal transportation time and labor on the part of the Firemen that could be better utilized in other directions. I found there was an opportunity to construct a big coal vault under the street surface, in the space between the Courthouse and the adjoining Hall of Records, on the Livingston street side, and at once had plans and specifications prepared by Assistant Engineers White and Griffith, of this Bureau, for such a structure. The contract for the work will be advertised and awarded early next year. Borough President Coler secured a Special Revenue Bond issue of \$5,000 for the purpose. The new vault will be approximately 57 feet long, 14 feet wide at one end, and 12 feet wide on the street end, with an average depth of seven feet. It will be built to hold approximately 135 tons of coal.

Early in the fall the grate bars and brick work of the building's three boilers were thoroughly repaired, the plumbing and sanitary arrangements were thoroughly overhauled and improved under open orders, and with its present plumbing, heating and ventilating systems, the condition of the building, instead of being unsanitary and fraught with danger to the inmates, as in years gone by, is sanitary and far beyond the average of that in similar buildings. So far as I was empowered, I have improved the office surroundings generally of the various officials quartered in this building.

To return to the suggested enlarging of the Court House, which, as I have explained above, by reason of the refusal of the Board of Estimate and Apportionment to grant Borough President Coler's request for a ten thousand dollar (\$10,000) appropriation for plans to enlarge the building, has been abandoned, I regret to say that the indications are that we will not, without a persistent effort, be able to secure sufficient funds for the purpose next year. The demands of the other boroughs in the same direction seem to point to this result. In Manhattan the City is meditating the purchase of an eight million dollar (\$8,000,000) site for a new Court House, on which, I believe, a twenty million dollar (\$20,000,000) building is to be constructed. In Queens the Court House is to be improved, I understand, at considerable expense, and Richmond, I have been told, is clamoring for improved court quarters. In view of these demands for City funds to enhance the City's various Court House buildings, our prospects for obtaining a large appropriation for this purpose are questionable; but at a moderate cost the present Kings County Court House could be enlarged. The scheme is practicable and the Supreme Court Justices housed therein earnestly desire it. I would respectfully suggest that funds for this purpose be again requested in 1907.

Municipal Building.

This building was occupied during the year 1906 as follows:

- Basement—
 - Engine and boiler room.
 - Carpenter shop.
 - Storeroom.
 - Department of Finance (Tax Bureau).
 - Department of Water Supply, Gas and Electricity. (Registrar of Water Rates.)
- First Floor—
 - Department of Finance. (Bureau of Collection of Assessments and Arrears.)
 - Department of Water Supply. (Water Registrar.)
- Second Floor—
 - Bureau of Highways.
 - Department of Taxes and Assessment.
- Third Floor—
 - Bureau of Public Buildings and Offices. (Executive offices.)
 - Department of Street Cleaning.
 - Bureau of Highways.
 - Department of Water Supply, Gas and Electricity.
 - Headquarters, Second Brigade.
- Fourth Floor—
 - Department of Water Supply, Gas and Electricity.
 - Superintendent of Public Baths and Comfort Stations.
 - Assistant Engineers and Draughtsmen, Public Buildings and Offices.
 - Bureau of Public Building Lighting, Department of Water Supply, Gas and Electricity.
 - Bureau of Highways' Laboratory.

In view of the meditated razing of this building to make way for the new Municipal Building, I have not ordered many repairs to this structure that would have otherwise received careful attention. As a matter of fact, there was a well grounded feeling during the summer among the officials located in the building that the structure was going down of itself by reason of the operations of subway contractors. Evidences of a seemingly dangerous condition of affairs in the structure were not wanting. There appeared at least one crack a quarter of an inch wide in one of the walls, and other cracks of almost as alarming dimensions were also observed. The subway contractors were found to have dug clear under the Joralemon street foundations. Superintendent of Buildings Moore quickly responded to this bureau's request for an investigation, however, and his experts assured us that as the cracks were only in the side walls, and that as there was no evidence of a collapse at the corners of the structure, there was no occasion for alarm. The building, at any rate, is now secure, as the tunnel operations below it are well nigh completed and its foundations fortified. The structure cost \$200,000 thirty years ago and is of solid build. From time to time during the year pieces of the ceiling have fallen and disturbed the peace of mind of the officials in whose offices the accidents occurred, but at the present time all fear of a serious condition of affairs seems to have been dispelled.

For necessary plumbing and steamfitting repairs there has been expended on the building during 1906 about \$600; the boilers and furnaces were overhauled and new grates furnished at a cost of about \$600; the roof was repaired and new water leader furnished; a new roof was placed on the horse shed in the yard; the offices of the Bureau of Public Buildings and Offices were renovated and partitioned off and considerable new fittings supplied, so that the details of the bureau's operations could be more conveniently and more satisfactorily carried on; the Cashier's compartment in the offices of the Commissioner of Taxes and Assessments was reconstructed at the request of Collector of Taxes David E. Austin; several of the offices were repainted; in answer to numerous complaints concerning the water supply in the closets on the third and fourth floors a cylindrical tank was placed on the roof, which is

supplied by a pump in the boiler room; the offices of the Assistant Engineer in charge of the Corporation Inspectors were partitioned and railed off, a new floor was laid and additional shelving placed in the book vault of the Deputy Register of Arrears on the first floor; the operating valves of the elevators were refined and two new fire exits were constructed in the basement, for the safety of the employees of the Department of Taxes; and on the small park adjoining this building a portable house for the Engineer of the Bureau of Sewers was erected, at an expense of \$75.

Much Needed Room Secured for the Bureau of Public Buildings and Offices.

The rooms on the top floor that were vacated by the Bureau of Sewers I had fitted up for the Assistant Engineers and Draughtsmen of this bureau, the Superintendent of Public Baths and Comfort Stations and the Public Building Lighting Bureau of the Department of Water Supply, Gas and Electricity. The removal of the Bureau of Sewers to the Mechanics' Bank Building gave this bureau much needed office space. The bureau's Assistant Engineers and Draughtsmen and the Superintendent of Baths and Comfort Stations had been crowded into the comparatively small space on the third floor, which I found the entire bureau occupying on the first of the year. With the additional space upstairs the various details of the bureau go on much more satisfactorily. Next year, with the understanding that the building will not be torn down in the very near future, I expect to make a few additional changes that will be appreciated by the various occupants.

Hall of Records.

The occupants of the Hall of Records during the year were:

- Basement—
 - Engine and boiler room.
 - Store room.
 - County Clerk's copyists.
- First Floor—
 - County Clerk.
 - Surrogate.
- Second Floor—
 - Register.
 - Commissioner of Records.
- Third Floor—
 - Commissioner of Records.
 - Keeper's apartments.
 - Accountants.

The new county officials with quarters in this building desired quite a number of improvements in their surroundings, after they had become well settled, and, so far as I found it expedient, I complied with their wishes. New storm sash was furnished and placed in the front windows of the Register's office, and the folding shutters on the metal cases in that official's quarters were repaired and equipped with new locking devices; this same class of furniture in the Surrogate's office was similarly attended to; the offices of the Deputy County Clerk were renovated at an expense of \$540, the ceilings being kalsomined, the side walls painted and the woodwork cleaned and varnished; in several rooms on the fourth floor the sash of five windows was cut down and transoms placed above them for ventilating purposes; in the book binding room in the basement thirty electric lamps were installed and new tiling was set where needed on the first and second floor main corridors.

The sanitary improvements effected in this building, in 1906, included the installation of a new water service system to supply the top floor. Various emergency repairs were made to the plumbing and heating systems during the year.

The only contract, of the many which went to improve this building during the past three or four years, that was left unfinished when I took office, was that of the Van Dorn Iron Works Company, of Cleveland, Ohio, for the installation of metallic furniture. This was completed a few months ago, and to-day the Hall of Records is one of the handsomest and best equipped public buildings in the greater city. There is now in the building an additional floor space of fully fifty per cent., and more help to care for the property, I feel, is necessary.

More Metallic Furniture Soon to Be Provided.

Borough President Coler secured an appropriation of \$9,500, last fall, for the cost of additional metallic furniture for this building, and plans and specifications have been prepared by the architect who arranged the specifications for the first installation, so that a second contract for this class of supply can be advertised next month.

Kings County Jail.

I have sought, since the first of the year, so far as practicable, to improve the very undesirable condition that has prevailed for some years in this building. The first week of my administration I made a personal inspection of the jail property and readily discerned the possibilities of a modest expenditure on the interior. Among the first orders I issued was one for the cleaning and whitewashing of the side walls of the men's prison. I also had a garbage retort constructed in the rear yard, so that the immense quantity of refuse from the prison kitchen, which had heretofore been thrown on the stones back of the cook house, could sanitarily be disposed of. New flooring was placed in the men's prison, a new tin roof was placed over the rear porch of the women's prison; the laundry and kitchen ranges were repaired; new leaders were placed on the stable, cook house and boiler room, and almost every day some repairs were made to the plumbing and steam fitting connection, the expense alone for this latter class of work footing up, for the year, over \$1,389.78. At an expense of over \$700, during the summer, I had the steamfitting plant in the boiler room and cook house, and the boilers and boiler brickwork thoroughly overhauled and made equal to new, and new grate bars installed. A new floor was also laid in the jail stable, and the main entrance gates were made secure.

Lack of Funds a Barrier.

In October I forwarded to Borough President Coler a detailed statement of the amount of money which, in my judgment, was absolutely necessary to place the various buildings at the southeast corner of Raymond and Willoughby streets, constituting the Kings County Jail, in a safe and sanitary condition. The total sum asked for was \$17,330. The work meditated included, in the men's prison, the repairing and painting of the ceiling and side walls, outside walls and iron work of 432 cells; whitewashing of the inside walls of the main building and the placing of new window frames and window bars, and a general overhauling of the interior of the civil prison, cook house, boiler room and woman's prison. With Mr. Coler I went before the Finance Committee of the Board of Aldermen in quest of this money, and, with his aid, finally succeeded in securing from the Common Council an appropriation of \$10,000 for improving the condition of this property. The Board of Estimate, however, cut the amount down to \$5,000, and I am now devising ways and means to use this limited appropriation to the best advantage.

New Jail Quarters Planned.

The only solutions, to my mind, of this vexed jail problem are at least one brand new structure, and a thorough renovation of one of the present buildings. The Borough President agrees with me in this respect, and in expectation of a special appropriation which he is going to use his best endeavors to secure, to defray the cost of the projects, I have instructed the assistant engineers of this bureau to prepare tentative plans for a new women's prison and for a rearrangement of some of the present property, for the approval of the Municipal Art Commission. I would respectfully direct your attention to the photographs of these plans which follow. From these it will be seen that it is proposed to remove the present women's prison, a portion of the jail wall, etc., and erect on their site a building corresponding in its general design to that part of the men's prison now occupied as an administration building and civil prison, making a building harmonious in its general architectural effect and indicative of the purposes for which it is contemplated, the building on the corner to be used as a women's prison and the central part of the proposed structure for administrative purposes.

Although ground plans are not presented, sufficient work has been done on such plans to show that in the structures contemplated it will be possible to provide ample

room for a complete heating and ventilating system for the entire plant, bath rooms, disinfecting and hospital rooms for both sexes, as well as an up-to-date kitchen. Provision will also be made for offices and sleeping quarters for the Warden and Deputy-Warden and the Matrons, a consulting room for prisoners and their counsel, a general office, bookkeepers' office, public waiting rooms, toilet accommodations, etc. In connection with the erection of this structure, consideration has also been given to a rearrangement of the present men's prison and civil prison, whereby a modern up-to-date building of steel construction, with the best sanitary arrangements, will be substituted in place of the present dark and unsanitary equipment.

Disciplinary Training School for Boys.

This institution, located in a group of buildings at Eighteenth avenue and Fifty-sixth street, which is managed by a Board of Directors appointed by the Mayor, is awarded direct every year an appropriation for its maintenance, so far as the feeding, clothing, tuition of the boys, payment of help and purchase of supplies is concerned.

The maintenance of the buildings, keeping them in repair and heating them is the duty of this bureau. The institution, largely by reason of its inadequate and dilapidated quarters, has been the subject of much public discussion for some years, and in June of this year I brought the matter before you, you will recall, in the form of a written statement, showing in detail the absolutely necessary repairs to the structure in order to make them comfortably habitable. That statement was founded on a careful inspection of the property by this bureau and set forth the need of a total appropriation of \$7,000 to meet the requirements. A resolution asking for that sum for the purpose was shortly afterward presented to the Board of Aldermen. It died in the Finance Committee of that body. In the absence of sufficient funds to thoroughly repair these buildings, this bureau's annual "supplies and repairs" appropriation would not admit of such an expenditure. You directed, I recall, that for the time being I should keep the property in reasonable repair. I have done so, but I cannot too strongly urge that new and improved quarters for this institution—which, I believe, is doing excellent work in this borough—should be provided.

Various repairs of an emergency character were made to the structure. In particular, the heating apparatus was repaired at an expense of nearly \$500, and for other repairs to the buildings we expended over \$650. Coal costing over \$2,200 was sent to the institution.

Firemen's Hall, Eastern District.

This building, on Bedford avenue, near North First street, which was formerly a part of the old Forty-seventh Regiment armory, has been occupied for some years, by authority of a resolution of the Common Council of the former City of Brooklyn, by the Exempt Firemen of the Eastern District. Its expense to the City for repairs during 1906 has been trifling. About the only expense it has entailed on this bureau during the year was \$25 for repairs to its roof.

Wallabout Market.

This bureau has to do with Wallabout Market only so far as the cleaning of the streets within the market proper is concerned, and employs a force of laborers and several horses and carts for the purpose the year round. The problem of keeping clean the streets of this market, which was a vexed one for several years, by reason of the fact, largely, that the City authorities empowered with the duty had no place to deposit the refuse collected, was finally and satisfactorily settled in 1902. The Street Cleaning Department has nothing whatever to do with the cleaning of the streets of markets. The charter, as you know, places that duty on the Borough Presidents. By an arrangement with the Street Cleaning Department, four years ago—an arrangement which is still in force—the market sweepings are dumped on one of that department's scows after being gathered by this bureau's force. These scows will not accept vegetable matter or manufacturer's refuse. All stuff of this character must be gathered separately by the market stand owners in cans which they themselves provide for the purpose, and which are emptied by the garbage contractors. This divided responsibility, however, has been the subject of some official discussion, and with a view of improving the method of work at Wallabout Market and also improving the property, Comptroller Metz last month presented to Borough President Coler a recommendation that the Borough President should bring the matter to the attention of the Board of Estimate for the purpose of obtaining funds toward this end.

Market Bath and Comfort Station Projected.

At the Borough President's request I had prepared a statement showing the approximate cost of various sanitary improvements at this market, and Mr. Coler brought it before the Board of Estimate. The proposition involved these prospective expenditures:

For the construction of a comfort station of a size suitable for the surroundings	\$15,000 00
For the removal of garbage from the market to the Street Cleaning Department's scows at the foot of Clinton street, by this bureau, which would necessitate the employment of two additional Laborers at a salary of \$750 per annum each, the purchase of three Street Cleaning Department carts at a cost of \$150 each, and the hiring of two additional horses, carts and drivers at a cost of \$1,000 per annum each, or a total yearly charge for the removal of garbage of.....	3,500 00
Total immediate appropriation.....	\$18,500 00

Later, by the Borough President's direction a larger and more serviceable comfort station and an interior bath was considered, and a resolution asking for an appropriation of \$50,000 for the bath and \$23,000 for the comfort station was presented. The money for these projects has not yet been forthcoming, but next year we have some hope of obtaining at least a portion of it.

During the year a defective brick retaining wall in the rear of the Administration Building—the latter was presented to the old City of Brooklyn by Mr. Alfred T. White, former Commissioner of City Works, and is used as a headquarters for this bureau's market force—was, after over a year's delay, made secure by the Federal Government to which it belongs as a part of the adjoining hospital property. It had been out of plumb, considerably out of line and was held by Special Inspector David F. Moore, now Superintendent of Buildings, in 1905, to be of insufficient strength to properly and safely support the bank of earth which pressed against it. It seems now to be in a safe condition, and threatens no damage to our Administration Building.

At an expense of about \$120, I had the furnace and boiler brick work of the Administration Building thoroughly repaired in the summer. The clock in the tower of the building, which is looked on as the farmers' time guide, was also repaired.

District Court Buildings.

City Magistrates' Courts.

The First, Third, Fourth, Seventh and Eighth District Courts are owned by the City, and the Second, Fifth and Sixth are leased. Some of these buildings are not in a satisfactory condition. This statement has reference to both leased and City owned structures. The leased property, because of seemingly ill-advised construction of the leases, this bureau cannot compel the landlords to place in proper condition, and the buildings owned by the municipality would either cost too much to warrant the necessary expenditure without special appropriations, or the property itself does not justify the expense.

Police Department Delays Adams Street Court Repairs.

One of these City owned buildings, which is jointly occupied by the Police Department and a City Magistrate's Court, and which is a comparatively new structure, I endeavored, by a proposition to Commissioner Bingham's department several months ago, to make sanitary and to generally improve, but up to date the Police Department has shown no practical disposition to share its part of the responsibility. I have reference to the building on Adams street, below Myrtle avenue, in which the First District City Magistrate's Court and the Forty-ninth Police Precinct are housed. I wrote Deputy Police Commissioner O'Keeffe in May explaining that I had under consideration a plan to improve the conditions in the quarters occupied by the Adams

Street Court, and stated that inasmuch as a part of the building was used by the Police Department, which by law attends to its own repairs, it seemed desirable that we should formulate a plan to carry on the work together. As a matter of fact, I pointed out to Mr. O'Keeffe one of the improvements contemplated comprehended a proposition which had to do with both portions of the building and which could not be made separately. This was to furnish adequate water supply for the whole building. The project incidentally called for the uncapping of a water service supply pipe which the Police Department had then recently run in from Adams street to the inside of the cellar wall and left capped. It should be properly connected, I suggested, to increase the means of flushing the toilets in both the police station and the court, and to adequately flush the court cells and slop sinks. Another reason why this bureau could not improve the court quarters separately, Mr. O'Keeffe was told, was that the slate work in the bath and shower rooms on the third floor, used by the police, and the radiators in the police rooms on the same floor, were found to be in a defective condition, so that drippings leaked down through the ceilings, loosening in many places large quantities of plaster in the court quarters. It would have been of no avail to fix up the rooms downstairs—such as plastering, papering, etc.—if the plumbing arrangements on the floor above were not made secure. Mr. O'Keeffe replied to my communication in June to the effect that the matter had been referred to the Bureau of Repairs and Supplies of his department, and that as soon as it had been approved he would apprise me of the fact. I have not heard from him since on the subject.

This building requires considerable repairs. They cannot judiciously be made by the Bureau of Public Buildings and Offices without the co-operation of the Police Department.

Unsuited for Court Purposes.

The Second District City Magistrate's Court is located in an ancient building, which is badly ventilated, at Court and Butler streets, under a resolution of the Sinking Fund Commission, dating back many years. It is owned by the estate of Charles A. Coe. The lease for the premises was last renewed by the Sinking Fund Commission on December 29, 1903, for a term of three years from January 1, 1904, at an annual rental of \$1,644. The premises are ill suited for public purposes. The building is a one-story and basement structure with a one-story extension on the north side. The interior is dilapidated and unsanitary, and in its chief construction is unfit for court purposes. It is heated by stoves and a furnace and lighted by gas. The court room floor beams have sagged, causing a depression in several places in the flooring of from two to three inches. The floor, when walked upon, shows considerable vibration and portions of the flooring are badly worn and in some places broken through. Several of the window openings, which contain 75 lights of glass each, are broken and others entirely gone. The woodwork of the window and sash frames is badly worn, broken and warped and the sash cords are broken. It is almost impossible to open and close the sash, by reason of the worn-out condition of the framework. The plaster on the side walls is loose and cracked and in some places is entirely broken off. The sanitary conditions are a menace to health. There is but one toilet room in the building and this is used by the magistrate, his subordinates and the public. This toilet room is also used for the purpose of storing the court stationery. In some places the side walls of this apartment have parted from the rear, permitting the daylight to show through.

There are two rooms in the extension, one used for men's cells and one for women's cells. The plumbing fixtures in these cells are foul and corroded, the atmosphere is foul and damp and without proper ventilation—in fact, the cells are unfit for human habitation. The building is overrun with vermin and rats are continually destroying the court stationery and the court records.

I brought the condition of this property to your notice, you will recall, in September, and suggested that the Sinking Fund Commission be asked not to renew the lease and in the meantime wrote to City Magistrate Tighe, who presided over the court, asking him to set a time and place when and where I could confer with him in connection with providing new quarters for his court room. My letter to Judge Tighe passed unnoticed. The lease of these premises will have expired on the first of next month, and it would seem now that the City will be obliged to enter into a holdover lease of the property for another year.

Recently Magistrate Tighe was reported in a Brooklyn newspaper as remarking from the Butler street bench:

"This place has been used for a court room for over sixty years. Some day it is going to fall in, and, with the crowds that frequently come here on days when there are hearings, there is going to be a big mortality list. Once before I was compelled to stop court and order every one from the place because the floor was settling and gave every evidence of possibly collapsing."

Yet Magistrate Tighe does not seem disposed to assist this bureau in locating better quarters for his court.

The Third District Court, at Myrtle and Vanderbilt avenues, and the Fourth District Court, at Lee avenue and Clymer street, in City property, have been kept in good condition so far as repairs to the building are concerned by the Bureau during the year. Both of these courts require new floor covering and new furniture, but the cost of these things, under the law, must be met by appropriations outside of the funds of this Bureau.

The Fifth District Court Building at Manhattan avenue and Powers street is owned by John Auer, who receives for it a rental of \$1,600 per year. Mr. Auer has refused to make some repairs to the property which the lease seems to bind him with and, through your office, the Corporation Counsel has been asked to pass upon the question. The building is in a fair condition.

The Sixth District Court is comfortably located on the lower floor of a new City building on Gates avenue near Marcy avenue, and has called for only emergency repairs during 1906.

The Seventh District Court is located in the former old Flatbush Town Hall, which is owned by the City on Snyder avenue, Flatbush, and is well situated.

The Eighth District Court divides with the Police Department the occupancy of a building owned by the City on West Eighth street, Coney Island. The Court quarters are cramped, and the Police could very conveniently use the whole building. In the summer months this is the busiest Magistrates' Court in Brooklyn, and it could well use more commodious quarters. The only expense of any moment to this Bureau occasioned by this Court in 1906 was in connection with emergency plumbing repairs.

Municipal Courts.

The First District Court at State and Court streets is housed in a leased building which the landlord keeps in suitable condition. Its furniture was repaired during the year by this Bureau at a trifling cost.

The Second District Court, in the upper part of the new Gates Avenue Court Building, which the City erected a few years ago on the site of the old Ninth Precinct Police Station, has called for but little attention by this Bureau in 1906. The cost of its janitor service and fuel was its greatest expense.

The Third District Court, on the second floor of the Lee and Division avenues building, owned by the City, has required this year only minor repair to its plumbing connections, but the court room floor covering was found to be in such a bad condition, and the Justice having no funds with which to purchase new, that I agreed to transfer to his use the cork carpet that was taken up in one of the Supreme Court rooms when the Court House repairs were recently made and which would otherwise have been sold as second hand material. The interior needs redecorating, and I expect to do it next year.

The Fourth District Court quarters at Howard avenue and Madison street are leased and are kept in a very satisfactory condition by the owner. The same may be said of the Fifth District Court at Third avenue and Fifty-third street.

Law's Delay Hindered New Courts' Operation.

The Sixth and Seventh District Courts came into being this year, and have called for no little attention from this Bureau. The former was assigned temporary quarters by the Sinking Fund Commission on the second floor of the old Montauk Theatre Building, which is now City property, on Fulton street. Given a special appropriation of \$1,100 for fitting up these premises for Court purposes and another of \$2,000 for equipping the court room, Justice's and Clerks' offices, I promptly undertook to place the property in condition for Justice Baylis' purposes. Bids were solicited for what actually turned out to be the practical construction of a court room and court offices from a large barnlike floor, and estimates varying from \$1,900 to \$993 were received.

The latter bid from John Byrne was accepted. The Bureau later furnished the court rooms and then installed a Janitor on the premises.

The Seventh District Court was found quarters by the Sinking Fund Commission in a hall at Fulton street and Pennsylvania avenue, which was leased for five years from January 1, 1906, at a yearly rental of \$2,500. Under the lease the landlord was called on to make the premises tenantable, reconstruct them to suit the Court's purposes and provide a Janitor. The Rev. A. Stewart Walsh owned the property when the lease was made. Very soon after the City had taken possession, the property was twice sold. The present owner is a local City Magistrate. The property's rapid change of ownership after the Court had been opened seemed to operate to put off the repairs which the lease called upon the landlord to make, and it was only when payment of the rent was withheld by the Comptroller at my request that the premises were placed in the condition by the owner that the lease demanded. The City appropriated for furnishings for this court room \$2,600, and as soon as notice was received that the money was accessible, I forwarded to Assistant Commissioner Van Vleck a contract for advertisement. The Court was doing business at the time without furniture of any description except a few second hand desks and chairs that I sent to the building for temporary purposes. Mr. Van Vleck, I found, forwarded the contract to the Law Department for approval, as is customary, the day after he received it, but the Corporation Counsel postponed action in the matter so long that the Justice and his Clerks found much fault, and at first felt that the blame rested with this Bureau. The Court is patronized by the large Brownsville section, where Court proceedings growing out of the immense real estate boom that the Hebrew part of the Twenty-sixth Ward has experienced within the past year or so are a characteristic of the neighborhood, and the Law Department's delay in passing upon the contract operated to make the Court conditions very undesirable. Ultimately, however, the contract was approved, advertised and awarded to the lowest bidder. The Court was then promptly and comfortably equipped.

Children's Court.

In leased property on Court near State street, this Court is very satisfactorily housed. Except for the cost of fuel and Janitor's services, it has been a source of very little expense to this Bureau during the year.

Court of Special Sessions.

While this Court is located in quarters which, I observe by this Bureau's records, are not satisfactory to the Justices, on the upper floor of the old Atheneum Building at Court and Clinton streets, there seems to have been no united effort made by the Justices to secure more desirable premises. The landlord furnishes heat, light and janitor's service. In 1906 this Bureau made some repairs to the furniture and clocks, and arranged rooms at a moderate expense to better suit the conveniences of the Clerks.

Projected District Court House.

A \$100,000 Headquarters for Municipal Justice Baylis Now Under Way.

The Sixth District Municipal Court quarters on the second floor of the Montauk Theatre Building, as I have explained, are only of a temporary character, it being the intention of the City to raze the building in order to make way for the Flatbush avenue extension. Until the project is in readiness the court can hold possession, but as soon as practicable, and I am led to believe, before the old theatre building has been torn down, I shall have a new modern court building ready for the use of Justice Baylis at the intersection of Flatbush avenue and Sterling place. The site is a narrow gore of land, which is really almost too small for practical building purposes, and which the owner of didn't think it worth while, evidently, for many years to pay taxes on. The City got the property with its tax mortgage for \$1,100 and then appropriated \$5,000 for plans for the court house, expecting at first to spend about \$50,000 more for the structure. The estimated cost of the building was probably based on the cost of the Gates avenue court house, which accommodates two courts—\$50,000. The original idea was to locate the Sixth District Municipal Court upstairs and the Second District City Magistrate's Court—the latter now occupies, as has been stated, very undesirable leased quarters at Court and Butler streets—downstairs. Architect Walter Parfitt was selected by Borough President Coler to design the structure. Mr. Parfitt found that the site was so cut up that it could not be used for a practical court building costing less than \$100,000, and, moreover, that it could be advantageously utilized only for a headquarters for one court. Then, too, the residents of the neighborhood—the location is close by the Park Slope section—strongly protested against the invasion of a police court there. Mr. Parfitt was thereupon instructed to prepare plans for a municipal court alone, on a \$100,000 basis. A photograph of the perspective of the proposed building is incorporated in this report.

The shape of the lot is triangular, the side of the triangle on Flatbush avenue being 141 feet 1 inch, on Sterling place 186 feet 3 inches, and the third side, being irregular, is about 132 feet. Twenty-one feet of the apex of the triangular being too small for use will not be built on so that the building will have a neat frontage on Flatbush avenue of 125 feet 1 inch, and on Sterling place of 145 feet 3 inches. The style may be termed Colonial. The height at the lowest point of the street at the apex will be 37 feet above the curb. The principal court room will have a floor area of 45 feet 9 inches by 76 feet 7 inches, with a height of 22 feet, and will contain besides the judges' bench and lawyers' enclosure, a seating area for two hundred and thirty persons, allowing ample room for aisles, etc.

The interior treatment and design will be in harmony with the exterior, the finish consisting of a panelled beam ceiling in plaster. The trim of windows, pilasters and wainscot will be of imitation marble, and rubber tiling will cover the floor, insuring a noiseless easily cleaned flooring. Abundance of light and ventilation will be provided from each of the four sides of the court room, which will have its longest side fronting on Sterling place, away from the street noises on Flatbush avenue.

In the apex of the building, which will be rounded, will be located the Judge's private room, 20 feet 8 inches in diameter, and it will be provided with an open fireplace. Adjoining and fronting on Flatbush avenue will be a library, having 96 linear feet of shelving, capable of containing 3,600 volumes. Adjoining will be accommodations for a stenographer and typewriter. Fronting on Flatbush avenue will be the clerk's general office, assistant clerk's office and clerks' toilet. The space between the Judge's private room and court room, fronting on Sterling place, will be occupied by a Judge's private toilet, private entrance, chief clerk's private office and two jury rooms, the latter having direct communication only with the court. At the rear of the clerk's general office and assistant clerk's office will be a 5 foot wide passageway, also a flight of stairs leading to a mezzanine story. In the clerk's general office will be a fireproof safe.

The main entrance to the court room will be at the southerly end of the plot, entering from Flatbush avenue, and will contain, first, a lobby 25 feet 6 inches by 15 feet, leading to a wide corridor. On one side will be the public toilets for both sexes, and to the rear a lawyers' consultation room, adjoining and just outside of the court room.

There will be four large, light wells or courts, occupying the space not otherwise appropriated, which will give light and air to the court room, corridors and halls, thus affording ample light and air to all parts of the building. At the easterly end of the plot and fronting on Sterling place will be an eight-room dwelling for the janitor. Over the jury rooms, clerks' offices and Judge's private room will be a mezzanine story, with a floor area and height capable of storing millions of records. All will be well lighted and ventilated with direct communication from the clerk's office.

In the basement will be the steam-heating plant, also ventilating apparatus, and a large space for additional records. The exterior of the building, above the first story to the cornice, will be of a light color limestone, and the basement of a light color brown stone, with granite water table. The cornice and parapet walls will be of a limestone color terra cotta.

Interior Baths.

We have in active operation the year round in this borough five interior baths, located as follows:

- No. 1—Hicks street, near Degraw street.
- No. 2—Pitkin avenue, near Watkins street.
- No. 3—Montrose avenue, near Union avenue.
- No. 4—Huron street, near Manhattan avenue.
- No. 5—Duffield street, near Concord street.

Bath System Rapidly Growing.

The indoor public bath system of Brooklyn has grown to be one of the most important branches of the work of the Bureau of Public Buildings and Offices. In general usefulness these buildings have increased wonderfully with time, and the records will bear out the statement that at no period of their history—they were established in 1903—has their popularity been so marked as during the first year of the present administration. We are now planning three more of these buildings, which, you will observe, are treated separately further on in this report.

Subject to my supervision, as you know, the interior baths are under the direct care of Mr. William H. Hale and his assistant, Mr. John P. Worstell. Both of these gentlemen are to be highly commended for their careful and competent attention to the multifarious details of the bath system during the year. Mr. Hale, to whom the small army of employees on the bath payrolls look for their daily instructions, is a particularly conscientious official. He entertains pronouncedly advanced ideas in connection with public betterments, and the interior bath proposition has been and is yet with him a special study. In his zeal in behalf of the public good in this connection I have ventured once or twice to remind him that we have not yet reached the ideal in the public bath relation, but, on the whole, I sincerely believe that no more able, alert or fair-minded Superintendent of Baths than Mr. Hale could have been found. He was appointed, as you are aware, by Borough President Coler.

Income From Baths Shows Phenomenal Increase.

The City's revenue from the sale of soap and use of towels and private rooms for tub bathing at these buildings, has been increased this year very far beyond all precedent. The total revenue from these sources in 1906, was \$11,414.61. This compares with \$4,446.75 in 1905; \$2,095.36 in 1904, and about \$200 in 1903, when the first baths were opened, or \$6,742.11, the total from the opening of the first bath till January 1, 1906. The above receipts for 1903, it should be explained, are reckoned approximately, because the records for that year do not itemize the income from baths and comfort stations separately.

The following table which has been very carefully compiled by Superintendent Hale, will give you a clear idea of the individual sources of this income.

	Hicks Street.	Pitkin Avenue.	Montrose Avenue.	Huron Street.	Duffield Street.	Total.
January	\$106 38	\$121 10	\$105 73	\$72 50	\$58 65	\$464 36
February	101 53	106 92	137 11	58 76	53 97	458 29
March	105 59	131 78	143 46	55 94	65 49	502 26
April	218 45	248 73	312 09	134 07	144 49	1,057 83
May	229 16	253 58	310 02	160 32	166 71	1,119 79
June	225 06	288 92	346 37	172 39	182 41	1,215 15
July	326 86	413 82	493 10	247 23	281 24	1,762 25
August	251 61	355 41	422 51	194 06	230 38	1,453 97
September	242 17	342 09	421 40	192 06	202 83	1,400 55
October	126 94	188 02	224 43	95 49	86 60	721 57
November	97 78	137 23	201 28	93 68	84 64	614 61
December	109 90	174 90	179 68	91 49	88 01	643 98
Year	\$2,141 43	\$2,862 50	\$3,297 18	\$1,567 99	\$1,645 51	\$11,414 61

The detailed statement of attendance at the several interior baths is as follows:

	Hicks Street.	Pitkin Avenue.	Montrose Avenue.	Huron Street.	Duffield Street.	Total.
January	42,234	30,995	51,245	17,947	14,235	156,656
February	33,159	28,357	32,857	15,418	14,233	124,024
March	32,663	38,652	33,545	14,549	22,839	142,248
April	30,793	41,167	47,956	26,639	22,090	168,645
May	36,479	53,477	55,492	23,703	22,734	191,885
June	43,139	66,428	76,519	32,117	23,711	241,914
July	50,311	61,867	89,266	36,848	23,393	261,685
August	43,713	66,883	95,891	40,170	26,369	273,026
September	35,507	45,190	69,924	29,047	20,206	199,874
October	29,183	32,561	43,338	15,478	13,216	133,776
November	18,501	25,065	41,261	13,280	13,991	112,098
December	18,958	26,523	26,636	12,015	15,166	99,298
Total	414,640	517,165	663,930	277,211	232,183	2,105,129

Of the foregoing, there were 1,452,249 men, and 652,880 women, distributed as follows:

	Men.	Women.	Total.
Hicks Street.....	285,749	128,891	414,640
Pitkin Avenue.....	362,184	154,981	517,165
Montrose Avenue.....	431,053	232,877	663,930
Huron Street.....	213,684	63,527	277,211
Duffield Street.....	159,579	72,604	232,183
Total for year.....	1,452,249	652,880	2,105,129

In 1905 the attendance was as follows:

	Men.	Women.	Total.
Hicks Street.....	426,509	193,139	619,648
Pitkin Avenue.....	287,226	108,811	396,037
Montrose Avenue.....	370,027	248,291	618,318

	Men.	Women.	Total.
Huron Street (9 months).....	186,528	96,974	277,502
Duffield Street (2 months, 20 days).....	28,074	11,135	39,209
Total for year.....	1,292,365	654,350	1,950,714

Bath Employees Underpaid.

Will you permit me to direct your attention in connection with these baths, to the subjoined statement to me from Superintendent Hale, which I believe describes a condition that should be seriously considered:

"It appears to me that the City has reason to be gratified at the prosperity of the year as shown by the phenomenal cash receipts, and also at the general efficiency of the working force, notwithstanding the fact that many of the Attendants are not adequately compensated. The salaries of some of the most experienced and efficient employees remains at the minimum rate after years of faithful service, during which the cost of living has been greatly enhanced. These salaries are not equalized up to the prevailing rates in Manhattan, nor to the rates paid to new appointees and persons newly transferred into the bath system here. This has resulted in a loss of several of our best workers, who have naturally been drawn away by higher salaries elsewhere.

"Cases of discipline have been but few, and they have had a salutary effect on the force.

"It is earnestly to be hoped that the authorities will not allow the great and useful work of the public bath system to be hampered by lack of sufficient funds to conduct the system on a liberal scale, thereby greatly contributing to the health and comfort of the people."

Bath Buildings Improved.

Considerable reconstruction and renovation were found necessary in these buildings during the year. At the Hicks street bath I had the interior repainted at an expense of \$550, the boiler brickwork repaired and new shaking grate bars installed, five new bath showers and pipes were substituted for defective ones, the floors and gutters were repaired, and numerous emergency repairs made to the plumbing fixtures.

At the Pitkin avenue building, one very important improvement made during 1906 was the installation of an ash-hoist, which was not included in the architect's plans, and which was greatly needed because ashes had to be raised by hand from the engine room to the sidewalk—a very long hoist, not only necessitating much hard work, but imperilling the safety of the workmen. At an expense of \$148, I had the brickwork of the two boilers repaired.

The most important improvement of the year, perhaps, at the Montrose avenue bath, was the construction of a sidewalk elevator for the hoisting of ashes. As at the Pitkin avenue bath, no provision for getting the ashes to the street was made in the original plans of the building. The project cost \$250. For the purpose of ventilating the engine room in this structure, I also had a new opening, inclosed with iron frame, and protected by an iron door, cut in the sidewalk. The situation fully justified the expense—\$164. The boiler brickwork of this building was also repaired at an expense of \$90, and new cast iron plates and door jambs were placed in the boilers.

Repairs to the plumbing connections were the most expensive work at the Huron and Duffield street baths during the year, and in this connection, I beg to call your attention to a suggestion which is incorporated in this report concerning the public comfort stations, with reference to appointing a practical plumber from a Civil Service list for constant duty in this Bureau.

I believe you will agree with me that a great saving of funds would result in such an appointment.

Floating Baths.

Brooklyn's five free floating baths, which were all thrown open to patrons this year about the middle of June, were located, as last year, as follows:

- No. 1, foot of Fifty-eighth street.
- No. 2, foot of North First street.
- No. 3, foot of Noble street.
- No. 4, foot of Conover street.
- No. 5, foot of Dock street.

The Noble street berth is owned by the City, and its occupancy, of course, entailed no expense on this Bureau. For the North First street berth we paid \$900; for the Fifty-eighth street berth, \$500; for the Conover street berth, \$400, and for the Dock street berth, \$500. These bath buildings were thoroughly renovated while lying in their winter berths at the foot of Thirtieth street, at an expense of about \$3,000, in the spring. The exact dates of their opening for bathing were: Fifty-eighth street, June 16; North First street, June 18; Noble street, June 19; Conover street, June 15, and Dock street, June 16. They were all officially closed on September 23, though bathing was permitted informally for two or three days later. The total attendance at the several baths was reported as follows:

	1906.	1905.
No. 1—Fifty-eighth Street.....	178,915	119,452
No. 2—North First Street.....	177,090	236,712
No. 3—Noble Street.....	168,565	152,292
No. 4—Conover Street.....	258,486	108,486
No. 5—Dock Street.....	264,165	184,399
Total.....	1,047,221	801,341

The total attendance by age and sex was as follows:

	1906.	1905.
Men	159,728	158,040
Boys	569,006	371,539
Women	74,013	86,261
Girls	244,474	185,501
Total.....	1,047,221	801,341

On Monday, Wednesdays and Saturdays men and boys exclusively were accommodated. On Tuesdays, Thursdays and Fridays women and girls enjoyed the privilege of free bathing, and on Sundays men were received in the forenoon, and women in the afternoon. The baths were open from 9 a. m., to 5 p. m., and when the weather was favorable, the hours were extended. The maintenance of these baths has been figured, estimating their expense to the City during the season, to cost about one and one-half mills per bather. They are absolutely free. Each building was equipped with a swimming apparatus for the instruction of novices, and the United States Life Saving Corps, under the supervision of former Assemblyman Edward C. Brennan, furnished the lessons.

Growing Pollution of Waters Considered.

From Superintendent Hale's report to me in connection with these baths, I append the following:

"The problem of sea bathing is one of increasing difficulty, owing to the growth of the metropolis and the pollution of the waters of the rivers and bay. It is of great importance to the public health that suitable facilities be furnished for such bathing, as it is well recognized that these baths are among the best possible tonics for many conditions of the system. During a recent visit to Boston I found men bathing on the 23d of November, at the beach at the foot of L street, South Boston, with the temperature of the water 42 degrees Fahrenheit, and I am told that bathing is continued throughout the winter, notwithstanding snow and ice. This beach was built about ten years ago by removing mud and filling in with sand at a cost stated to me as \$160,000."

In regard to pollution of the waters circumjacent to New York City, which has a direct bearing on our floating bath system, Mr. Hale draws my attention to an article from the "Engineering News," which has just been published, showing that, while the proper disposal of the sewage of the 5,000,000 people within the metropolitan district of New York, is a problem both unique and stupendous, there is no immediate cause for alarm, but indicates that minor and chiefly local pollution already exists and must become worse with the growth of population.

Proposed New Interior Baths.

An Appropriation of \$345,000 Provides Means for the Erection of Three New Buildings of This Character.

I found when I took charge of this bureau that contracts for plans for three new interior bath buildings, the cost of which is made chargeable to a Revenue Bond issue of \$345,000, had been awarded during the previous year, but that the projects, except in one instance, had not yet reached the stage of considering contracts for the buildings. The sites were selected by the previous administration as follows:

Northeast corner of Fourth avenue and President street.

Nostrand avenue, at the head of Stockton street.

Easterly side of Hamburg avenue and Willoughby avenue.

The architects selected for these buildings I found to be Mr. R. F. Almirall for the Fourth avenue structure; Messrs. Helmle, Huberty and Hudswell for the Nostrand avenue building and Messrs. Bernstein & Bernstein for the Hamburg avenue building. The project under charge of Mr. Almirall I found to be the only one of the three that had reached the building stage. Bids for the Fourth avenue bath, the records showed, were opened on December 20, 1905, and the firm of Clarke & Stowe were seen to be the lowest bidder at \$155,000. Borough President Littleton went out of office without awarding the contract, I believe, for several reasons. I understand that Mr. Littleton felt that more attention should be given to the matter before the contract was sealed than he was permitted to give it in the expiring hours of his administration, and that he concluded to leave it for the action of his successor. One thought that operated largely with him, I think, was that the amount of the lowest bid was in excess of the estimated pro rata cost of each building, so that if Clarke & Stowe's bid was to be accepted it would leave an apparent deficiency in the appropriation for the other two buildings. When the fact was brought by me to your attention and through you to the notice of the Borough President, you will remember it was shown that the Fourth avenue site could not well be utilized for a practical building costing less than the lowest bid received, and thereupon Clarke & Stowe were directed to proceed with the work. Thus far that firm's operations have not been just satisfactory. Their contract provides that they must assume all responsibility for piling work if such was found to be necessary. That contingency arose, and the contractors, who estimated the cost thereof at \$16,770, refused flatly to go on with the construction unless they were given an additional allowance to cover the expense of this work. The Corporation Counsel decided the question adversely to the contractors, and they have now agreed to complete the building at their original bid. One of the photographs herewith shows the building under way.

New Fourth Avenue Structure.

This bath will drain the Eighth, Twelfth and Twenty-second Wards, one of the most thickly populated sections of this borough. The estimated population of these three wards is 149,341. They comprehend the most densely populated of the so-called "newer sections." The tendency of population in Brooklyn is decidedly toward the outlying wards, and it is in these sections that the population to which public baths particularly appeal dwell. A big swimming pool has been planned for this bath. There are none in the other Brooklyn interior baths, and the idea at first met with some opposition on sanitary grounds. It was shown, however, that by emptying the pool frequently there was no fear of bad results, and the popularity of the scheme has rapidly grown.

The design of the Fourth avenue bath presents a building approximately 90 feet by 60 feet on the first floor, and approximately 50 feet high above the sidewalk level. The basement extends out approximately 25 feet, and 16 feet under the sidewalks of Fourth avenue and President street, respectively, and the floor is approximately 14 feet below the curb level.

Architecturally the treatment of the two facades indicates serious study to obtain a character of building that will indicate its use. Whether these results be called modified French in style or otherwise, the design is of no particular style, as understood by motives of detail.

In general, the base of the building will be cream-colored terra cotta, the brickwork above, laid in Flemish bond, will be of a rough texture and cream color and crowning the building will be a cream-colored terra cotta cornice and balustrade into which will enter a very considerable amount of faience work.

In the basement will be located the boiler and coal rooms, the heating and ventilating plants, the largest swimming pool in any public bath in or near New York City and the toilet accommodations. The fresh air will be filtered, warmed and forced throughout the different rooms by powerful fans.

The first floor will be reached by a short flight of stairs from Fourth avenue, which will divide and lead to the women's and men's waiting rooms, to the left and right, respectively, and will be separated by the office and service stairs. Each entrance to the swimming pool gallery on this floor and the shower baths on the floor above will be so controlled as to make the best supervision possible and permit of the swimming pool being used on separate days by men and women without interference with the use of the shower bath.

Back of the waiting rooms will be the gallery, extending above the outside portions of the pool, and thereon located will be the shower or cleansing baths and lockers for those who use the pool. Above will be two large shower bathrooms for men and women. These rooms will be not only provided with light and air by windows on the streets and courts, but also by ventilating skylights and ceiling lights, so that in summer, when the forced system of ventilation is not operated, abundant fresh air may be had.

The summary of baths is as follows: Women's showers, 30; women's bathtubs, 5; men's showers, 41; men's bathtubs, 4; cleansing showers in connection with swimming pool, 34.

The size of the swimming pool will be 40 feet by 60 feet, and its depth 3 feet 6 inches to 6 feet 6 inches.

Toilets will be provided for men and women in connection with all baths and separately for the employees.

New Nostrand Avenue Building.

An approximate total population of 137,073 embraced in the Seventh, Nineteenth and Twenty-first Wards will be readily accommodated by the Nostrand avenue bath. This building will occupy a plot 37 feet by 100 feet on Nostrand avenue at the head of Stockton street and 200 feet north of Myrtle avenue. It will be two stories high. The front will be of stone and it has been designed in the free classic style, simple, dignified and eminently suited for this type of public building. There will be separate entrances for men and women leading into ample waiting rooms. On the first floor there will be thirty shower rooms for men and fifteen for women, each with a separate dressing room.

On the second story there will be sixteen additional showers for men, making a total of sixty-one baths, with ample toilet rooms for both the public and attendants.

The baths will be fitted up in the most modern sanitary style, with partitions of soapstone, impervious to moisture or impurities of any kind, and the floors will be of terrazzo marble mosaic. There will be no part of the bath, from floor to ceiling, that cannot be flushed with a hose, thus insuring perfect cleanliness throughout.

The heating and ventilating system, being of prime importance, has received special attention. Fresh air will be drawn from above the roof, and after being passed through screens of cheesecloth, thus removing all dust, will be heated to the required temperature, and driven by powerful fans to every part of the building. A separate system of ducts will draw the foul air from each separate compartment and discharge it at the roof. In certain parts of the building there will be additional direct radiators of the usual pattern taking care of strictly local conditions.

Plans and specifications for this building, the architects say, are about ready, but, to avoid the condition that confronted us in connection with the Fourth avenue bath, I am having core borings made at the site, so that proper foundation plans may be incorporated in the contract. This will occasion only a brief delay, and the project should be advertised early in 1907.

New Hamburg Avenue Bath.

Within the confines of the three wards—Eighteenth, Twenty-seventh and Twenty-eighth—which the Hamburg avenue bath will conveniently accommodate, there dwell, approximately, 147,000 persons. The limits of the Twenty-eighth Ward alone contain the largest population of any ward in Brooklyn and a great percentage of these residents will take advantage of free bathing facilities.

The building will be located in the middle of a plot, 75 feet by 100 feet, located on the northeasterly side of Hamburg avenue at the corner of Willoughby avenue. In dimensions it will be 37 feet 6 inches by 96 feet. It will be of brick, and faced on the two facades with Indiana gray limestone with granite water table and base. The style of architecture will be of the Romanesque.

The interior wainscoting and stall partitions will be of Italian marble. The floors will be of soapstone and mosaic tile. The floor construction will be of the Columbian system or equally as good.

The heating will be of the indirect system. Forced ventilation will be employed for the removal of foul air through a system of air ducts. The basement will be used for the boiler room and coal storage and for laundry and drying rooms.

The first floor will contain two waiting rooms in the front portion, one for men and the other for women. The rear portion will be used for men and will contain four bath tubs and twenty-five shower and dressing rooms and four toilets; the second floor or first balcony for men will contain twenty-six shower and dressing rooms and two toilets; the third floor for men will contain twenty-six shower and dressing rooms and two toilets. The women's portion of the second floor will contain four bath tubs, eight shower and dressing rooms and four toilet rooms; on the portion of the third floor arranged for women will be located thirteen shower and dressing rooms and four toilet rooms. The total accommodations of the building will be eight bath tubs, ninety-eight shower and dressing rooms and sixteen toilet rooms.

The plans for this building were submitted to me for final approval some weeks ago, and referred back to the architects for a revision of the heating system, which as originally planned was not satisfactory. I expect shortly to advertise the contract for this structure.

Public Comfort Stations.

Six buildings of this character, which were constructed during 1902 and 1903, by means of three special appropriations, aggregating \$128,000, are located respectively as follows:

- At the junction of Fulton street and Joralemon street.
- At the intersection of Broadway and Reid avenue.
- At the intersection of Broadway and Lorimer street.
- At the corner of Hamilton avenue and Richards street.
- At the corner of Greenpoint and Manhattan avenues.
- At the intersection of Liberty and East New York avenues.

All of these structures are built underground. Four of them are in the form of an equilateral triangle, each of the sides being sixty feet in length and eight feet in height in the clear. The other two are rectangular in shape, approximately eighty feet long, eighteen feet wide and eight feet high in the clear. They are each divided into two compartments, one for women and one for men. Each compartment contains the necessary toilets and wash basins. A portion of these toilets are constructed with small rooms fitted up with the most approved plumbing, including separate wash bowls, and are supplied with looking-glasses, towels, soap, etc. All the structures, with the exception of the doors, are of steel and masonry construction. The interiors consist mainly of marble and enameled brick. The ceilings have a keen cement finish. The floors are of kosmocrete. All painted work is enameled with the view to cleanliness, it being known from experience that these stations to be a success must be kept clean, and where the paint is washable a hose can be turned on all parts as often as it is desired and a thorough washing given. Light in the day time is obtained by means of patent vault lights, and at night electricity is used for illuminating purposes. The stations are heated and ventilated by means of fresh air drawn through hot water coils by electric fans and then forced through flues and registers into two compartments into which the stations are divided. The foul air is exhausted by additional electric fans, through registers placed in each toilet, and then through flues to the outside air. By this means the air is changed almost every ten minutes. Separate staircases are provided for each sex. Each compartment has a small room or office for the use of the attendants in charge. These stations were all planned by Assistant Engineer Walter Griffith of this Bureau.

Plumbing Repairs Very Expensive in These Stations.

Great difficulty has been experienced in keeping the public comfort stations in proper repair owing to the continual breaking down of the plumbing. The expense of keeping them even so well plumbed as has been done, has been greatly disproportioned to the real necessities of the case, because of the inability to put our own plumber at once upon repairs as soon as they were needed. The great desideratum of the comfort stations is a plumber always at command and properly equipped to attend to repairs as soon as they are needed. The same principle applies also to the public baths, although these have not suffered quite as much in this connection as have the comfort stations. A great economy in our entire system will be attained by having the City purchase all its own plumbing supplies directly from the manufacturers, instead of commissioning hired plumbers to make such purchases and to charge them up against the City at an advance of 33 1-3 per cent. This practice, besides increasing the expense of supplies unduly, furnishes a constant temptation to the plumber to throw away fixtures that might readily be repaired and to buy new ones. These evils would all be avoided by employing our own plumber and purchasing our own supplies. I have found some manufacturers willing to sell to the City at the same rates as to the most favored customers, and if any will not do so, we can undoubtedly procure everything needed from these who will. Superintendent of Baths and Comfort Stations Hale reports cash receipts from the comfort stations for sale of soaps, use of towels and use of private rooms for the year as follows:

Borough Hall	\$165 00
Reid avenue	44 63
Lorimer street	132 80
Hamilton avenue	130 60
Greenpoint avenue	58 67
Liberty avenue	13 27
Total for year	\$544 97

The attendance at the various comfort stations was reported as follows, compared with 1905:

	1906.		Total.	1905.		Total.
	Men.	Women.		Men.	Women.	
Borough Hall.....	2,031,464	147,318	2,178,782	2,375,309	142,019	2,517,328
Reid avenue.....	1,832,072	290,144	2,122,216	1,283,742	281,495	1,565,237
Lorimer street.....	2,230,498	340,626	2,571,124	2,927,430	295,922	3,223,352
Hamilton avenue.....	1,618,930	464,231	2,083,161	1,891,716	283,496	2,175,212
Greenpoint avenue.....	1,570,346	178,656	1,749,002	1,552,725	181,043	1,733,768
Liberty avenue.....	774,426	255,981	1,030,407	758,964	162,955	921,919
Total.....	10,057,736	1,676,956	11,734,692	10,789,286	1,346,930	12,136,216

Growing Demand for Comfort Stations.

These stations continue to be a great convenience to the people, especially those at Borough Hall, Lorimer street and Hamilton avenue. The Reid avenue station is by no means so useful as a station at Fulton street and Flatbush avenue would be, which was the location originally selected for station No. 2, afterwards changed to Reid avenue because of the objections of the neighboring storekeepers, who probably did not know how little it would discommode them, if, indeed, it would have at all. A station at this point is needed, perhaps, more than anywhere else in Brooklyn, and I am inclined to believe, now that the experiment which frightened the business men in the neighborhood of Fulton street and Flatbush avenue, when a station at that point was projected four years ago, has been proven to be a totally inoffensive public utility from a sanitary point of view, and a desirable rather than an otherwise acquisition to a neighborhood that the storekeepers thereabouts would now welcome one there.

The Lorimer street station is not in a good condition because of the leakiness of the roof, which cannot be remedied, except with new roofing at considerable expense. I asked for an appropriation of \$5,000 in my Budget for 1907 for this purpose, but it was not allowed by the Board of Estimate.

The Hamilton avenue station is the only one of these buildings which cannot be termed a complete success. It is a very great care, and among employees an undesirable past, because it was built at so low a level that all sewage has to be pumped up in order to reach a grade from which it can flow off. This pumping has to be done usually about every twenty-three minutes. It was sought to correct this condition by installing a more powerful pump last year, but the improvement is not marked.

The Greenpoint avenue station requires new plastering and a thorough renovating inside, and I expect to do this work in January.

The Borough Hall and Reid avenue stations are in good condition.

Additional Comfort Stations Needed.

Following the thought referred to above with reference to the intersection of Fulton street and Flatbush avenue, I would respectfully direct your attention to the fact that several comfort stations are needed at congested points throughout the borough. Besides Fulton street and Flatbush avenue, I believe a comfort station should be planned for somewhere near the Long Island Railroad Depot, at Atlantic and Flatbush avenues, which locality will become still more congested on the full and free opening of widened Livingston street; at the Williamsburg Bridge plaza; at Coney Island, and other points which, if the idea meets with your favor, I shall be pleased to indicate.

Apropos of this subject, I forwarded in February last to Borough Secretary Adams, by order of President Coler, a report concerning the acquiring of title for a site for a comfort station, including the probable cost of the work, and a statement of the value of the real estate included in the probable area of assessment, on property bounded by Patchen avenue, Fulton and Sumpter streets. The matter was suggested, I believe, by one of the local boards. I feel that a station in the vicinity indicated is desirable. My estimate for the building, basing it on the style of the Lorimer street station, so as to have a small park effect, was \$30,000, and the estimated value of the property to be condemned, \$10,000. The assessed value of the property included in the area of assessment was found to be \$21,714.180.

Residents of the Twenty-seventh and Twenty-eighth wards this year petitioned us for the construction of a comfort station at the intersection of Myrtle, Wyckoff and Gates avenues and Palmetto street. This bureau's inquiry into the matter developed the fact that a structure of this character was needed in the neighborhood indicated. Incidentally it was found that the sewers along Palmetto street and Gates avenue were of sufficient depth to permit of an underground station being built on either of these streets, preferably Palmetto street, owing to the greater depth. I think a station here, similar to that on Manhattan avenue, the cost of which would be approximately \$25,000, would be a very desirable project.

Headstones for Veterans' Graves.

A contract for headstones for the graves of deceased veteran soldiers and sailors in the cemeteries of Kings and Queens counties, a matter which is under the care of this bureau, was let in 1906 to P. H. Haran. This contract called for the marking and erecting of one hundred stones. The contract was completed and the stones placed in cemeteries as follows:

Cypress Hills	9
Holy Cross	23
Lutheran	13
Evergreen	13
Greenwood	16
Calvary	11
Mt. Olivet	6
Flushing	2
Canarsie	4
St. Michael's	1
St. John's	2

These stones cost about \$11 each. The expenditure is regulated by chapter 225 of the Laws of 1896, providing that each grave of deceased soldiers and sailors from Kings County in the cemeteries of Kings and Queens counties shall be marked by a headstone containing the deceased's name, and if possible, the organization to which he belonged, or in which he served. The expense of such headstones is chargeable upon the county of the deceased's legal residence. The stones, it is provided, shall not cost more than \$15 each. Provision was made in this bureau's budget this year for \$1,500 for the purpose. The applications for the stones come through the Memorial and Executive Committee of the Grand Army of the Republic, and there are so many on hand now that I have requested Borough President Coler to secure a special appropriation to meet the cost thereof next year.

Brooklyn Theatre Fire Victims' Plot in Greenwood Cemetery.

The care of the plot in Greenwood Cemetery in which are interred the remains of the unidentified dead of the Brooklyn Theatre fire has been under the care of this bureau for several years. Fifty dollars per year is regularly appropriated by the City for keeping this plot in order and during 1906 it was properly taken care of.

This plot contains the one hundred and one unidentified bodies of the two hundred and ninety-five victims of the Brooklyn Theatre fire, which occurred on December 5, 1876. The plot was bought by the City of Brooklyn. It is on "Battle Hill," only a short distance from the main entrance to the cemetery. The interment was made on Saturday, December 9, 1876, four days after the holocaust. It took seventeen hearses and forty-five undertakers' wagons, the latter containing from one to four corpses each, to carry the remains. The bodies were interred in one common grave, a circular trench seven feet deep and thirteen feet wide, surrounding a round sodded space ten feet in diameter, upon which a monument was subsequently erected. The bodies are placed in a double row, the heads all pointing toward the monumental

centre. This lot I have just caused to be fertilized for the winter months. As soon as the warm weather approaches, the lot will be planted with flowers and the grass cut.

Street Signs.

A special appropriation of \$5,000 for new street signs for this borough has been accessible for several weeks, but the project has been somewhat delayed by complications which could not well have been avoided. In the first place, it seemed to me that these signs should be purchased without an advertised contract for the reason that it was difficult to tell just what style of sign was most desirable until they had been installed and an expression of public opinion obtained as to their practicability, and if a number of manufacturers' goods had been included in one contract, no one manufacturer, my experience has been, would have felt free to bid on the varied specifications. Our request to the Board of Aldermen to expend the appropriation on open orders was not granted. Some little time was taken up in this direction. When I found that we had to arrange to buy these signs by advertised contract, I arranged to get up a list of streets where the signs are most needed, and have since been considering which style of sign, out of a great number submitted, would best suit the purpose. I think I have now solved the question and early in the new year I shall have a contract ready for advertising.

Purchase of Ice and Coal.

Ice for the offices within the jurisdiction of the Borough President and coal for the public buildings under the Borough President's charge are purchased by advertised contract. The contract for ice this year called for the delivery of over 475,000 pounds. Despite the scarcity of this very necessary hot weather commodity during the summer, we succeeded in getting all that was required, and at the very reasonable cost of twenty-five cents per hundredweight for all points of delivery, except the baths and comfort stations. For the latter deliveries our contract called for thirty cents per hundredweight.

Our coal was purchased by contract at \$5.80 per gross ton, while the Manhattan authorities were reported to have received as the lowest bid for coal, \$6.44 per ton. This year's contract provided for 34,800 tons, and contained a 20 per cent. clause, which will supply us until we can complete a contract for 1907.

PROJECTED EIGHTH WARD MARKET.

A Group of Buildings That Will Form One of the Biggest Institutions of its Kind in the World.

WILL COST OVER TWO MILLION DOLLARS.

The Foundation Now Well Under Way. Much Land Under Water Being Filled In. Indicates a Yearly Income to the City when Completed of \$125,000.

The wholesale market to be located in the Eighth Ward of this borough, which is an engineering project of no small moment, and the details of which are being planned by Assistant Engineers E. S. White and Walter Griffith of this Bureau, under the supervision of Borough Consulting Engineer R. W. Creuzbaur and your Superintendent of Public Buildings and Offices, is gradually reaching a concrete stage. Early in January we shall open bids in connection with an advertised contract for building a temporary bulkhead on this property. This will be the first formal contract to be let with reference to the work, but general preliminary operations have been going on at the site, under the care of this Bureau for several months.

This undertaking originated with the Local Board of the Bay Ridge District in June, 1903, when it was recommended by that body to the Board of Estimate and Apportionment that the map or plan of the City should be altered so as to lay out a public market in the Eighth Ward of this borough. This was the territory comprehended:

Beginning at a point on the westerly line or side of Second avenue, 375 feet north of the centre line of Thirty-ninth street, as said street is laid down on the map of the Commissioners appointed by the Legislature of the State of New York, to lay out streets, avenues and squares in The City of New York; running thence westerly on a line parallel with and distant 375 feet from said centre line of Thirty-ninth street and a line drawn in continuation thereof 994.52 feet; thence northwesterly 350.89 feet to a point 717 feet northerly from the continuation of the centre line of Thirty-ninth street; thence easterly and parallel with said centre line of Thirty-ninth street 916.02 feet to the westerly line or side of Second avenue 342 feet to the point or place of beginning.

It was not until Borough President Coler came into office that funds were secured to further the idea. The Board of Estimate on June 22, 1906, appropriated \$200,000 to be used in the preparation of land for this market, and this appropriation was approved by the Board of Aldermen on July 24, 1906. His Honor the Mayor approved it on July 31, 1906. Thereupon I was instructed by Borough President Coler to get up a feasible scheme for the market. I presented such a scheme to Mr. Coler before the close of May, and he promptly approved it. The plan in detail provided for the following:

A pier 600 feet long by 60 feet wide, having a depth of water alongside of 18 feet mean low tide, and a recreation pier overhead.

Space for 150 buildings, each 20 feet by 60 feet.

A market square to accommodate about one hundred and fifty wagons.

An overhead trolley system for distributing produce to any point on the property, also for collecting market rubbish and garbage.

A reserve space of 300 feet by 70 feet on which it is proposed to erect an incinerator plant to dispose of the rubbish and garbage from the market, as well as rubbish collected in this section of the borough by the Department of Street Cleaning, from which a light, power and cold-air plant for market purposes can be operated.

On this space a public bath, comfort station and administration building for the market will also be erected.

The salient features of the plan are:

First—Facility to receive and dispose of all classes of market produce by boat at pier, and thence by overhead trolley service to any point on the premises by cars via railroad float direct to buildings, or by means of overhead trolley; accommodations to receive freight at one entrance of the building and to dispose of it to retailers at the opposite end, thereby preventing a congestion of wagon traffic; the advantages of wide streets and many entrances thereto.

Second—Clean granite pavement on concrete with proper provision for surface drainage; provision for the burning of garbage and rubbish, with overhead trolley service to collect it; floors for buildings, so that hose can be used on them.

Third—An incinerator plant, from which light, power and cold-air plants are operated.

Fourth—An overhead trolley system, power for which is to be obtained from incinerator, thereby saving a vast amount of trucking.

Fifth—A recreation pier, public bath and comfort station, all of which are needed in this section of the borough.

Sixth—Buildings of neat and simple design of fireproof construction, sanitary and arranged to be rented in bays of 20 feet by 60 feet and more, and supplied with light, power and cold-air from a central plant.

Seventh—A subway for all kinds of pipe, etc., so that pavement will remain intact when once laid.

Eighth—The entire property to be inclosed by fence and gates at various entrances, so that perfect control may be had over it in its entirety.

The estimated cost of the project as outlined was \$2,057,782, itemized as follows:

Dredging	\$43,462 00
Pier	55,350 00
Recreation shed	128,000 00
One hundred and fifty market buildings	1,050,000 00
Bulkhead	60,000 00
Piles sheeting	26,000 00
Granite pavement on concrete	148,354 00
Overhead trolley system	35,000 00
Incinerator, power and cold-air plant and lighting	150,000 00
Sewers and drainage	20,000 00
Railroad yard and float bridge	50,000 00

Public bath, comfort station and administration building	100,000 00
Contingencies	191,616 00
	<u>\$2,057,782 00</u>

No allowance is made here for filling (approximately) 325,000 cubic yards, which should be a revenue instead of an expense.

The following is set forth as a fair and reasonable financial statement resulting from this improvement:

Estimated Cost—	
Land	\$800,000 00
Improvement	2,057,782 00
	<u>\$2,857,782 00</u>

Estimated Revenue—	
Wharfage	\$1,200 00
Fees from market wagons	2,500 00
Overhead trolley system (50 cents per day from 100 stands for 300 days)	15,000 00
Cold-air plant	15,000 00
Rental of 150 buildings, at \$900 per year	135,000 00
	<u>\$168,700 00</u>

Estimated Operating Expenses—	
6 Motormen operating overhead trolley, at \$900 each	\$5,400 00
3 Electrical Engineers, at \$1,460 each	4,380 00
3 Engineers, cold air plant, at \$1,460 each	4,380 00
1 Electrician and Helper	2,500 00
1 Machinist and Helper	2,500 00
9 Firemen, at \$1,095 each	9,855 00
3 Oilers, at \$900 each	2,700 00
1 Lamp Man	1,000 00
8 Laborers, at \$900 each	7,200 00
1 Superintendent	2,000 00
Contingencies	1,785 00
	<u>43,700 00</u>

Showing a net earning of..... \$125,000 00

As a greater part of the property is under water, it had to be filled in, and by permitting it to be used as a free dump for all such material as was suitable for the purpose about 20,000 cubic yards was thus obtained, and more was available had not the work been stopped by the Federal authorities, on the claim that the material was filling up the ship channel at the end of the pierhead line now being excavated by the Government, and that the work could not be proceeded with until steps were taken to confine the fill by a bulkhead or other means.

Although a general bulkhead plan had been considered by this bureau and preliminary sketches made therefor, it was found that a permanent structure could not be erected at present, owing to the fact that Thirty-sixth street has not been declared an open street, and other legal complications, which had not been adjusted when the property was purchased. While proceedings have been commenced to open Thirty-sixth street and remove all obstacles in the way of further advancement of the work, it has been deemed advisable to build a temporary bulkhead in such manner as to permit the City receiving the benefit of the vast amount of filling now obtainable, without cost, from various sources. We therefore prepared plans and specifications for a temporary bulkhead suitable for this purpose. These having been approved by Mr. Creuzbaur, the Consulting Engineer of the Borough, the Engineers for the Commissioner of Docks and Ferries and the Army Engineer in control of the harbor, the work in accordance therewith, as I have explained above, will soon be advertised.

In the meantime, plans for the furtherance of the scheme are under way in this bureau, with the result that soundings of the entire site under water have been made, the property cross-sectioned and elevations given for cuts and fills for grading whereby some additional cubic yards of material can be utilized at once.

Tentative grade charts have been made, plans for a sewage system are about ready, building plans, consisting of a perspective drawing of the entire market, one colored perspective drawing of the tower or administration building, one revised, approved general plan or map of the market improvement, one isometric drawing of Blocks 1 and 10, one-quarter scale drawing of three buildings, including a corner and one-quarter scale drawing of one-half of Second avenue entrance have been submitted to the Municipal Art Commission for its approval. Preliminary plans have also been made of the proposed incinerator and boiler plant, cold air plant and public bath and comfort station.

It will thus be seen that this project is well in hand, and every effort is being made to start actual construction of the buildings on Blocks 1 and 10 in the early spring.

The accompanying photographs give a general idea of the work.

At the site I have had erected a portable building for the use of the bureau force and furnished it sufficient for all purposes. It is heated by stoves.

Municipal Garage in View.

There are now eight automobiles in use in the various branches of the Borough President's department which are stored in garages throughout the Borough at a total annual cost of \$1,620 for storage and cleaning alone. The cost of maintaining these cars, which comprehends the purchase of gasoline, lubricating oil, new parts and labor, is arranged through open orders issued by this Bureau and in a year it foots up a substantial sum. Our Automobile Enginemen are all capable of making repairs to the machines, and by purchasing the supplies and new parts in large quantities, with the Enginemen to make the repairs, we could materially reduce the cost of caring for the automobiles. With this thought in view a municipal garage was suggested.

We contemplate the building of a moderate-sized garage under the approach to the Brooklyn Bridge, at the northwest corner of Washington and Tillary streets. It is planned to be approximately 50 feet by 50 feet and 12 feet high, with a capacity for twelve cars, and equipped with washstand, repair pit, office and locker room, toilet accommodations, boiler room, work bench, etc. It is estimated to cost approximately \$6,000. The project is yet in embryo, but I shall have a practical scheme covering it, ready for submission early in the new year. My idea is to place the garage under the systematic care of an experienced automobile mechanic, with proper assistants and to hold him responsible for the condition of the cars when they leave the garage; to see that they are supplied with such extra parts as may be needed in case of a mishap and to keep a daily record of each car showing the quantity of supplies used and the number of repairs made.

Proposed Embellishment of the Prospect Park Plaza in Connection with the Central Library Building.

The scheme of embellishment of the plaza of Prospect Park, approved by Borough President Coler, is of significant importance, not only to Brooklyn, but to the entire City of New York, indicating conservative artistic development in a borough famous for its homes and permitting now of opportunities in improvement which, if neglected, will not present themselves again. Although at the present time many monuments attest to the civic pride of the municipality and individual munificence—including a splendid aggregation of comfortable library buildings, which constitute a wonderful collection of modern achievement—there is not to be found in New York or in the United States any ensemble decoratif of the kind. The design of Raymond F. Almiral, architect, to whom this great work has been entrusted, is of sufficient merit to rank The City of New York among the world's great cities of artistic development.

Taking advantage of the necessity of this improvement to determine the future of the Borough and provide educational facilities of a high order of artistic merit to the public and of its logical sequence to the selection of the admirable site on the plaza for the Brooklyn Public Library, the Borough President has, with commendable promptness, proceeded to bring the matter to public notice.

The slight ascent of the plaza in the direction of the park, its form, the Central Library and balancing buildings flanking the main entrance to the park, permit of an exceptional architectural composition unlike any recalled in Paris, Rome, Vienna, London or Berlin, or in any other city where in the past or present similar places for public enjoyment and festivals have been designed.

The treatment is unique. The extended plaza will frame, with the new and monumental entrance to the park, the two great monumental buildings and make them requisite to the successful accomplishment of the design. The diverse elements of the composition are drawn together by a portico, the decorative effect of which will be completed by two fountains and terrace gardens of exceptional artistic interest, while the portico will serve the double purpose of a shelter from sun or shower and admirable point from which to view the plaza itself.

The plaza comprises an elliptical avenue reserved for the use of vehicles and cars, the central space being reserved to pedestrians and those who will seek recreation in the beautiful French garden, embellished with statues and vases, shrubbery and flowers in decorative designs, the centre of which will be occupied by a monumental and imposing fountain, placed at the exact intersection of the axes of Flatbush and Vanderbilt avenues.

The proposed embellishment of the plaza is of peculiar elegance and takes advantage of the space and conditions, utilizing and making them essentials in an expression of rare æsthetic conception, different and more comprehensive than any other plaza or square in the world.

Proposed New Municipal Building.

After years of delay the building for the accommodation of the municipal offices, now housed in the old Municipal Building, together with several of the departments now occupying the Borough Hall or rented quarters, and four large new court rooms, is undergoing the preliminary stages of the preparation of the plans. It is expected that it will be possible to start the actual construction work in a few months.

The plans approved by President Coler, which have been prepared by Messrs. Lord & Hewlett, architects, provide for a building approximately 250 feet by 300 feet, and it is designed to extend from Joralemon street through to Livingston street, including the present property of the Polytechnic Institute, for the acquiring of which the initial steps have already been taken.

The plans call for a simple massive type of building, devoid of superfluous architectural enrichment, and of a character that shall suggest the practical uses of the department offices.

Upon the ground floor will be situated the Department of the Receiver of Taxes and Arrears, Registrar of Water Rates, and Registrar of Arrears. Above this will be a mezzanine floor devoted to smaller offices and giving opportunity for an increase of the space devoted to the four important departments mentioned above. Upon the third floor will be situated four ample court rooms with various judges' rooms, jury rooms, etc., and space for the offices of the District Attorney. Above the court room floor will be six stories of offices, serving other functions of the government of the borough. And above these will be an additional story designed particularly with a view to procuring ample and well-lighted draughting space for the engineering and building forces of the borough.

The building will be built of either light granite or white marble, and it is estimated to cost about \$3,000,000. There is now available for the commencement of this work the sum of \$500,000, with which preliminary contracts will be entered into as soon as possible for the excavation and foundation work of the building.

In closing this report I wish respectfully to make known to you the fact that I have been well supported in the administration of this bureau during the year by the entire force of over four hundred employees.

Very respectfully yours,

JOSEPH M. LAWRENCE, Superintendent.

During the year 1906 there were completed in the Borough of Brooklyn 7,067 buildings, at an estimated cost of \$47,950,276, and provision was made in these buildings for 21,794 families, or a total of 108,970 persons (averaging five persons to a family).

OPERATIONS OF THE BUREAU OF BUILDINGS, BOROUGH OF BROOKLYN, NEW YORK CITY, FOR THE YEAR ENDING DECEMBER 31, 1906.

Plans and Specifications for New Buildings filed and Acted Upon During the Year Ending December 31, 1906.

Classification.	Number of Applications.	Number of Buildings.	Estimated Cost.
1. Dwelling houses, estimated cost over \$50,000.....	.....	.....	.....
2. Dwelling houses, estimated cost between \$20,000 and \$50,000.....	7	7	\$193,000 00
3. Dwelling houses, estimated cost less than \$20,000.....	509	2,239	10,243,400 00
4. Tenements, estimated cost between \$20,000 and \$50,000.....	225	348	11,305,000 00
5. Tenement houses, estimated cost less than \$20,000.....	621	1,962	18,374,800 00
6. Stores, estimated cost over \$30,000.....	17	18	1,235,000 00
7. Stores, estimated cost between \$15,000 and \$30,000.....	13	13	268,000 00
8. Stores, estimated cost less than \$15,000.....	80	112	602,200 00
9. Stores and two families.....	279	561	3,325,150 00
10. Office buildings.....	12	12	652,400 00
11. Manufactories and workshops—brick.....	135	144	2,534,385 00
12. Manufactories and workshops—frame.....	72	72	196,305 00
13. School houses.....	11	11	2,135,000 00
14. Churches.....	19	19	996,000 00
15. Public buildings, Municipal.....	24	29	842,695 00
16. Public buildings, places of amusement, etc.....	9	9	656,000 00
17. Stables.....	136	140	818,425 00
18. Brick sundries.....	101	106	1,109,100 00
19. Frame dwellings.....	1,015	1,612	6,676,785 00
20. Frame tenements.....	120	311	1,485,900 00
21. Frame stores, two families.....	90	143	648,150 00
22. Other frame structures.....	688	716	668,630 00
Total.....	4,193	8,584	\$65,066,325 00

Plans and Specifications for Alterations to Buildings Filed and Acted Upon During the Year Ending December 31, 1906.

Classification.	Number of Applications.	Number of Buildings.	Estimated Cost.
1. Dwellings.....	491	529	\$562,305 00
2. Flats.....	.....	.....	.....
3. Tenements.....	394	476	344,210 00

Classification.	Number of Applications.	Number of Buildings.	Estimated Cost.
4. Hotels and boarding houses.....	10	10	16,170 00
5. Stores.....	119	147	735,195 00
6. Offices.....	19	20	163,625 00
7. Manufactories and workshops.....	156	163	704,506 00
8. Schools.....	18	19	585,750 00
9. Churches.....	10	10	57,685 00
10. Public buildings.....	38	42	501,440 00
11. Stables.....	48	52	116,525 00
12. Frame buildings.....	2,511	2,732	1,604,199 00
Total.....	3,814	4,200	\$5,391,610 00

Complaints Received and Investigated During the Year Ending December 31, 1906.

Nature.	Pending Jan. 1, 1905.	Received Since.	Total.	Unfounded.	Remedied on Verbal Notice.	Notice Issued.	Total.	Pending Dec. 31, 1906.
Defective flues.....	..	29	29	10	3	16	29	..
Defective construction, materials, etc.....	1	54	55	33	2	20	55	..
Defective leaders.....	..	14	14	5	..	9	14	..
Erecting and altering without permit.....	..	80	80	56	1	23	80	..
Insufficient means of escape, etc.....	1	26	27	12	..	15	27	..
Wood too near flue.....	..	5	5	2	..	3	5	..
Unsafe buildings.....	4	246	250	125	13	112	250	..
Defective plumbing and drainage.....	..	74	74	38	1	35	74	..
Erecting frame structures without permit.....	..	109	109	57	..	52	109	..
Fences over 10 feet high..	..	27	27	16	1	10	27	..
Total.....	6	664	670	354	21	295	670	..

Violations of Law and Unsafe Buildings During the Year Ending December 31, 1906.

Nature.	Pending Dec. 31, 1905.	Received Since.	Total.	Remedied Before Action of Court.	Total for Disposition.	Pending Dec. 31, 1906.	For-warded to Counsel.
Defective light and ventilation.....	2	..	2	..	2	2	..
Defective plumbing and drainage..	702	1,039	1,741	731	1,010	1,010	334
Defective elevators.....	41	65	106	44	62	62	10
Defective construction and materials.	1,763	1,432	3,195	1,290	1,905	1,905	252
Erecting and altering without permit	838	748	1,586	560	1,026	1,026	154
Insufficient means of escape, fire escapes out of repairs, etc.....	246	65	311	47	264	264	35
Unsafe buildings.....	296	364	660	370	290	290	23
Total.....	3,888	3,713	7,601	3,042	4,559	4,559	808

Notices Issued During the Year Ending December 31, 1906.

To place fire escapes on buildings.....	65
To remove violations of law.....	3,210
To remove unsafe buildings.....	364
Of disapproval of plans.....	52
To repair passenger elevators.....	65
Totals.....	3,765

Inspection of Passenger Elevators During the Year Ending December 31, 1906.

Number inspected.....	5,255
Found to be in good order and fit for use.....	5,190
Found not in compliance with the law.....	65

Disposition of Cases Found not in Compliance with the Law.

Nature.	Pending Jan. 1, 1906.	Received Since.	Total.	Law Complied With.	Pending Dec. 31, 1906.	Counsel.
Defective safety appliances.....	..	..	..	..	..	..
No grating over overhead machinery..	41	65	106	44	62	10
Total.....	41	65	106	44	62	10

Iron and Steel Inspections Made During the Year Ending December 31, 1906.

Beams.....	9,694
Columns.....	4,021
Lintels.....	1,087
Channels.....	1,179
Girders.....	3,144
Angles.....	832
Shoe plates.....	3,914
Trusses.....	30
Ties, caps, separators.....	767
Bases.....	220
T-bars.....	27
Miscellaneous.....	7
Totals.....	24,921

Total number of iron and steel inspections during the quarter.....	24,921
Total number of construction inspections during the quarter.....	354,283
Applications for ordinary repairs made on construction slip blanks—plans, 478; buildings, 3,058; bay windows, 1,761.....	5,297
Estimated cost of repairs on construction slip blanks—plans, \$75,670; build- ings, \$335,817; bay windows, \$572,726.....	\$984,213

Location of New Buildings Commenced and Completed During the Year Ending
December 31, 1906.

Wards.	Commenced.	Completed.
First	9	14
Second	6	9
Third	21	11
Fourth	6	3
Fifth	7	11
Sixth	27	5
Seventh	37	32
Eighth	400	706
Ninth	83	86
Tenth	8	8
Eleventh	16	7
Twelfth	30	7
Thirteenth	47	21
Fourteenth	37	16
Fifteenth	18	15
Sixteenth	39	29
Seventeenth	153	170
Eighteenth	20	88
Nineteenth	31	33
Twentieth	9	8
Twenty-first	84	72
Twenty-second	158	181
Twenty-third	19	45
Twenty-fourth	356	377
Twenty-fifth	148	150
Twenty-sixth	1,571	1,485
Twenty-seventh	163	121
Twenty-eighth	311	401
Twenty-ninth	1,002	901
Thirtieth	1,552	1,163
Thirty-first	508	687
Thirty-second	193	205
Total.....	7,070	7,067

Location of Alterations to Buildings Commenced and Completed During the Year
Ending December 31, 1906.

Wards.	Commenced.	Completed.
First	36	36
Second	16	19
Third	67	40
Fourth	36	30
Fifth	28	46
Sixth	87	28
Seventh	112	45
Eighth	101	103
Ninth	27	43
Tenth	45	71
Eleventh	78	31
Twelfth	80	16
Thirteenth	139	44
Fourteenth	106	50
Fifteenth	88	69
Sixteenth	209	175
Seventeenth	127	149
Eighteenth	39	32
Nineteenth	125	84
Twentieth	66	45
Twenty-first	129	111
Twenty-second	88	80
Twenty-third	50	67
Twenty-fourth	103	78
Twenty-fifth	77	69
Twenty-sixth	426	401
Twenty-seventh	60	56
Twenty-eighth	87	92
Twenty-ninth	175	155

Wards.	Commenced.	Completed.
Thirtieth	187	167
Thirty-first	298	172
Thirty-second	62	31
Total.....	3,354	2,635

New buildings in progress.....	10,760
Alterations in progress	4,782
New buildings commenced	7,070
New buildings completed.....	7,067
Alterations commenced	3,354
Alterations completed	2,635

Number of Buildings Inspected and Total Number of Inspections Made During the
Year Ending December 31, 1906, in Relation to Plumbing and Drainage.

Nature.	As to Plumbing and Drainage.		Total.
	Tene- ments.	Miscel- laneous.	
Number of buildings under inspection January 1, 1906.....	2,356	5,890	8,246
Number of buildings commenced during the year.....	2,418	5,344	7,762
Number of buildings completed during the year.....	2,307	3,633	5,940
Number of buildings under inspection December 31, 1906.....	2,467	7,601	10,068

Total number of inspections during the year..... 146,064

Comparative Statement for the Year Ending December 31, 1906.

	1905.	1906.	Increase.
Number of new buildings and alterations for which permits were issued	19,679	18,081	.....
Number of new buildings completed.....	4,506	7,067	2,561
Number of alterations completed.....	2,387	2,635	248
Violations reported by the Inspectors.....	4,029	3,284	.....
Notices issued during the year.....	4,344	3,765	.....
Complaints lodged with the Department.....	1,093	664	.....
Unsafe buildings made safe or taken down.....	651	370	.....
Violations forwarded for prosecution.....	917	750	.....
Unsafe building cases forwarded for prosecution.....	11	23	.....
Fire escape cases forwarded for prosecution.....	26	35	.....
Number of fire escape violations.....	71	65	.....
Number of passenger elevators examined.....	7,056	5,255	.....
Violations removed.....	3,066	2,625	.....

Estimated cost of new buildings and alterations..... 1905. \$73,017,706 00 1906. \$71,442,148 00

DAVID F. MOORE,

Superintendent of Buildings, Borough of Brooklyn.

James J. Byrne, Chief Clerk.

Bureau of Sewers, Superintendent's Office,
Mechanics' Bank Building,
July 11, 1907. }

Hon. DESMOND DUNNE, Commissioner of Public Works:

Dear Sir—I submit to you herewith a report covering the operations and activities of the Bureau of Sewers during the year 1906.

Attached hereto are also reports from the Chief Engineer and the Assistant Superintendent of Maintenance, giving in some detail accounts of work performed under their immediate supervision.

The following is a statement in condensed form of the financial transactions of the Bureau for the year:

BUREAU OF SEWERS.

REPORT OF FINANCIAL TRANSACTIONS FOR THE YEAR ENDING
DECEMBER 31, 1906.

1905 Appropriations.

	Available January 1, 1906.	Expended During Year.		Balance December 31, 1906.	Out- standing Liability.
		Salaries.	Supplies.		
Salaries	\$1,200 79	\$1,173 00	.....	\$27 79	*
Sewers, Repairing and Cleaning, Payrolls and Supplies.....	10,500 00	350 00	\$10,146 79	3 21	*
Contracts at Public Letting.....	19,765 25	88 00	4,503 07	15,174 18	\$9,439 47
Thirty-first Ward, Sewer Districts Nos. 1 and 3.....	3,776 25	.....	1,895 38	1,880 87	*
Twenty-sixth Ward Disposal Works	3,177 60	.....	130 20	3,047 40	*
Dredging Sewer Outlets.....	3,205 37	.....	.....	3,205 37	3,205 37
Supplies and Contingencies.....	35 91	.....	.....	35 91	.....
	\$41,661 17	\$1,611 00	\$16,675 44	\$23,374 73	\$12,644 84

* Closed.

1906 Appropriations.

	Available January 1, 1906.	Expended During Year. Salaries. Supplies.	Balance December 31, 1906.	Out- standing Liability.
Salaries	\$108,318 75	\$107,593 86	\$724 89	*
Sewers, Repairing and Cleaning, Payrolls and Supplies.....	105,700 00	83,980 42	\$11,967 29	9,752 29
Contracts at Public Letting.....	21,000 00	3,184 36	4,482 90	13,332 74
Thirty-first Ward, Sewer Districts Nos. 1 and 3.....	44,710 50	31,684 92	9,622 65	3,402 93
Thirtieth Ward, Bath Beach District	6,242 75	6,084 68	158 07	*
Twenty-sixth Ward Disposal Works.	30,926 75	19,954 46	7,143 48	3,828 81
Dredging Sewer Outlets.....	24,000 00	28 03	23,971 97	14,323 00
Supplies and Contingencies.....	2,500 00		2,488 90	11 10
Horses, Horsekeeping and Supplies.	2,400 00		2,223 34	176 66
Thirty-second Ward Disposal Works	8,000 00	2,663 71	5,336 29	445 00
	\$353,798 75	\$255,174 44	\$37,928 56	\$60,695 75
				\$35,035 60

* Closed.

Bond and Special Funds.

Construction of Sewers, Borough of Brooklyn.....	\$49,827 13
Fund for the improvement of the sanitary condition of the Gowanus canal.	10,926 75
Street Improvement Fund.....	679,370 50
Construction of private sewers, Borough of Brooklyn.....	4,202 46
Atlantic Avenue Improvement Fund.....	22,460 47
Fund for Twenty-sixth and Thirty-first Ward Disposal Works.....	3,700 00
Total.....	\$770,487 31

Cash Received by Bureau During 1906.

Sewer permits	\$62,994 46
Map "O"	6,712 11
Map "N"	7,128 61
	\$76,835 18

The total expenditures for the Bureau of Sewers, Borough of Brooklyn, for the year ending December 31, 1906, are here summarized:

For salaries, contingencies, sewers, repairing and cleaning, payrolls and supplies, sewers, repairing and cleaning, contracts at public letting; Twenty-sixth Ward Disposal Works, Thirty-first Ward Sewer Districts 1 and 3; Thirtieth Ward, Bath Beach District; dredging sewer outlets, etc., or against all appropriation accounts for 1906.....	\$293,103 00
Bonded Accounts or Special Funds, as Street Improvement Fund, Construction of Sewers, Borough of Brooklyn; Atlantic Avenue Improvement Fund, Fund for the Improvement of the Sanitary Condition of the Gowanus Canal, Fund for Twenty-sixth and Thirty-first Ward Disposal Works	766,284 85
For outstanding contracts on 1904 appropriations, as salaries, contingencies, sewers, repairing and cleaning, payrolls and supplies; sewers, repairing and cleaning, contracts at public letting; Thirty-first Ward, Districts 1 and 3; Twenty-sixth Ward Disposal Works, and dredging sewer outlets	18,286 44
For salaries, construction of private sewers and refund to owners of same.	4,202 46
	\$1,081,876 75

Requisitions were drawn on the Comptroller by the Bureau of Sewers for the year 1906, as follows:

1906 Appropriations.

Salaries, Superintendent's office.....	\$107,593 86
Contingencies	2,488 90
Thirtieth Ward, Bath Beach District— Salaries	6,084 68
Twenty-sixth Ward Disposal Works— Salaries, Engineers, Firemen, etc.....	\$19,954 46
Coal and lime contracts.....	5,655 64
Chemicals, supplies, repairs, etc.....	1,487 84
	27,097 94
Thirty-first Ward Sewerage, Districts 1 and 3— Salaries, Engineers, Firemen, Laborers, etc.....	\$31,684 92
Coal and lime contracts.....	6,223 43
Chemicals, supplies, repairs, etc.....	3,399 22
	41,307 57
Sewers, Repairing and Cleaning, Payrolls and Supplies— Salaries, Foremen, Laborers, etc.....	\$83,980 42
Materials, supplies, etc.....	11,967 29
	95,947 71
Sewers, Repairing and Cleaning, Contracts at Public Letting— Salaries, Inspectors and Engineers.....	\$3,184 36
Paid contractors and incidental supplies.....	4,482 90
	7,667 26
Dredging Sewer Outlets— Salaries, Inspectors and Engineers.....	28 03
Thirty-second Ward Disposal Works— Salaries	2,663 71
Horses, Horse Keep and Supplies— Supplies, etc.	2,223 34
	\$293,103 00

1905 Appropriations.

Salaries	\$1,173 00
Twenty-sixth Ward Disposal Works— Materials and supplies	130 20
Thirty-first Ward, Districts 1 and 3— Materials and supplies.....	1,895 38
Sewers, Repairing and Cleaning, Payrolls and Supplies— Salaries: Engineers, Firemen, etc.....	\$350 00
Materials and supplies.....	10,146 79
	10,496 79
Sewers, Repairing and Cleaning, Contracts at Public Letting— Salaries: Engineers and Inspectors.....	\$88 00
Materials and supplies	4,503 07
	4,591 07
	\$18,286 44

Bonded Accounts.

Street Improvement Fund— Salaries, Engineers and Inspectors.....	\$623,507 34
Paid contractors and incidental supplies.....	55,863 16
	\$679,370 50
Construction of Sewers, Borough of Brooklyn— Salaries, Engineers and Inspectors.....	\$6,394 26
Paid contractors and incidental supplies.....	43,432 87
	49,827 13
Fund for Improvement of the Sanitary Condition of Gowanus Canal— Salaries, Engineers and Inspectors.....	\$8,856 75
Paid contractors and incidental supplies.....	2,070 00
	10,926 75
Atlantic Avenue Improvement Fund— Paid contractors and incidental supplies.....	22,460 47
Fund for Twenty-sixth and Thirty-first Ward Disposal Works— Salaries, Engineers	3,700 00
	\$766,284 85

Private Sewers.

Construction of Private Sewers, Borough of Brooklyn— Salaries, Engineers and Inspectors.....	\$1,354 04
Refund to owners of sewers.....	2,848 42
	\$4,202 46

Recapitulation.

Total 1905 appropriations.....	\$18,286 44
Total 1906 appropriations.....	293,103 00
Total Bonded Accounts.....	766,284 85
Total private sewers.....	4,202 46
	\$1,081,876 75

You will note that the increase in extent of the sewerage systems has been rapid, there having been built during the year 19,471 miles of new sewers and 280 basins. This brings the total mileage of our sewer system up to 783,695, and the total number of basins to 9,143. This great mileage places the system among the most extensive systems of the world, and when work now under way is completed, few sewerage systems in the world will exceed it in size and length of mains. It compares with the systems in the other boroughs of Greater New York as follows:

	Miles.
Brooklyn	783.695
Manhattan	513.77
The Bronx	247.50
Richmond	61.75
Queens	Mileage not known.

Its rapid increase from year to year carries with it an increase in the cost of its maintenance, especially in the cleaning of sewer basins, in matters pertaining to the purification and disposal of house sewage at our various disposal works. In the inspection of house connection drains, in the general repair and cleaning of the system and the office work incidental to the whole. I believe the Bureau is now one of the most active of those under your jurisdiction, and that it has under way work of as great magnitude and importance as can be found anywhere of similar character.

The work of the Maintenance Division has been well and economically done and compares favorably in this respect with that of previous years, the number of basins cleaned being 8,132 greater than the previous year, and the cost of cleaning per basin 14 cents less. This decrease in cost of cleaning has been accomplished in spite of the fact that the cost of disposing of the material is increasing year by year. Within a short time dumps will no longer be obtainable, and a new method of disposal will have to be found. It should be remembered that the occupation of the labor force of this Bureau is most disagreeable and unhealthful and wages are not materially higher than elsewhere. The temptation to avoid as much labor as possible is great, and the men should be given credit for doing the full measure of their duty.

The mileage of sewers built is less than that of previous years, but it is, on the whole, of good quality. The aim has been and will be to secure work which is permanent and enduring in character and that will bear inspection, rather than to break records.

With the exception of the relief sewers and a few smaller jobs, where there were good reasons for delay, all work authorized by the Board of Estimate and Apportionment during the year was placed under contract as promptly as possible.

Plans for relief sewers are well under way and will be placed under contract during the year 1907 to as great an extent as the present appropriation of \$2,000,000 will allow. It is proposed to place the Gold street sewer under contract first. The remainder of the appropriation will be used in the construction of the main line of the system, which will discharge at the head of the Wallabout canal. These sewers are described in detail in the report of the Chief Engineer, to which you are referred for further particulars. It is of the greatest importance that this work be continued from year to year as rapidly as possible, and further appropriations should be made for that purpose as soon as contracts covering the amount of the present appropriation are made. The sewers already designed relieve two of the worst flooded areas in the borough, but the appropriation is not sufficient to complete them, and there are a number of others which should not be allowed to remain long without relief. It is fortunate that during the last year heavy storms have been less frequent than usual, and there has been in consequence much less damage from flooding.

The most important piece of construction now under way, the Flushing tunnel for the Gowanus canal, has made very little progress during the year. It was ordered ahead in construction on April 9, 1906, but little more than preliminary and experimental work has been done. A large plant of machinery has been collected and an actual start made, but one unforeseen difficulty after another and the necessity of removing quantities of damaged work has caused much delay. The structure as designed did not contemplate the method of construction chosen. The contractor, however, is confident of success in overcoming all difficulties, and there is every probability that satisfactory progress will soon be made.

The contract for the reconstruction of the large sewer in Knickerbocker and Johnson avenues has progressed very slowly throughout the year. The contractor has been badly hampered by the difficulty of maintaining the large dry weather flow of sewage while the work of reconstruction was going on. The work will no doubt be completed before the close of the year 1907.

Work has been resumed upon the large outlet sewer in Fourteenth avenue, between Seventy-ninth street and Bath avenue, which was delayed for some time because of refusal of payment for lateral sewers in Dyker Heights, which formed a part of this contract, and which were built of cement pipe. This outlet will be completed before the close of the present season and will prove of immense benefit to the districts lying to the north and east, the sewers from which outlet into it.

I earnestly recommend that settlement be made with contractors upon some equitable basis for sewers built in 1905 with cement pipe, upon which pavement has been withheld because of the unsatisfactory character of the pipe used. There are 45 contracts included in this category, and in many cases much inconvenience is caused to property owners by the delay.

A matter which, in my opinion, is of much importance, and to which attention is drawn in the report of the Chief Engineer, is the establishment of an adequate plant and the employment of a suitable force to clean our large sewers, in which large deposits of sludge form every year. In view of the experience of other large cities, there can be no question but that this work should be done by day's labor rather than by contract, and I concur in the recommendation that an appropriation of funds be secured sufficient to purchase the necessary plant, and that either the fees collected for the installation of house connection drains be used, or that provision be made in the annual budget for the wages of the force required. It seems to me

very unwise, both from the standpoint of health and economy, to delay this work longer.

I wish to place particular emphasis also upon the need of rebuilding our sewage disposal works upon modern lines and providing modern methods of disposal. Our present plants, while they have been operated as economically and efficiently as ever before, have outlived their usefulness and are sadly ineffective. Methods of sewage disposal have entirely changed since these plants were built, and the methods employed in them are entirely obsolete and expensive in operation.

The City owns all the land required in the neighborhood of the Twenty-sixth Ward plant, and sufficient space could be acquired at the other plants without great expense. With your approval the rebuilding of these plants will be undertaken in the near future.

Another matter which is worthy of further mention is that of the preparation of assessment rolls. While more than \$4,000,000 of arrears were left as a legacy by the last administration, and comparatively few rolls were completed during the past year, effective work has been done, and it can confidently be stated that during the coming year nearly the whole of the above amount will be completed and can be placed in the hands of the Assessors. The nature of these assessments is such that in many cases it will always be advisable to delay their preparation to avoid the necessity of levying too numerous assessments for sewers upon the same property. This cannot be counted a disadvantage to the City at large, because although the fund from which contracts for local improvements are certified may suffer temporarily, interest at the rate of 6 per cent. is collected from property upon which the assessments are levied, and the City is the gainer in the long run.

As a statement of work done during the year, this report and those attached hereto are fairly complete, but only a portion of the projects under way, and of matters requiring immediate attention have been mentioned. Too much space would be required to cover the whole ground. It should be said, however, that one of the most important matters to be considered is the proper design of storm water outlets along the southern boundary of the Borough and the disposition of house sewage in the suburban wards lying north of this shore. The rapid development of this territory and the numerous changes that are going on within it necessitate extensive remodeling of the systems already designed. The engineering force of the Bureau will undertake this work at once, and will push it to completion as rapidly as possible.

The past year has been one of preparation and reorganization and equipment of the Bureau on lines that fit it to handle properly the large and increasing amount of work that devolves upon it. Many necessary changes and increases in the office force have been made, new office accommodations and equipment provided, and the field force of Engineers properly provided with tools, instruments and other accommodations to do their work. In all these respects the Bureau had been heretofore at a very low ebb. This work is still far from complete. It is under way constantly, but some time will elapse before all the necessary improvements have been made. New map and filing cases, draughting tables, systems of keeping records, new office furniture, and in fact almost every part of the necessary office equipment are among the items of betterment required.

The new equipment for testing sewer pipe, and other materials of construction which has been put in operation, is a matter for just pride. The Chief Engineer states that it is now one of the most complete testing plants of its kind in existence.

The new offices in the Mechanics' Bank Building are of great benefit to the work of the Bureau, and the wisdom of making the change cannot be questioned.

The employees of the Bureau are, in nearly all cases, loyal to the City's interests and faithful in the performance of their duties.

It is a common impression among those unfamiliar with the duties of municipal employees that their duties are merely nominal, or that they are largely neglected. I take pleasure in asserting that in this Bureau, at least, this is not the case. Duties are quite as arduous as would be required for similar positions with private corporations, and as fair a return for the compensation received is rendered.

I thank the numerous employees of the Bureau for their loyal support and attention to duty.

I also wish to thank you and the Borough President for your uniform courtesy and consideration.

Yours respectfully,

JAMES DUNNE, Superintendent of Sewers.

Bureau of Sewers,
Office of Chief Engineer,
Mechanics' Bank Building, June 3, 1907.

Hon. JAMES DUNNE, Superintendent of Sewers, Borough of Brooklyn:

Dear Sir—I have the honor to present herewith a report covering the operations of the engineering division of this Bureau for the year ending December 31, 1906.

My connection with the Bureau as Engineer of Design dates only from July 17, 1906, and as Chief Engineer of Sewers from February 1, 1907. I am not able therefore to speak of all matters which transpired prior to those dates with as great familiarity as I should like.

	Miles.
The total length of sewers built during the year is.....	19.471
Of this amount the portion built by private contract is.....	.969
The portion built by the Grade Crossing Commission is.....	.099
The length of sewers abandoned, removed or reconstructed is.....	1.713
The net increase in mileage of the sewer system during the year 1906, is, therefore.....	17.758
The total length of sewers of all sizes in this Borough on January 1, 1907, was, therefore.....	784.312

In addition to the above, 1,696 miles of house connection drains were built, which cannot be properly included in the mileage of sewers, being only appurtenances of the sewer system, and adding nothing to its length.

The total number of basins built during the year is.....	280
The total number of basins removed in the reconstruction or removal of old sewers or for other reasons, is 12, making a net increase in the total number of basins in the Borough of.....	268
This number of basins built up to January 1, 1907, gives a total of.....	9,549

Detailed information in regard to sizes of sewers included in the above statement of total mileage built, is contained in the tables attached to this report, and need not be repeated here.

In addition to the above the Rapid Transit Commission has carried out considerable work in the construction and reconstruction of sewers necessitated by the subways. This work has been done by them under authority granted by the Legislature. This Bureau has not had any supervision of the work, and at the time of the compilation of the mileage of sewers we had no official knowledge of the extent of the work done by them. Recently we have been furnished a tabular statement by the Chief Engineer of the Rapid Transit Commission, which is herewith submitted.

I here recapitulate the same:

Built During 1906.

	Feet.	Miles.
12-inch vitrified pipe.....	1,713	0.325
15-inch vitrified pipe.....	91	0.017
18-inch vitrified pipe.....	999	0.189
Total vitrified pipe.....	2,803	0.531

	Feet.	Miles.
8-inch cast-iron pipe.....	95	0.018
12-inch cast-iron pipe.....	15	0.003
18-inch cast-iron pipe.....	736	0.139
20-inch cast-iron pipe.....	12	0.002
24-inch cast-iron pipe.....	40	0.008
Total cast-iron pipe.....	898	0.170
3 feet 6 inches by 2 feet 4 inches brick.....	1,000	0.189
Grand total.....	4,701	0.890

Abandoned 1906.

	Feet.	Miles.
12-inch vitrified pipe.....	2,752	0.521
15-inch vitrified pipe.....	287	0.054
18-inch vitrified pipe.....	57	0.011
Total vitrified pipe.....	3,096	0.586
24 inches by 18 inches brick.....	115	0.022
2 feet 8 inches by 2 feet 3 inches brick.....	948	0.180
3 feet by 2 feet brick.....	247	0.047
4 feet by 3 feet brick.....	50	0.009
Total brick.....	1,360	0.258
Grand total.....	4,456	0.844

Constructed Up to and Including 1906.

	Feet.	Miles.
12-inch vitrified pipe.....	1,956	0.371
15-inch vitrified pipe.....	271	0.051
18-inch vitrified pipe.....	999	0.189
Total vitrified pipe.....	3,226	0.611
8-inch cast-iron pipe.....	95	0.018
12-inch cast-iron pipe.....	15	0.003
18-inch cast-iron pipe.....	736	0.139
20-inch cast-iron pipe.....	12	0.002
24-inch cast-iron pipe.....	40	0.008
Total cast-iron pipe.....	898	0.170
3 feet 6 inches by 2 feet 4 inches brick.....	1,430	0.271
4 feet 6 inches by 3 feet brick.....	2,322	0.440
Total brick.....	3,752	0.711
Grand total.....	7,876	1.492

Abandoned Up to and Including 1906.

	Feet.	Miles.
12-inch vitrified pipe.....	6,566	1.243
15-inch vitrified pipe.....	1,794	0.340
18-inch vitrified pipe.....	782	0.148
Total vitrified pipe.....	9,142	1.731
24 inches by 18 inches brick.....	115	0.022
2 feet 8 inches by 2 feet 3 inches brick.....	1,068	0.202
3 feet by 2 feet brick.....	247	0.047
3 feet 6 inches by 2 feet 4 inches brick.....	480	0.091
3 feet 6 inches by 2 feet 8 inches brick.....	35	0.007
4 feet by 3 feet brick.....	50	0.009
Total brick.....	1,995	0.378
Grand total.....	11,137	2.109

Decrease in mileage up to and including 1906, 3,261 feet—0.617 mile.

Sewer basins built during 1906.....	7
Sewer basins abandoned during 1906.....	19
Decrease during 1906.....	12

Sewer basins built up to and including 1906.....	7
Sewer basins abandoned up to and including 1906.....	19
Decrease up to and including 1906.....	12

From this it appears that the total mileage in the Borough of Brooklyn on January 1, 1907, of 784.312 miles, is too great by 0.617 mile. The corrected mileage is, therefore, 783.695 miles. As twelve sewer basins have been abandoned, as reported by them, the corrected statement of sewer basins connected with the sewerage system is 9,143 instead of 9,155.

As indicating the amount of work under construction during the year, and the magnitude of the task of properly supervising it, some value attaches to a statement of the contract price of such work. A tabular statement giving this information during the years 1902-1906 inclusive, is therefore given as follows:

In 1902 total value of work under construction was.....	\$4,034,819 00
In 1903 total value of work under construction was.....	5,479,833 46
In 1904 total value of work under construction was.....	5,747,231 89
In 1905 total value of work under construction was.....	6,990,255 09
In 1906 total value of work under construction was.....	6,915,171 24

These figures for the years 1902-1905 inclusive, are taken from a previous annual report.

Not all of this work was completed, and not all of it was placed under contract during the year.

It should be understood that the greater portion of sewer improvements are paid for by assessments upon the property benefited, and are authorized upon petitions from property owners. Its amount is not altogether under the control of this Bureau, and is not a correct measure of its activities. Comparatively few sewer improvements are paid for by issues of Corporate Stock.

The value of all work authorized by the Board of Estimate and Apportionment between the years 1902-1906 inclusive, is as follows:

1902.....	\$2,170,848 00
1903.....	2,170,871 00
1904.....	1,010,088 00
1905.....	3,544,413 88
1906.....	1,353,150 00

The amount of work placed under contract each year was somewhat less than this. For instance, in 1905 it amounted to only \$1,408,410.42. \$2,000,000 of the amount authorized in this year was for relief sewers, upon which no progress was made.

The estimated value of work for which petitions were received, and upon which reports and estimates were submitted from this office, and the value of contracts entered into during the years 1902-1906 inclusive, is as follows:

	Reported Upon.	Contracts Entered Into.
1902.....	\$5,218,400 00	\$1,535,243 13
1903.....	2,684,800 00	1,888,031 57
1904.....	3,798,300 00	795,059 52
1905.....	2,893,190 00	1,408,410 42
1906.....	5,122,300 00	631,094 59

The steady increase in the amount of sewer construction petitioned for from year to year is a good indication of rapid suburban development which has been under way, and together with the value and number of sewer improvements placed under contract, gives a good idea of the increase in the work of this office.

	Number.	Amounts Paid During 1906.	Contract Price.
Contracts entered into.....	138		\$631,094 59
Contracts completed (accounts closed).....	87	\$570,529 87	1,360,035 65
Contracts in progress.....	130	209,542 88	1,883,347 31
Contracts authorized (P. and S. under way).....	29		3,205,500 00
Contracts under investigation because of the use of cement pipe.....	45		465,888 28
Salaries of Engineers and Inspectors (private construction).....	11	1,419 49	
Refunded to owners of private sewers.....		2,121 51	
		\$783,613 75	

More detailed information in regard to contracts in all stages of progress toward completion, as given above, is contained in the various tables attached to this report.

It appears from the above data that the mileage of sewers built, and their value in money fell considerably below that of the years immediately preceding 1906. It is not so certain, however, that their value in use, which is the true measure of their usefulness, is any less. In the construction of pipe sewers, of which 16.175 miles were built, only double strength vitrified pipe of very good quality was used. The manufacturers of cement concrete pipe found it impossible to produce a pipe that would meet the requirements of the specifications. While ostensibly admitting this class of pipe into competition, several of the requirements were such that Portland cement mortar or concrete, even of the highest degree of excellence, could not fulfill them. The character of work in connection with the construction of large sewers was, no doubt, equal to the average that has prevailed in years past.

At the end of the year all work which had been petitioned for and had been authorized by the Board of Estimate and Apportionment, with thirty exceptions, had been placed under contract. Bids were received upon forty-two of these contracts so late in the season, however, that they were not certified by the Comptroller in time to be placed under construction. These seventy-two contracts, together with eighty-nine others which are partially completed, should enable construction work in the spring to commence on as large a scale as ever before.

The work which was not placed under contract, although authorized by the Board of Estimate and Apportionment, and the reasons for delay are given in detail in the following table. The reasons in every case are good and sufficient. Progress is being made in the preparation of plans for all of this work, and all of it will be placed under contract during the coming season.

Contracts Authorized, Plans and Specifications in Course of Preparation, December 31, 1906.

Title of Work.	When Authorized.	Estimated Cost.
Relief Sewers.		
Chauncey street, from Broadway to Troy avenue; Fulton street, from Troy avenue to Grand avenue; Grand avenue, from Fulton street to Greene avenue; Classon avenue, from Park avenue to head of Wallabout canal; Park avenue, from Classon avenue to Skillman street; Skillman street, from Park avenue to Myrtle avenue; Myrtle avenue, from Skillman street to Tompkins avenue; Tompkins avenue, from Myrtle avenue to Park avenue; Park avenue, from Tompkins avenue to Throop avenue; Throop avenue, from Marcy avenue to Throop avenue; Throop avenue, from Kosciusko street to Lafayette avenue; Lafayette avenue, from Throop avenue to Lewis avenue; Hewes street, from Kent avenue to Classon avenue; Taylor street, from Kent avenue to the canal; Gold street, from East river to Myrtle avenue; Myrtle avenue, from Gold street to Carlton avenue.....	July 14, 1905	\$1,985,000 00
Change of plan for these relief sewers has been made and submitted to Board of Estimate and Apportionment.		
Bath avenue, from Twenty-first avenue to Bay Thirty-fifth street; Bay Thirty-fifth street, from Bath avenue to Benson avenue; Benson avenue, from Bay Thirty-fifth street to Stillwell avenue, crossing Stillwell avenue to Avenue V; Avenue V, from Stillwell avenue to West Thirtieth street; West Thirtieth street, from Avenue V to Gravesend basin, and force main, etc., etc.....	Nov. 3, 1905	194,800 00
Change of plan for district including these sewers is under way.		
Dougiass street, from Plaza street to Underhill avenue.....	Feb. 9, 1906	2,700 00
Fiftieth street, from Eighth avenue to Fort Hamilton avenue, with outlet in Fiftieth street, from Fort Hamilton avenue to a point about 165 feet west of Eleventh avenue; Ninth avenue, from Fiftieth street to Fifty-second street, and Tenth avenue, from Fiftieth to Fifty-second street.....	June 15, 1906	17,700 00
705 manholes in Seventy-sixth street, between Nineteenth and Twentieth avenues, etc., etc.....	June 29, 1906	31,000 00
Field information not secured until late in year. Plans are now under way.		
Grand street (as extended), from South Fourth street to Hooper street.....	Nov. 2, 1906	6,700 00
Scott avenue, from Newtown creek north of Metropolitan avenue to St. Nicholas avenue; St. Nicholas avenue, between Troutman street and borough line; also St. Nicholas avenue, between Troutman street and Flushing avenue, and Flushing avenue, between St. Nicholas avenue and Gardner avenue.....	Nov. 2, 1906	868,000 00
Fourteenth avenue, from Seventy-fifth to Seventy-ninth street.	Nov. 2, 1906	15,100 00
Northeast corner of Erasmus street and Rogers avenue.....	Nov. 2, 1906	200 00
Southwest corner of Kingston avenue and Degraw street.....	Nov. 2, 1906	200 00
Northwest corner of Norman avenue and Jewell street.....	Nov. 16, 1906	200 00
West Fifth street, all four corners of Sheepshead Bay road....	Nov. 16, 1906	
Northerly corner of Eighteenth avenue and Bath avenue.....	Nov. 16, 1906	200 00
Easterly corner of Tenth street and Second avenue.....	Nov. 16, 1906	200 00
Neptune avenue, northeast and northwest corners of West Third street; northeast, northwest and southwest corners of West First street; northwest corner of Ocean parkway, and sewer, westerly side of Ocean parkway, between Neptune avenue and Canal avenue.....	Nov. 16, 1906	11,900 00
Ninth street, northwest and southwest corners of Sixth avenue; northwest and southwest corners of Seventh avenue; northwest and southwest corners of Eighth avenue; both sides, midway between Fifth and Sixth avenues; both sides, midway between Sixth and Seventh avenues; both sides, midway between Seventh and Eighth avenues.....	Nov. 16, 1906	2,400 00
Hinsdale street, northeast and southeast corners of Blake avenue; northwest corner of Dumont avenue; northeast and northwest corners of Livonia avenue; northeast and northwest corners of Riverdale avenue.....	Nov. 16, 1906	1,400 00
Forty-seventh street, from New Utrecht avenue to Twelfth avenue, and outlet in Forty-seventh street, from Twelfth avenue to Thirteenth avenue.....	Nov. 16, 1906	5,600 00
East Twenty-eighth street, from Avenue F to Flatbush avenue.	Nov. 16, 1906	2,500 00
Fifty-fifth street, from Ninth avenue to Fort Hamilton avenue.	Nov. 16, 1906	3,200 00
Sixtieth street, from Fifteenth avenue to New Utrecht avenue.	Nov. 16, 1906	3,300 00
Java street, from Provost street to Oakland street.....	Nov. 16, 1906	2,700 00
West street, from Forty-third street to Eighteenth avenue.....	Nov. 16, 1906	5,800 00
Reconstruction of outlet for Kent avenue sewer at Division avenue.....	Nov. 23, 1906	15,000 00
Reconstruction of East Nineteenth street, from Cortelyou road to Dorchester road.....	Dec. 7, 1906	5,400 00
Fifty-third street, from Eleventh avenue to Fort Hamilton avenue.....	Dec. 7, 1906	2,600 00
Fort Hamilton avenue, south side, between East Fourth and East Fifth streets, and sewer basins at northeast and northwest corners of East Fourth street and Fort Hamilton avenue.....	Dec. 7, 1906	2,300 00
Fiftieth street, from Fourteenth avenue to Fifteenth avenue, with outlet in Fiftieth street, from Fifteenth to Seventeenth avenue, and Seventeenth avenue, from Fiftieth to Fifty-first street.....	Dec. 7, 1906	17,400 00
Milford street, northeast and northwest corners of Belmont avenue, and all four corners of Sutter avenue.....	Dec. 7, 1906	1,200 00

Data from field not yet available.

\$3,205,500 00

It will be noted from tables accompanying this report that forty-five contracts, upon which construction work was commenced in 1905, and when cement concrete pipe was used, which did not conform to specification requirements, are still delayed, no progress having been made during the year toward correcting the defects, or in arriving at a satisfactory basis upon which to settle with the contractors.

Construction work upon thirty-seven of these contracts was completed in 1905, and in many cases permits for house connections with them have been granted.

Upon three of these contracts construction work has not been completed, although satisfactory arrangements have been made with the contractors for completing them. They will all, no doubt, be completed during the coming season. In two cases it is very important that these contracts be completed as soon as possible, because they include outlets which are necessary to make useful large branches which are now under construction. The particular outlets referred to are on Fourteenth avenue, between Seventy-ninth street and Ninety-second street, and on Beverley road, between Bedford and Rogers avenues, both under contract with P. J. Murray & Co.

These forty-five contracts include 19.21 miles of sewers of various sizes, as shown in detail below. The contract prices total \$465,888.28. Partial estimates for \$181,116.40 have been sent to the Department of Finance for payment. In addition, work amounting in value to \$22,094.63 has been done, for which no certificates have been issued. As a whole they are about 44 per cent. advanced toward completion.

Size of Sewer, Equivalent Diameter.	Miles.	Percentage of Whole.	Percentage Completed.
12-inch.....	9.975	52	87
15-inch.....	3.180	16	93
18-inch.....	1.635	8	94
24-inch.....	0.524	3	100
30-inch.....	0.782	4	63
36-inch.....	0.570	3	82
42-inch.....	0.189	1	40
48-inch.....	0.451	3	48
54-inch.....	0.203	1	23
60-inch.....	0.828	4	100
66-inch.....	0.328	2	100
78-inch.....	0.0076	0.4	....
96-inch.....	0.294	1.6	....
102-inch.....	0.242	1	....
	19.2086	100	

Of the contracts remaining in this office on January 1, 1906, for which final certificates had not been issued, there were three which require mention. The first is the contract for sewers in Eighty-seventh street, between Second and Fourth avenues. These sewers were uncovered in various places, and the examinations revealed that they were not built in the manner specified in the contract. During the year the contractor entirely relaid the sewers in entire compliance with the plans and specifications.

With respect to the two contracts entered into in January, 1905, for the reconstruction of the lateral sewers in Sixtieth street, between Fort Hamilton avenue and New Utrecht avenue, it is well to say that in consequence of the settlement of the earth over the large tunnel sewer in Sixtieth street the small sewers for house service were rendered defective. Early in 1905 the reconstruction work was reported completed. No final certificate was issued, however. These sewers were examined in the spring of 1906 and were found not to conform to plans and specifications. The contractors were informed that the work was not acceptable. The assignee of the contractors late in the year took up the sewers mentioned through their whole length and then relaid them in conformity with plans and specifications.

During the year attention was directed to the sewer in North Fifteenth street, between West street and Engert avenue, part of the system outletting at the foot of Quay street. It was discovered that the piles which were to furnish suitable foundation for the sewer were not properly driven, and that the pile capping did not have suitable bearing. The contractors agreed to remedy all the defects, and have since that time done so.

Sewage Purification Disposal Works.

I here give a tabulated statement of the work done in the several purification works throughout the borough.

Twenty-sixth Ward Disposal Works.

Gallons Pumped—	
Engine No. 1.....	1,733,571,840
Engine No. 2.....	1,749,931,480
Materials Used—	
Waste, pounds.....	538
Machine oil, gallons.....	190
Cylinder oil, gallons.....	466
White oil, gallons.....	606½
Sulphuric acid, pounds.....	10,693
Oxide of manganese, pounds.....	4,500
Salt, pounds.....	5,498
Per chloride of iron, pounds.....	5,403
Quick lime, barrels.....	4,920
Phenyl, gallons.....	31
Coal, tons.....	827½
Soil removed, cubic feet.....	2,827,848
Average Yearly Duty—	
Engine No. 1.....	22,834,000
Engine No. 2.....	22,680,000

Thirty-first Ward Disposal Works, Station No. 2

Gallons Pumped—	
Engine No. 1.....	306,945,862
Engine No. 2.....	257,181,180
Materials Used—	
Waste, pounds.....	72
Machine oil, gallons.....	29
Cylinder oil, gallons.....	75½
White oil, gallons.....	101
Sulphuric acid, pounds.....	2,222
Oxide of manganese, pounds.....	982
Salt, pounds.....	1,302
Per chloride of iron, pounds.....	657
Quick lime, barrels.....	542
Phenyl, gallons.....	170
Sal soda, barrels.....	215
Coal, tons.....	409½
Fluid sludge removed, cubic feet.....	227,126
Average Yearly Duty—	
Engine No. 1.....	6,500,000
Engine No. 2.....	11,150,000

Thirty-first Ward Disposal Works, Station No. 3.

Gallons Pumped—	
Engine No. 1.....	66,067,900
Engine No. 2.....	173,343,798
Materials Used—	
Waste, pounds.....	89½
Machine oil, gallons.....	12½
Cylinder oil, gallons.....	61½
White oil, gallons.....	196½
Sulphuric acid, pounds.....	2,262
Oxide of manganese, pounds.....	994
Salt, pounds.....	1,304
Per chloride of iron, pounds.....	801
Quick lime, barrels.....	555
Phenyl, gallons.....	87
Sal soda, pounds.....	75
Boiler compound, pounds.....	441
Coal, tons.....	375½
Fluid sludge removed, cubic feet.....	2,519,172

Average Yearly Duty—

Engine No. 1.....	4,675,000
Engine No. 2.....	4,090,000

Thirty-first Ward Disposal Works, Station No. 4.

Gallons Pumped—	
Engine No. 1.....	136,713,750
Engine No. 2.....	481,908,206

Materials Used—

Cylinder packing, pounds.....	188
Waste, pounds.....	112¼
Machine oil, gallons.....	113¾
Cylinder oil, gallons.....	53
White oil, gallons.....	242¼
Sulphuric acid, pounds.....	1,683
Oxide of manganese, pounds.....	776
Salt, pounds.....	1,196
Per chloride of iron, pounds.....	418
Quick lime, barrels.....	604
Sal soda, pounds.....	446
Boiler compound, pounds.....	46½
Coal, tons.....	469 9-2,240
Fluid sludge removed, cubic feet.....	139,980

Average Yearly Duty—

Engine No. 1.....	9,970,000
Engine No. 2.....	11,700,000

Owing to the extension of the systems of sewers which now deliver house sewage to the Twenty-sixth Ward Disposal Works, and in view of probable authorization in the coming year of extensive systems of sewers in Drainage Map "X" (a recently developed area), which sewers will run to these works, it becomes a pressing necessity to extend the work of the plant. Studies are in progress and have so far advanced that we are able to say that these changes will not be exorbitantly expensive to make, yet will modernize and bring the plant up to its highest degree of efficiency.

The plants in Coney Island likewise require attention, and a study is being made with their betterment in view.

Cleaning of Sewers.

A matter of vital importance to the community at large is the regular and thorough cleaning of our sewers. Many of them have not been designed with an adequate knowledge of the laws governing the flow of water in open channels, self cleansing velocities, quantities of rainfall which should be provided for, etc., and as a consequence about 50 miles of the larger sewers and many smaller ones require regular cleaning to keep them in sanitary condition and in shape to care for storm water from even moderate rainfalls.

In deciding upon the best method of maintaining and cleaning our sewers, the advisability of doing the work by contract or by days labor, the necessary plant and yards required, if the latter method is adopted, and the funds that should be provided, the present condition of the sewer system, and the magnitude of the work to be done, should be understood.

Our system is very old. It represents a growth of at least fifty years, and every degree of knowledge or lack of knowledge possessed by engineers in that time in regard to the design of sewerage systems.

The accumulation of sludge amounts annually to about 35,000 cubic yards. The removal of this sludge is a task which should be performed regularly and systematically by this bureau every year. The saving which would result by so doing in damages caused by flooding, would go far toward paying the whole bill, if it did not more than pay for it.

The objection to the present method is that it does not keep them clean. The last contract let in December, 1904, and carried out in 1905, is not settled yet, and is altogether an unfortunate experience for the City. When work ceased in 1905 it was far from complete, and as no cleaning was done this past year, more than the usual annual deposit has accumulated.

The same reasons that make it advisable to clean the streets, to repair the pavements, and to clean sewer basins by days labor, apply to the cleaning of sewers. The need for the work arises in the same way. It should be continued throughout nearly the whole year. Its cost varies with the size and depth of the sewer, the quantity of house sewage running into it, the distance from the dump, and so many other things that it is hard to see how, under the circumstances the contractor can bid intelligently or be sure of reasonable profit unless he makes his bid high enough to cover all eventualities.

I believe that a well organized force under proper supervision, can do this work substantially as cheaply as it can be done by contract. It can be done in this way in a more thorough and satisfactory manner, and it can be done when and where it is from time to time most urgently needed. A contract cannot be continually in force, whereas there is no time during the season when cases do not arise requiring immediate attention, and when it would not be well to have a plant and force in readiness. As it is a legitimate annual charge for work done in the maintenance of the system, it seems as if it should be provided for in the annual Budget, or a permanent fund created from the fees which are now received from permits for house connections, and against which fund the cost of cleaning should be charged.

Now, when a permit to connect a house with the sewerage system is asked for, a fee of ten dollars is exacted before it is issued. This fee in theory is to cover the cost of the inspection made to see that the connection is properly made. As a matter of fact, the connection inspectors are paid from the salary account, and the fees turned over to the Sinking Fund, from which this bureau derives no benefit. If there is any valid reason for exacting fees it is that they should be used to keep the sewers clean. For every additional house connection made more sludge may be deposited in sewers which are not self-cleaning, and it seems as though it would be eminently proper to apply fees toward cleaning.

Before this work is attempted by day's labor suitable facilities should be provided to make good results possible. Outside of the Disposal Works, which are located at very out of the way places, on the outskirts of the borough, as Coney Island, or in the Twenty-sixth Ward, near Jamaica Bay, there is only one small yard, in North Portland avenue, which is 50 feet by 100 feet in extent. One familiar with the extent of this cleaning work would understand that this one yard is much too small to accommodate the necessary apparatus. Proper yards should be acquired, together with tools, hoisting apparatus, trucks, etc., sufficient to supply the needs of at least six gangs of men. These yards should be so located that as little time as possible may be wasted in traveling to and from the site of the work. It is hoped that the recommendation to establish such a plant and organize the necessary force to operate it properly may find favor, and that no more than the necessary delay may occur in putting it into effect.

Assessment.

The following is a statement of the work done during 1906 in the preparation of rolls for assessments for sewer construction:

Sewer assessments, cases prepared, catalogued and forwarded.....	88
Parcels of land included in assessment district.....	4,134
Number of maps.....	618
Number of private sewers, all proceedings completed, cases.....	12

Twenty-sixth Ward Sewer Assessments.

Tenth and Last Installment apportioned—	
Amount of installment confirmed by Borough President.....	\$80,276 98
Assessed Valuation—	
Number of reports of assessed valuations of land within probable area of assessment.....	267
Valuation of property examined.....	\$135,900,823 00
Number of feet of new sewers plotted in connection books and on wall maps and catalogued (27.67 miles).....	146,112

Number of house connection tracings entered and catalogued.....	291
Number of basin tracings received and plotted on wall maps and catalogued	218
Number of basins entered on map and catalogued.....	424

All lumber reports for 1906 indexed and filed.

As shown in the statement, there were 88 assessment lists completed, as well as the last installment of the Twenty-sixth Ward assessment, amounting in all to \$378,229.21. This is nearly twice as many assessment cases as were completed during the year 1905, and contained nearly twice the number of parcels of land within the assessment districts affected. More than twice as many assessment maps were prepared.

On January 1, 1907, there remained in this office assessment rolls, not prepared, amounting in value to \$4,763,258.21. These rolls have been accumulating for five or six years. The delay in preparing the assessment rolls for one large drainage district, namely, that known as "I," District No. 40, has been largely due to the fact that the sewer improvements were undertaken under some thirteen different contracts, extending over several years. It was thought unwise to assess each improvement as soon as completed upon the property affected, for the improvements affected districts that overlapped each other, and hence some property owners would have received, perhaps, as many as ten successive assessments for sewer improvements; hence the rolls were not begun until the outlets were completed and all the information at hand to complete the assessment rolls for each district. The City, however, has not been subjected to any financial loss whatever in consequence of these delays.

The force of Draughtsmen at work on assessment rolls has been increased, and it is the intention to further increase it, so that the work may be brought up to date and kept there. It is not practicable to avoid all delay, for it is well that some months should elapse after the final certificate is issued before the assessment rolls are prepared, in order to permit all claims affecting the work to be filed and paid.

House Connection Drains.

In the early part of 1906 a departure from the usual custom in providing and laying house connection drains was directed by the Borough President. Theretofore these drains were not laid until required by the property owners, and were then laid by plumbers under private contract with the owners. Frequently pavement of a permanent character had been laid before drains were put in, and hence when one was required a tearing up of the pavement became necessary, with its consequent disastrous effect upon the adjacent pavement. The cost of a permit for opening the pavement is \$13. Including the cost of laying the drain to two feet within the curb line, the cost of a drain should amount to about \$25. These drains have never been laid under proper supervision, for examination in various parts of the borough have revealed that plumbers generally lay them in a poor and unsanitary manner, giving no attention to proper jointing nor to proper grade. Moreover, frequently plumbers have cut into or broken into the sewers at points where there were no branches or spurs, leaving the sewers in a damaged and sometimes defective condition.

At the direction of the Borough President all contract plans and specifications for new sewers in unpaved streets now provide that house connection drains shall be laid, at the time the sewer is built, to a line two feet inside of the curb line. These drains now receive as careful supervision and inspection as the sewers themselves, and are laid to a proper grade. The joints are made in the same manner as the joints on pipe sewers. The cost of house connection drains is about one dollar per linear foot, or about twenty dollars each. This compares favorably with the cost of laying by property owners.

The aim has been to so locate them that each city lot having a frontage of twenty feet shall be provided with a separate drain. It is reasonably certain that many of them will not be used for years. In the suburban districts, where parcels of land generally have a frontage greater than twenty feet, there is no means of determining just where the house will be situated, and in consequence house connection drains may not in all cases prove to be located to the best advantage of property owners. One or more house drains for each parcel may never be used, yet the owner will be required to pay for all that front his property.

In sections of the borough that are undergoing development at the hands of real estate operators this provision may have a deterrent effect upon petitions for sewers to be built by private contract, for the reason that the cost of the improvement will immediately be much larger than formerly. This should not be considered a disadvantage.

This borough is not alone in requiring that these drains be laid when the sewer is built and before a permanent pavement is laid, for there are a number of American cities, notably Philadelphia, which require it to be done.

In my opinion all of the above disadvantages of the practice are much more than offset by the benefit that will ultimately accrue to the pavement, and by the fact that the sewers will no longer be broken into indiscriminately by plumbers who do not take the trouble to locate carefully the house spur to which connection should be made. On the whole, the practice is a good one and will work no hardship to property owners in general.

New Specifications.

An entirely new form of specifications has been prepared, and will be used in all contracts which are advertised after the beginning of the coming year. An endeavor has been made to simplify them, to exclude all obsolete and unnecessary requirements, and to include all requirements which are necessary to obtain good and substantial work. They have been drawn so that fair competition in the various kinds of pipe will obtain.

Among the notable changes made is the one respecting the method of restoring pavement, flagging and curbing that are not under guarantee. Heretofore such pavement, etc., were in many cases restored by the contractor with indifferent success. Now he will be required to deposit with the Bureau of Highways, before the work is completed, a sufficient sum to cover the cost of restoration, which will be made by the President of the Borough. The cost will be based upon unit prices, which are clearly stated in the specifications.

With respect to cement and sand for mortar and stone for concrete, a definite statement of a unit of measurement has been made, leaving no doubt as to how these materials shall be measured.

General provisions for steel and iron used in the construction of sewers have been introduced.

Both vitrified salt-glazed stoneware pipe and Portland cement concrete pipe are permitted to be laid. The requirements for each of these are such that only the best pipe will be accepted. The method of jointing is clearly stated. A gasket will be placed in every joint and the lower half of the joint of vitrified pipe will be embedded in concrete.

The requirements for jointing cement as well as vitrified pipe may increase the cost of pipe sewers slightly, but tight joints will generally be admitted to be worth what they cost. In certain seasons infiltration of ground water into pipe sewers increases the burden upon our purification plants. In separate systems of sewerage, therefore, they are of the greatest importance. The small additional cost will be amply warranted in view of the fact that we may now confidently expect our pipe sewers to be substantially tight, with a minimum of leakage of sewage out of and of infiltration of ground water into them.

The above are only a few of the changes which have been made to adapt them more perfectly to modern work of this character. There are many more of equal importance. The specifications are still imperfect (a perfect specification has rarely, if ever, been written), but they compare favorably with the best of their kind.

A new standard plan of manholes has been prepared and adopted. The inverts of the manholes on pipe sewers will consist hereafter of split pipe instead of brick. This will permit greater uniformity of flow. All timber in the foundation has also been dispensed with, and a bed of concrete of suitable thickness has been substituted.

A new standard plan for basin heads is being prepared. The old standard granite head, while very substantial, would permit of only one depth of gutter. Under the new plan the basin may be built to meet any depth of gutter. Objectionable depressions about basins will thus be avoided. The new basin head will be of cast iron, will have a grating which cannot be easily removed and will present in many ways a much neater appearance than the old one.

Redesigning of Sewerage Systems.

The legal drainage maps for the outlying wards were hurriedly prepared for adoption shortly after consolidation, and now prove inadequate under the changing conditions.

The Engineers of this Bureau have given careful study to the shortcomings of the adopted designs, and an endeavor is being made to modify them to conform to the new conditions, using, of course, all of the outlets already built. Where surface elevations are slight and where in the near future provision must be made for treatment of house sewage before its discharge into neighboring waters, or for pumping it through long force mains to be discharged through existing outlets, the wisdom of providing for a separate system of sewerage cannot be doubted. Modified plans embodying this system are being prepared as rapidly as possible, but it is a task of such magnitude that it cannot be completed for some time to come. No delay must be permitted in constructing sewers in these rapidly developing sections, and no serious delay will be permitted to ensue in consequence of these modifications.

The system of sewers in Map "Z," including part of Bensonhurst, has already been redesigned, and the remodeling of the systems in Coney Island is under way.

Several of the basins along the south shore, into which it was proposed to deliver the purified sewage, are now being filled in, and hence new outlets must, of necessity, be designed. Every new outlet built presents a new problem which requires care in its solution. In the large improvements that are projected along this shore, and which are sure to come, the necessities of sewerage and drainage systems should not be lost sight of. The improvement of Jamaica Bay and the Paerdegat basin and the ship canal at Coney Island all vitally affect the sewerage of many square miles of territory lying to the northward, and should be undertaken with this fact in view. The expense of the last named improvement in particular would be largely justified by the facilities which it will afford for drainage. For this and numerous other reasons its construction should not be long delayed.

Cement and Pipe Testing.

Samples of cement used in construction work have been taken from time to time, and, as usual, submitted to the Chemist in the Highway Bureau for test. On sheet No. 13 of the attached tables will be found a tabulated report of the results of these tests.

Samples of pipe used in construction of all pipe sewers have been tested during the year by the machine, hurriedly, yet effectively, made in the latter part of 1905.

Recently there has been installed a modern testing machine of 75,000 pounds capacity by Riehle Brothers, of Philadelphia, by which pipe is tested much more rapidly than by the one first mentioned. This machine has been erected on the grounds adjoining the Municipal Department Building, and a portable house protects it. Few cities possess a more complete testing plant than this, and the results obtained from it in years to come, if it is properly operated, will be of great value.

It would be well to provide in the proposed new Municipal Department Building ample space for a complete testing laboratory for pipe, cement and other materials used in construction, under the charge of an Assistant Engineer.

Bench Marks.

In the matter of elevation of street surfaces and of grades generally, it is found that there is no uniformity in the several Bureaus in the office of the President of the Borough. Each of the Bureaus has its own plane of reference. These datum planes have come down from past generations. All elevations shown on the maps of the Bureau of Sewers refer to sewer datum. All elevations shown on maps of Bureau of Highways refer to the highway datum. If the difference between comparative elevations at various places in the borough were always the same, a constant allowance could be made, but it has frequently occurred that after the sewer in a street was built, using old established bench marks, the manhole tops and street basins were not at a grade which the Highway Bureau would meet, and this after all allowance for difference between datum planes was made. These old bench marks are in many instances faulty and not of a permanent character. They may be moved by frost or otherwise and rendered worse than useless. Extreme care is constantly required in giving grades for the construction of sewer improvements, and a vast amount of additional surveying is entailed. Frequently it becomes necessary to run lines of levels over two or more of these old bench marks, and, notwithstanding, errors are frequently made.

I recommend that some Bureau undertake the establishment of a system of permanent bench marks throughout the borough, which bench marks shall be the ones to which all work shall be referred. This is a work of considerable magnitude, but of the first importance, and should be undertaken without delay.

Outlet Sewer for Queens Borough.

Among the improvements authorized late in the year was the sewer in Scott avenue, from Newtown creek to St. Nicholas avenue, and in St. Nicholas avenue, from Troutman street to Borough line.

This sewer is the outlet for over 2,300 acres in Queens Borough, and is a much needed improvement. Changes in surface grades will be required in the low-lying district between Montrose avenue and Newtown creek, but these will be rapidly prepared and sent along for adoption. The contract plans are under way, and it is expected that construction will be well advanced before the close of the year. This will be one of the most notable pieces of sewer construction in this Borough, and has been estimated to cost approximately \$800,000. Very few sewers which have ever been built anywhere will exceed it in size.

Reorganization of the Force.

A complete reorganization of the Engineering staff has been effected. This was necessary in order that the Chief Engineer might receive adequate and systematic support in the management of the rapidly increasing technical work of the Bureau, which, as the data given in this report show, involves a large variety of problems, many of which are of great magnitude and importance, and all of which require the most careful consideration.

The technical work involved in the design of sewers, and the solution of problems arising in connection with the sewerage system, and with the redesigning of the system, which is absolutely necessary to bring it up to modern requirements and efficiency; the preparation of plans and specifications for contracts; the reporting and estimating of proposed sewers asked for by the Local Boards; and the office work generally, has been placed under the immediate care of an Engineer-in-Charge of Design.

The field parties, to whom are assigned the care of construction work on contracts in progress, and the preliminary surveys, profiles, and running of bench lines and maintaining bench marks, and all other duties involved in field work, have been placed under the immediate care of an Engineer-in-Charge of Construction.

This reorganization of the office and construction forces, it is confidently believed will bring them up to their highest efficiency. If the number of sewer improvements reported upon last year is an indication of the amount of work to be authorized and undertaken, this Bureau will run under full pressure, and in all likelihood the force engaged in carrying out the details will prove to be insufficient in number, but the reorganization effected is such that an increase may be made as the work requires.

Relief Sewers.

One of the most important problems that this Bureau has been called upon to solve in many years is the design of systems of relief sewers for numerous low lying areas in the older, and, in most cases, densely populated areas of the Borough. The flooded condition of these districts in times of storm and the necessity for their relief has been dwelt upon for a number of years past in annual reports, and nothing can be added here to advantage to what has already been said. Nothing of consequence seems to have been done in the study of these sewers until the latter part of the year 1904. In July, 1905, an appropriation of \$2,000,000 was made by the Board of Estimate and Apportionment for this purpose, but no effective work in the preparation of rational designs was done until the latter part of 1906.

The worst flooded sections of the Borough should of course be cared for first, and with this object in view plans and estimates have been prepared in detail for relieving and supplementing the present inadequate and improperly proportioned sewers in the Twenty-third, Twenty-fourth and Twenty-fifth Wards, and the territory in the neighborhood of Wallabout street, between Broadway and Classon avenue. All of this territory is included in Legal Drainage Maps "L" and "O." They will hereafter be referred to as "Relief Sewers, Division No. 1."

Plans and estimates have also been prepared and submitted for sewers designed to relieve the flooded condition in the district north of Flushing avenue, in the neighborhood of the Navy Yard, also to intercept the Greene avenue sewer at Hanson place and South Portland avenue, and to carry its contents to a new point of discharge at the pierhead line at the foot of Gold street. These sewers will hereafter be referred to as "Relief Sewers, Division No. 2." The territory affected by them lies within what is known as Legal Drainage Maps "L," "E," "F," "K" and "G."

These plans and estimates have been prepared under the supervision of Mr. R. W. Creuzbaur, Consulting Engineer, who has given much attention to the work.

The inadequacy of the present sewers in these districts, including the large Greene avenue relief sewer, and the failure to properly care for storm water, has been a matter of common knowledge for some years. Flooded streets and buildings, damaged foundations, ruined goods, sickness resulting from unsanitary conditions, depreciated values of real estate, and a constantly increasing number of damage suits against the City, have served to keep the necessity for adequate storm sewers fresh in the minds of city officials, and to emphasize the need of expedition in building them.

The proper points of outlet are so obvious that they cannot be mistaken. The contour lines of the district and large sewers already built, which it would be unwise to destroy, point out plainly the most economical routes to follow. The flooded districts are well defined, indicating in a general way the points at which relief is most urgently needed. Other points at which the old sewers are most deficient, and where they should be relieved have been determined by computation.

The presence of the old sewers, supplemented from time to time, as they have been by relief sewers, which are laid at various depths and extend in almost every direction, complicate the working out of the details of the new system in such a way that all surcharged sewers shall be relieved properly; that they shall continue to be used to as great an extent as possible; that existing and projected structures be interfered with as little as possible, and that the work shall be done with the minimum of expense.

The territory, which the relief sewers included in Division No. 1 are to serve, comprises an area of 2,384 acres, or 3.7 square miles, and corresponds, roughly, with that of the old Twenty-third, Twenty-fourth and Twenty-fifth Wards, and portions of the Seventh and Twentieth Wards. It slopes decidedly toward the north at an average rate of about 15 feet per thousand, so that surface waters, without ordinary guidance, would naturally find their way to the Wallabout basin.

The slope of the territory lying to the south of Fulton street is quite steep, being on the average fully 18 feet per thousand. North of Fulton street for some distance to the northward, or approximately to Lafayette avenue, it is much flatter. Between Fulton street and Lexington avenue there is a comparatively level stretch within which there are several low-lying areas or pockets. The lowest of these, the one in the neighborhood of Howard avenue and Decatur street, contains an area of about 10 acres, which lies below the 40-foot contour line, and a very large area which lies below the 50-foot contour line. Another smaller one in the neighborhood of Halsey street and Tompkins avenue, contains an area of about 70 acres, which lies below the 50-foot contour line. As a result storm water is delivered to these low-level areas very rapidly from the south, and the worst effects of flooding are felt here.

The great majority of streets within the water-shed are paved with asphalt. Eventually nearly all of those now unpaved along its southern portion, and those now paved with cobble stone and a poor character of block pavement, will be covered with a smooth pavement. Nearly the whole district is built up closely, and in a few years it will be entirely so, so that for the purposes of sewer designing, it must be considered to be entirely improved. The streets are, at present, nearly all provided with sewers. Those south of Greene avenue discharge their storm water into the Greene avenue sewer; those lying to the north of Greene avenue discharge into the Wallabout street or Flushing avenue sewers.

The relief sewers proposed will give ample relief to all of them at the points indicated in the following table: There may be isolated cases of flooding hereafter at points remote from the lines of relief sewers, that will need further attention, because the smallest lateral sewers are inadequate as storm sewers. With few exceptions, the smallest lateral sewers used in the Borough are 12-inch circular pipe. In the majority of cases, after heavy storms it is probable that they flow under a head. In most cases this head is too small to cause trouble.

My predecessor, the then Chief Engineer of the Bureau of Sewers, was directed to prepare plans for sewers to relieve the Greene avenue sewer and the district to the south of it, between Broadway and Grand avenue; also to relieve the flooded areas in the Wallabout district, in the neighborhood of Flushing avenue and Navy street. Plans were prepared for these sewers and submitted to the Commissioner of Public Works. They included a relief sewer, which was designated to be built in Myrtle avenue, from Carlton avenue to Gold street, and in Gold street, from Myrtle avenue to the East river. This sewer was intended to intercept the flow of the 36-inch sewer in Carlton avenue, the 18-inch sewer in Cumberland street, the old sewer in Raymond street, the 18-inch sewer at Navy street, and the 60-inch sewer at Tillary street. It was also designed to take in many smaller sewers at various intersecting streets along the line. The plans submitted also included a system of storm sewers with outlet at the head of Wallabout Canal, which called for sewers in the following streets:

Classon avenue, between Kent avenue and Willoughby avenue.
Willoughby avenue, between Classon avenue and Tompkins avenue.
Tompkins avenue, between Willoughby avenue and Fulton street.
Fulton street, between Tompkins avenue and Troy avenue.
Troy avenue, between Fulton street and Pacific street.
Pacific street, between Troy avenue and Schenectady avenue.
Schenectady avenue, between Pacific street and St. Mark's avenue.
Fulton street and Brooklyn avenue, between Tompkins avenue and Prospect place.
Prospect place, between Brooklyn avenue and Nostrand avenue.
Nostrand avenue, between Prospect place and Degraw street.
Van Buren street, between Tompkins avenue and Stuyvesant avenue.
Stuyvesant avenue, between Van Buren street and Fulton street.
Fulton street, between Stuyvesant avenue and Utica avenue.
Utica avenue, between Fulton street and Pacific street.
Pacific street, between Utica avenue and Buffalo avenue.
Chauncey street, between Stuyvesant avenue and Broadway.
Ralph avenue, between Chauncey street and Herkimer street.
Herkimer street, between Ralph avenue and Howard avenue.
Saratoga avenue, between Chauncey street and Fulton street.
Rockaway avenue, between Chauncey street and Fulton street.
Marcy avenue, between Greene avenue and Fulton street.
Fulton street, between Marcy avenue and New York avenue.
New York avenue, between Fulton street and Herkimer street.
Herkimer street, between New York avenue and Bedford street.
Bedford street, between Herkimer street and Fulton street.
Nostrand avenue, between Herkimer street and Prospect place.
Prospect place, between Nostrand avenue and Grand avenue.
Myrtle avenue, between Classon avenue and Clinton avenue.
All as shown on the accompanying map.

A large relief sewer, designed to relieve the Wallabout section was also shown in Harrison avenue and Division avenue, between Vernon avenue and the East river; in Broadway, between Wallabout street and Lynch street, and in Lynch street, between Broadway and Harrison avenue.

The estimates of cost, sizes and lengths of this system of sewers are attached hereto. The total cost is shown to be \$2,865,000.

Myrtle avenue and Gold street are nearly the only streets available for a relief sewer of a size suitable to accomplish the purpose of relieving the flooded district in the neighborhood of Flushing avenue and Navy street. Its capacity, as designed, was sufficient, and it was officially approved. Objection was made to the other proposed sewers that they were needlessly expensive; that they involved the tearing up of too many streets, and that they made useless too many valuable sewers already built. They also crossed the lines of projected subways at an unnecessary number of points.

Amended plans were prepared in the office of the Commissioner of Public Works, which called for sewers in Grand avenue, from Greene avenue to Fulton street; Fulton street, from Grand avenue to Troy avenue; Chauncey street, from Troy avenue to Broadway; Park avenue, from Classon avenue to Skillman street; Skillman street, from Park avenue to Myrtle avenue; Myrtle avenue, from Skillman street to Tompkins avenue; Tompkins avenue, from Myrtle avenue to Park avenue; Park avenue,

from Tompkins avenue to Throop avenue; Kosciuszko street, from Marcy avenue to Throop avenue; Throop avenue, from Kosciuszko street to Lafayette avenue; Lafayette avenue, from Throop avenue to Lewis avenue; Hewes street, from Kent avenue to Classon avenue; Taylor street, from Kent avenue to the canal.

This amended plan discarded entirely the large relief sewer designed in the former plan to be placed in Division avenue and Harrison avenue, between Vernon avenue and the East river, for the purpose of relieving the Wallabout street sewer, and which it was estimated would cost \$575,000, and attempted to accomplish the necessary relief by sewers in Park avenue, between Throop avenue and Tompkins avenue; Tompkins avenue, between Park avenue and Myrtle avenue; Myrtle avenue, between Tompkins avenue and Skillman street; Skillman street, between Myrtle avenue and Park avenue; Park avenue, between Skillman street and Classon avenue, where junction was made with the projected main outlet, between Greene avenue and the Wallabout canal. The estimated cost of these sewers, as shown in attached detailed estimates, is \$173,440. A saving in cost was therefore apparently effected as against the proposed sewer in Division avenue and Harrison avenue of \$401,560.

These amended plans, including the relief sewer proposed in Myrtle avenue and Gold street were adopted by the Board of Estimate and Apportionment on July 14, 1905, by the following resolution:

Resolved, That the Board of Estimate and Apportionment hereby determines that the whole cost and expense of the construction of relief sewers in the following streets in the Borough of Brooklyn, shall be borne and paid by The City of New York: No. 1—

Chauncey Street.

	Inches.
From Broadway to Hopkinson avenue.....	42
From Hopkinson avenue to Saratoga avenue.....	48
From Saratoga avenue to Ralph avenue.....	84
From Ralph avenue to Patchen avenue.....	96
Patchen avenue to Lewis avenue.....	102
Lewis avenue to Troy avenue.....	108

Fulton Street.

	Inches.
From Troy avenue to Brooklyn avenue.....	126
From Brooklyn avenue to New York avenue.....	138
From New York avenue to Nostrand avenue.....	144
From Nostrand avenue to Bedford avenue.....	156
From Bedford avenue to Grand avenue.....	168

Grand Avenue.

	Inches.
From Fulton street to Greene avenue.....	168

Classon Avenue.

	Inches.
From Park avenue to the head of Wallabout canal.....	180

No. 2—

	Inches.
Park avenue, from Classon avenue to Skillman street.....	102
Skillman street, from Park avenue to Myrtle avenue.....	102
Myrtle avenue, from Skillman street to Bedford avenue.....	102
Myrtle avenue, from Bedford avenue to Nostrand avenue.....	90
Myrtle avenue, from Nostrand avenue to Marcy avenue.....	78
Myrtle avenue, from Marcy avenue to Tompkins avenue.....	54
Tompkins avenue, from Myrtle avenue to Stockton street.....	54
Tompkins avenue, from Stockton street to Floyd street.....	48
Tompkins avenue, from Floyd street to Park avenue.....	42
Park avenue, from Tompkins avenue to Throop avenue.....	36
Kosciuszko street, from Marcy avenue to Tompkins avenue.....	72
Kosciuszko street, from Tompkins avenue to Throop avenue.....	66
Throop avenue, from Kosciuszko street to Lafayette avenue.....	60
Lafayette avenue, from Throop avenue to Sumner avenue.....	48
Lafayette avenue, from Sumner avenue to Lewis avenue.....	36
Hewes street, from Kent avenue to Classon avenue.....	84
Taylor street, from Kent avenue to the canal.....	78

No. 3—

	Inches.
Carroll street, from Third avenue to Gowanus canal.....	42

No. 4—

	Inches.
Gold street, from East river to 150 feet south.....	126
Gold street, from latter point to Tillary street.....	120
Gold street, from Tillary street to Myrtle avenue.....	114
Myrtle avenue, from Gold street to Hudson avenue.....	108
Myrtle avenue, from Hudson avenue to Navy street.....	72
Myrtle avenue, from Navy street to Raymond street.....	66
Myrtle avenue, from Raymond street to North Portland avenue.....	54
Myrtle avenue, from North Portland avenue to Cumberland street.....	48
Myrtle avenue, from Cumberland street to Carlton avenue.....	36

—and be it further

Resolved, That, in pursuance to the provisions of sections 169 and 176 of the Greater New York Charter, the Comptroller be and hereby is authorized to issue Corporate Stock of The City of New York, to an amount not exceeding two million dollars (\$2,000,000) for the purpose of providing the necessary means for the construction of such relief sewers in the above named streets.

A true copy of resolution adopted by the Board of Estimate and Apportionment July 14, 1905.

(Signed) J. W. STEVENSON, Secretary.

I hereby certify that this is a true copy of a certified copy of resolution.

Dated, Brooklyn, July 26, 1905.

(Signed) JOHN A. HEFFERNAN, Secretary.

In the design, as approved, no appropriation was made for that portion of the outlet sewer in Classon avenue, between Greene avenue and Wallabout canal, although in the report of Mr. A. J. Provost, recommending this plan, it is stated that this outlet should be proceeded with without delay. Also the cost of sewers in Myrtle avenue, between Carlton avenue and Classon avenue; Prospect place, between Grand avenue and New York avenue, with outlet through Nostrand avenue, between Fulton street and Degraw street; in Brooklyn avenue, between Fulton street and Eastern parkway; in Pacific street, between Buffalo avenue and Troy avenue, with outlet through Troy avenue, between Pacific street and Fulton street; in Herkimer street, between Howard avenue and Ralph avenue, with outlet through Ralph avenue, between Herkimer street and Chauncey street; Saratoga avenue, between Hull street and McDougall street; Rockaway avenue, between Fulton street and Chauncey street, are not provided for in the appropriation, although all of these sewers are included in the design, and at an estimated cost of \$590,000.

Instructions were given to the Bureau of Sewers about July 19, 1905, to prepare plans and specifications for the sewers included within this adopted plan without delay. It is not apparent that any progress was made, however, during the remainder of the year 1905.

On July 15, 1906, when steps were taken by the Borough President to hasten the work, plans had been nearly completed for a small relief sewer in Carroll street, between Third avenue and the Gowanus canal, which is designed to relieve the Third avenue sewer at this point. A contract has since been made for it. Plans were also well under way for the sewer in Myrtle avenue and Gold street. Since July 15 the whole problem of relief sewers, as it affects the above districts, has been thoroughly studied. Final conclusions, based upon these studies, have been arrived at,

and a detailed report presented with attached plans and estimates of cost, embodying these conclusions.

The Gold street relief sewer, as originally designed, was, for the greater part of its length, correctly located, but that portion of it on Myrtle avenue is located under an elevated structure, where unusual precaution will be required to avoid damage, and where the work of construction would be expensive. Surface railroad tracks will have to be temporarily abandoned; in fact, this busy street will have to be given over largely to the use of the contractor while the work is in progress. It is thought wise and economical, therefore, to change the line of the sewer to Raymond street, from Myrtle avenue to Johnson street, thence through Johnson street, from Raymond street to Gold street. This will avoid the elevated and surface car tracks for a distance of five blocks, and besides being of great benefit to the traffic which uses Myrtle avenue, will make the sewer cheaper to build. At the corner of Raymond street and Johnson street the top of the sewer masonry will be only a few feet under the surface of the street. It would be desirable to have a greater depth of cover than can be obtained at this point, but if the sewer sections are properly designed no harm can come from it.

In the original design no account seems to have been taken of the fact that inasmuch as Fourth avenue, from Flatbush avenue southerly, is to be occupied by a four-track subway, to which the present indifferently built 15-foot storm sewer would be a pestilent and dangerous neighbor; inasmuch as a subway station is to be built at the intersection of Fourth avenue and Flatbush avenue, under which this same sewer must be carried at great expense, and inasmuch as the natural surface slopes in the neighborhood of Flatbush avenue and Fourth avenue are to the northward, forming a natural drainage valley for storm water, which leads directly to the line of the Gold street sewer, within a distance of a few blocks; that, therefore, this sewer should be considered as the logical outlet for the Greene avenue sewer, which should be diverted through it, leaving the intersection of Flatbush avenue and Fourth avenue free for the purpose of rapid transit. Several lines of subway are to converge at this point and will form a crowded nerve centre of traffic, where, within a few years, more people will pass daily than at any other point in the Borough, and where an accident, such as a break in the sewer, in times of flood, would be almost certain to cause loss of life and damage to property and would flood the subway as far as the Manhattan end of the tunnel.

The Engineers of the Rapid Transit Commission appreciated these facts, and in 1901 sought the approval of the Borough officials to the diversion of the Greene avenue sewer through Gold street, as now proposed. It was not found possible to obtain official approval of the proposition, although it was not disapproved. No action was taken upon it, or upon any comprehensive scheme of dealing with the problem. It was finally abandoned. The Engineers of the Commission decided that the problem must be taken up piecemeal as it was encountered. Contracts for the temporary diversion of the sewer from Flatbush avenue to Atlantic avenue have already been let by the Rapid Transit Commission at a cost of \$40,000, or \$200 per linear foot.

A further diversion as far as Dean street is contemplated as soon as the construction of the Fourth avenue subway is commenced. The cost of this will certainly not be less than \$100 per foot, or \$55,000, even if a much cheaper form of construction is adopted than has been adopted for the work now under contract. If the same form of construction is adhered to it will very likely amount to \$100,000. It is estimated that in addition to this, the old sewer, if allowed to remain in Fourth avenue, will require repairs and strengthening, which will involve an expense of \$25,400. The net cost of diverting the Greene avenue sewer through Gold street, as proposed, making the outlet of sufficient capacity to care for about 778 cubic feet of water per second from the Greene avenue sewer (which is its present capacity east of the proposed point of diversion), will be about \$183,000. This takes into consideration the fact that the old sewer in Raymond street is now in a very dilapidated condition and must soon be rebuilt. The cost of rebuilding this sewer would be in the neighborhood of \$50,000. This amount has, therefore, been legitimately deducted from the cost of the proposed diversion.

The plans now under way for the subway in Bedford avenue, between the Williamsburg Bridge plaza and Lafayette avenue, contemplate the relocation of the 48-inch sewer in Bedford avenue, between Lafayette avenue and Wallabout street.

The use of the Greene avenue sewer as a combined sewer will permit the entire removal of the sewer in Bedford avenue for a distance of nearly one-half mile, and the substitution for it of a small pipe to care principally for the house sewage on this street.

A similar saving in the cost of rebuilding sewers to accommodate this subway may be made on Grand avenue, between Lafayette avenue and Myrtle avenue, where a large dry-weather flow from a 48-inch sewer may be led into the Greene avenue sewer.

In many other less important cases it will be of great advantage to the work of subway building to be able to divert lateral sewers carrying house sewage into the Greene avenue sewer. It seems as if in view of the great saving and convenience to the work of the Rapid Transit Commission, which the plan proposed will accomplish, a large part of the cost at least of carrying it out should be considered a legitimate charge against their work.

If this work is carried out and the 15-foot sewer in Fourth avenue, between Flatbush avenue and Degraw street, is entirely removed, the outlets in Degraw street, Butler street and Baltic street, west of Fourth avenue, will become available as outlets for the relief sewer which it is proposed to build in Sixth avenue, between Flatbush avenue and Twenty-first street, at an estimated expense of \$1,140,000, and which has been designed to outlet through Twenty-first street into the Gowanus canal near its mouth. The grades of Sixth avenue are favorable for making Butler street, Degraw street and Baltic street the outlets of this sewer, and by doing so it is certain that a large amount of money, greater in fact than the whole cost of the Gold street diversion, can be saved.

The tunnel now under construction, which is to flush Gowanus canal, will, if properly operated, render the present occasional dilution which the waters of this canal receive by storm water from the Greene avenue sewer a matter of small importance. This sewer is supposed to carry only storm water, the house sewage from the territory which it drains being nearly all carried to the Wallabout street sewer, and thence to the outlet at Division avenue and the East river. As a matter of fact, at the present time, about eighteen inches of sewage is flowing in it at Grand avenue, which is continually discharging at the head of Gowanus canal. This sewage deposits quantities of sludge, which must be dredged out every year, and the waters of the canal are befouled by it to a much greater extent than they are benefited by the occasional storm water which it carries. This sewage should be carried directly to the swift currents of the East river, where it will do the least harm. Sewage now discharged through the Division avenue outlet into the comparatively quiet water behind the Cob dock, at the bulkhead line, where with every tide quantities of it must be carried to the neighborhood of the Wallabout basin, may also be diverted into the Greene avenue sewer and discharged through the Gold street outlet at the pier head line where the tidal currents are strong.

After the Gold street sewer is built, the Hudson avenue sewer will be so far relieved that it will be possible to rebuild the portion of the old sewer in Flushing avenue, between Carlton avenue and Hudson avenue, and abandon the outlet, which now crosses the Navy Yard and which is a constant source of trouble.

From almost every point of view this proposed diversion seems desirable. It is certain to prove immensely economical when plans for relieving the present flooded conditions along Third, Fourth and Fifth avenues are carried out.

The plan of sewers adopted July 14, 1905, for the relief of the Twenty-third, Twenty-fourth and Twenty-fifth Wards, and the territory in the neighborhood of Wallabout street, is open to several objections.

First—It does not follow the most direct route to the natural and most available outlet, the head of Wallabout canal; the route which the natural topography of the district points out as the most economical and which the first principle of sewer design (namely, that other things being equal, main sewers should approach the point of outlet along as direct a route as possible) calls for.

Second—It does not properly relieve the Greene avenue sewer. Owing to irregularities in the grade of this sewer, its capacity varies very erratically and within wide limits, as reference to the accompanying map will show. At present it is badly surcharged at nearly all points. It would not be materially relieved between Broadway and Classon avenue, while to the west of Grand avenue it would still be badly surcharged by the waters of the proposed Grand avenue sewer.

Third—It provides for a sewer 10½ feet to 14 feet in diameter, and 7,170 feet in length, to be built under Fulton street, where tunnel construction would have to be resorted to for a distance of at least 2,390 feet; where surface settlements would be disastrous to the elevated railroad, and where the expense of construction would be in any case needlessly great. Since the date of this design the Rapid Transit Commission have taken under consideration the question of a subway on Fulton street as one of the few available arteries of through traffic to the easterly outlying sections of the borough. The sewer would lie below this projected subway. This fact alone forms an objection of the most serious character, which, aside from other considerations, would make it advisable to change its location, even if by so doing additional expense would be incurred.

The plan now proposed as the result of careful studies of the whole problem makes use of the same point of outlet as the adopted plan. It also follows the same alignment as the sewer in the adopted plan on Chauncey street, between Broadway and Lewis avenue. Beyond Lewis avenue an entirely different route is chosen and sewers in the following streets are proposed:

Lewis avenue, between Chauncey street and Macon street.
Macon street, between Lewis avenue and Tompkins avenue.
Tompkins avenue, between Macon street and Vernon avenue.
Vernon avenue, between Tompkins avenue and Nostrand avenue.
Nostrand avenue, between Vernon avenue and Myrtle avenue.
Myrtle avenue, between Nostrand avenue and Skillman street.
Skillman street, between Myrtle avenue and Park avenue.
Park avenue, between Skillman street and Classon avenue.
Classon avenue, between Park avenue and Wallabout canal.

The line of the outlet should cross private property, located in the angle between Classon avenue and Hewes street, and right of way across this property should be obtained for this purpose. All proposed plans have shown a similar location for this outlet. The head of the canal cannot be approached with a good alignment from Classon avenue without crossing this property, because the United States Naval Hospital grounds occupy the whole available space to the southward, and the angle of the block reaches some distance beyond the north bank of the canal.

No change of route from the adopted plan is proposed for sewers in the following streets:

Myrtle avenue, between Clinton avenue and Classon avenue.
Classon avenue, between Myrtle avenue and Park avenue.
Rockaway avenue, between Fulton street and Chauncey street.
Saratoga avenue, between Hull street and Chauncey street.
Herkimer street, between Howard avenue and Ralph avenue.
Ralph avenue, between Herkimer street and Chauncey street.
Pacific street, between Buffalo avenue and Troy avenue.
Troy avenue, between Pacific street and Fulton street.
Brooklyn avenue, between Dean street and Fulton street.
Prospect place, between Grand avenue and Nostrand avenue.
Park avenue, between Throop avenue and Tompkins avenue.
Tompkins avenue, between Park avenue and Myrtle avenue.

The sizes of sewers proposed on these streets are, in some cases, different from those in the adopted plan, but in general they do not materially differ from them.

It has been necessary to keep the grade of the new sewer low enough in all cases to intercept the flow of the old sewers. This has resulted in making it deeper in many cases than would otherwise have been necessary. This difference in depth is most noticeable where the Greene avenue sewer is crossed, where the new sewer is 8 feet below the old one. This increased depth has made smaller sizes possible in many cases.

Another important object sought in fixing the grades was to so regulate the hydraulic grade that the velocity of the sewage should gradually increase toward the outlet, and matter entering at the upper inlets should be kept in suspension until discharged at the outlet. At the same time it has been attempted to make invert grades great enough, so that with small rain-falls giving sufficient run-off to carry into the sewers, sand and other street detritus, the velocity should be sufficient to prevent the deposit of this material. For house sewage the Baltimore Sewerage Commission recommended a minimum velocity of 20 inches per second. For the transportation of road detritus a velocity of at least 2½ feet per second should be obtained with the smallest flow. All except the very lightest storms will give a velocity as great as this.

To describe the plan recommended in detail, commence at Broadway and Chauncey street, the upper limit of the proposed system of sewers, where a 42-inch sewer in Broadway, which discharges 113 cubic feet of storm water per second from a drainage area of 68 acres, is diverted through Chauncey street. The dry weather flow will amount to about 7 cubic feet per second, and a storm water flush of equal amount will be allowed to pass under the sill with it, so that the old sewer will carry 14 cubic feet per second beyond this point, and the new sewer will have a capacity of 106 cubic feet per second. It will be egg-shaped and equivalent to a circular section 42 inches in diameter. The present sewer now continues through Broadway to Halsey street, thence through Halsey street to Central avenue, its contents eventually finding their way through Knickerbocker avenue, Johnson avenue and South Fifth street to the East river. It is now largely responsible for frequent flooding, which occurs in the neighborhood of Halsey street, between Bushwick avenue and Central avenue. No trouble should remain in this neighborhood after the Broadway sewer is diverted through the new sewer in Chauncey street. The diversion of this volume of storm water from the Johnson avenue sewer is an important advantage to be gained. This sewer and the South Fifth street sewer now carry a large volume of house sewage. Their hydraulic properties are very poor. Deposits form in them very rapidly, and the cost of keeping them clean is large.

The Johnson avenue sewer is now being provided with a new invert between Knickerbocker avenue and Bushwick place, which will increase the velocity between these points to such an extent that it is hoped that the sewer may be self-cleaning. This improvement will not benefit the portion of the outlet between Bushwick place and the river, however. In fact it will no doubt make conditions worse, because it will deliver storm water much more rapidly to it and surcharge it more than at present. Then too by raising the grade of the Johnson avenue sewer at Morgan avenue, the sewage will be backed up farther than at present, and it will be necessary to raise the sill at the outlet of the Morgan avenue overflow sewer at Stagg street to prevent sewage flowing into the canal. This will materially decrease the capacity of this outlet as a storm water overflow. The Morgan avenue sewer at best is little more than an elongated cesspool, the hydraulic grade line of the Johnson avenue sewer at their junction being above the surface of the street on Morgan avenue. Only by making the overflow at Stagg street very ample can flooding be prevented. In a short time the house sewage from about 2,300 acres of territory in Queens will be turned into the Johnson avenue sewer, and will make conditions much worse by reducing its capacity for storm water purposes and making the probability of occasional overflow of house sewage into the Newtown creek at Vandervoort avenue and Stagg street and Morgan avenue greater. The City is now under agreement with property owners to prevent the flow of house sewage into Newtown creek at these points, and is compelled to dredge the creek at both places annually. There is no other way of disposing of this sewage, except by purification or by building a long and expensive outlet. In either case great expense would be incurred. While purification may ultimately be undertaken, the wisdom of relieving these sewers of as large a portion of their flow in the meantime cannot be doubted. A comprehensive scheme of relief for them must be undertaken in the near future.

At Rockaway avenue a new sewer 30 inches in diameter, between Chauncey and Fulton streets, will discharge 37 cubic feet per second from a drainage area of 23 acres. It will intercept a small sewer at Fulton street, and will receive storm water which now is taken into a number of small pipe sewers, which are surcharged after excessive storms. A total area of 91 acres is therefore tributary to the new sewer at this point. The total run-off from this area will amount to 143 cubic feet per second. After deducting 9 cubic feet per second, which will be allowed to pass over into the old sewers as a storm water flush, the remaining 134 cubic feet per second should be the capacity of the new sewer. Its gradient will be 1.9 per cent. A dry weather flow of 2 cubic feet per second, which concentrates at this point, is allowed to continue on through the old sewer.

At Hopkinson avenue a 30-inch sewer, which discharges 58 cubic feet per second from a drainage area of 25 acres, will be intercepted. The dry weather flow will be allowed to continue on through Hopkinson avenue to Broadway, as at present. The dry weather flow amounts to 3 cubic feet per second; 12 cubic feet per second of storm

water will also be allowed to pass into the old sewer for the purpose of properly flushing it. Considerable flooding, which has occurred just north of Chauncey street, near Hopkinson avenue, will thus be prevented. Between Hopkinson avenue and Saratoga avenue the new sewer will be 54 inches in diameter, and will have an invert gradient of 1 per cent. The total drainage tributary area to the new sewer at Hopkinson avenue is therefore 116 acres. The total amount of storm water collected from it will be 179 cubic feet per second, after deducting 21 cubic feet per second, which has been allowed to pass over into the dry weather flow; the remainder, 158 cubic feet per second, represents the amount for which the sewer is designed.

At Saratoga avenue a 24-inch pipe sewer will be intercepted and will discharge 106 cubic feet per second from a drainage area of 55 acres. A new sewer, 36 inches in diameter, is designed for Saratoga avenue, between Chauncey street and Fulton street. This will supplement the 24-inch pipe sewer in this street, and will relieve the present 30-inch storm sewer on Marion street, between Saratoga avenue and Howard avenue.

The total area tributary to the new sewer at this point is 171 acres; the total run-off from this area will be 250 cubic feet per second; 24 cubic feet per second in all have been allowed to pass into the old sewers with the dry weather flow, leaving 226 cubic feet per second as the required capacity of the new sewer. It will have a gradient of .17 per cent., and a diameter of 84 inches.

Flooding now occurs along Saratoga avenue, between Chauncey street and Broadway. This will be entirely relieved. Both this sewer and the one in Hopkinson avenue now outlet through Halsey street, into Central and Knickerbocker avenues.

At Howard avenue the storm waters of a 36-inch sewer will be intercepted, which discharges 77 cubic feet per second from a drainage area of 37 acres. The area of the territory tributary to the new sewer at Howard avenue is 208 acres. The maximum storm flow from the territory is 296 cubic feet per second; 6 cubic feet per second will be allowed to pass into the old sewer for the purpose of flushing it; 30 cubic feet in all have thus far been disposed of in this way, leaving 266 cubic feet per second as the required capacity of the new sewer. It will have a diameter of 102 inches. The old sewer at this point carries a dry weather flow of 4 cubic feet per second, which will continue as at present. Flooding is now complained of all the way along Howard avenue, between Fulton street and Broadway. The Howard avenue sewer now discharges into the Halsey street sewer, and its dry weather flow is carried to the Knickerbocker avenue sewer, while its storm waters are intercepted at Saratoga avenue, and are discharged into the Greene avenue sewer.

A new sewer is designed to be placed in Ralph avenue, between Herkimer street and Chauncey street, and in Herkimer street, between Howard and Ralph avenues. It will be 36 inches in diameter in Ralph avenue, and 30 inches in diameter in Herkimer street. It will receive the storm waters from an area of 56 acres, and will have a capacity of 107 cubic feet per second.

The maximum dry weather flow of the Ralph avenue sewer is 6 cubic feet per second; 10 cubic feet per second of storm water will pass with it into the old sewer, which will not be disturbed in its present position.

At Ralph avenue, the storm waters of a 36-inch sewer will be intercepted, which will discharge 77 cubic feet per second from a drainage area of 37 acres. Much flooding now occurs along Ralph avenue, between Fulton street and Broadway, and on intersecting streets adjacent to Ralph avenue, which should be discontinued by providing this new outlet. The above 36-inch sewer at present discharges its dry weather flow through the Knickerbocker avenue sewer, and its storm waters through the Greene avenue sewer.

Between Ralph avenue and Patchen avenue a 48-inch sewer, now in Patchen avenue, and discharging northerly into Ralph avenue, will be encountered and its storm flow taken into the Chauncey street sewer. The dry weather flow of this old sewer is 18 cubic feet per second; this, together with 11 cubic feet per second of storm water will be allowed to continue on through it. Between Ralph avenue and Broadway, four blocks of 12-inch pipe, and one block of 15-inch pipe, now in Chauncey street, will be encountered in building this new sewer, but will not be disturbed.

It should be mentioned here that a relief sewer proposed in Pacific street, receives the storm flow from an area of 102 acres at Buffalo avenue, and thus leaves the 48-inch sewer mentioned above and the sewer in Buffalo avenue leading to it, adequate. It will then deliver to the Chauncey street sewer 135 cubic feet per second from a drainage area of 81 acres.

At Patchen avenue an old sewer 48 inches in diameter, will join the Chauncey street sewer from the south, and will discharge about 255 cubic feet per second from a drainage area of 183 acres. Between Ralph and Patchen avenues the new sewer will be 108 inches in diameter; its capacity will be 321 cubic feet per second.

The Patchen avenue relief sewer now relieves this 48-inch sewer at Sumpter street of a portion of its storm waters. Nevertheless, damages from flooding are very heavy in the immediate neighborhood for a distance of several blocks to the north and south of Patchen avenue. Between Patchen avenue and Lewis avenue, a distance of three blocks, the new sewer will be 104 inches in diameter. On these three blocks one block of 15-inch pipe and two blocks of 12-inch pipe will be relieved of their storm flow, although the sewers themselves will not be disturbed in building the new sewer. The dry weather flow in the present 48-inch sewer at Patchen avenue now runs to the Knickerbocker avenue sewer, and will continue to do so.

At Lewis avenue the contents of a 42-inch sewer from Troy avenue, and the 42-inch sewer from Schenectady avenue will be intercepted. These two sewers now discharge 285 cubic feet per second from a drainage area of 225 acres. The dry weather flow from this area is now discharged through Lewis avenue, Halsey street and Marcy avenue into the Wallabout street sewer. The storm water is intercepted by the Lewis avenue sewer, and discharges into the Greene avenue sewer. A new sewer, starting at Pacific street and Buffalo avenue, and extending through Pacific street to Troy avenue, through Troy avenue to Chauncey street, through Chauncey street to Lewis avenue, is included in this design. The diameter of this new sewer will be 82 inches at Buffalo avenue, 60 inches at Rochester avenue, 66 inches at Utica avenue, 84 inches at Schenectady avenue, 90 inches at Troy avenue, and 96 inches where it joins the Chauncey street sewer. Its total drainage area will be 302 acres. At each of the above streets it will intercept the flow of the present sewers, and will discharge 372 cubic feet per second.

The line of a projected subway passes through Fulton street, so that at Troy avenue space enough is left above the new sewer to accommodate it. The elevation of the street surface is 54.58; the elevation of the inside crown of the new sewer is 30.68; about 24 feet is, therefore, left in which to build the subway. The size of the sewer, its depth, and, therefore, its cost, is somewhat greater than would otherwise be necessary.

The new sewer designed for Pacific street will leave only 24 acres tributary to the old sewer in Schenectady avenue. Thirty-one cubic feet per second of storm water will be delivered from this area.

On Lewis avenue, between Chauncey street and Macon street, the new sewer will be 138 inches in diameter, and will replace the present 48-inch sewer which now discharges into the Halsey street sewer, and which receives 12-inch pipe sewers from the easterly side at intersecting streets between these points.

The storm flow from each of these sewers which is now discharged into the present storm sewer in Lewis avenue will be taken into the new sewer.

It amounts to 68 cubic feet per second at Decatur street, at Bainbridge street, at McDonough street and at Macon street, from a drainage area of 40 acres.

It will not be necessary to allow any portion of the storm flow of these sewers to accompany the dry weather flow into the present 48-inch sewer now in Lewis avenue. It will probably not be wise to disturb the present storm sewer in Lewis avenue, as this may properly be made use of, to carry house sewage now carried by the present 48-inch sewer (which will be removed), and discharge it as at present into the Halsey street sewer.

On Macon street, between Lewis avenue and Tompkins avenue, a distance of three blocks, a 12-inch pipe sewer now in this street will be rebuilt on each side of the street before building the new sewer, and will act as house sewers almost entirely, the storm flow being delivered to the new sewer. Eighteen-inch pipe sewers will be intercepted from the south at Sumner avenue and Throop avenue, and a 24-inch pipe at Tompkins avenue. These sewers at present discharge 36, 39 and 47 cubic feet per second of storm water from drainage areas of 16, 17 and 25 acres in extent, respectively. Their dry weather flow, which, as a maximum, amounts to 6 cubic feet per second respectively, will be allowed to discharge as at present into the Halsey street sewer. A small portion of the storm flow will be allowed to accompany it.

The new sewer in Macon street will be 138 inches in diameter between Throop avenue and Lewis avenue. Between Throop avenue and Tompkins avenue it will be

144 inches in diameter, and will have a capacity of 709 cubic feet per second. The total area of the watershed tributary to it at Tompkins avenue is 760 acres.

For the greater portion of the length of these three blocks the surface at Macon street lies below the 50-foot contour line, and flooding is very heavy immediately to the north along Halsey street. This low-lying district covers practically all the territory between Sumner avenue and Nostrand avenue and Madison street and McDonough street. Flooding takes place now practically over the whole of it. The new sewer will turn south through Tompkins avenue and will pass, approximately, through the centre of this low area.

At Tompkins avenue and Macon street a new sewer is designed to join the main sewer from the south. This new sewer starts at Grand avenue and Prospect place, where it receives the storm flow of a 24-inch pipe sewer, amounting to 67 cubic feet per second from a drainage area of 33 acres. This sewer now discharges its storm water into the Greene avenue sewer at Grand avenue. Its dry weather flow, amounting to 3 cubic feet per second, continues on through Grand avenue to Flushing avenue, and will continue to do so. No storm water passes into the old sewer with the dry weather flow. It will ultimately be cut off entirely at Greene avenue. Between Grand avenue and Classon avenue the new sewer will be 42 inches in diameter, and will have a capacity of 67 cubic feet per second.

At Classon avenue, where its diameter changes to 54 inches, it will receive another 24-inch pipe sewer, which will contribute 95 cubic feet of storm water per second from a drainage area of 57 acres. The present dry weather flow of the Classon avenue sewer, amounting to 6 cubic feet per second, will be allowed to continue on through the present sewer in Classon avenue. These two drainage areas lie between Union street and Prospect place and Underhill and Franklin avenues. This 24-inch sewer also discharges into the Grand avenue sewer at present. The effect of the new sewer at these points, therefore, is to relieve the Greene avenue sewer at Grand avenue of 142 cubic feet per second of storm water, in place of which 9 cubic feet of house sewage will be turned into it.

At Franklin avenue a 30-inch sewer now discharging northerly and through Brevoort place into the Bedford avenue sewer will be relieved of its storm water, amounting to 91 cubic feet per second from a drainage area of 48 acres. The dry weather flow, amounting to 5 cubic feet per second, together with 2 cubic feet per second of storm water, will be allowed to continue on as at present. Continuing easterly to Bedford avenue the new sewer will have a diameter of 54 inches and a capacity of 234 cubic feet per second. The area of the watershed tributary to it will be 160 acres.

At Bedford avenue it will intercept the flow of a 24-inch pipe sewer from the south and will receive from it a storm flow of 59 cubic feet per second, collected from a drainage area of 28 acres. The dry weather flow, amounting to 3 cubic feet per second, together with a storm flush of 2 cubic feet per second, will continue on as at present through Bedford avenue and Pacific street to the Nostrand avenue sewer.

The new sewer at Bedford avenue will have a diameter of 60 inches and a capacity of 234 cubic feet per second. It is planned to build a subway through Bedford avenue, and it is necessary therefore to place the sewer low enough at this point to avoid it when it is built. The inside of the crown of the sewer is therefore placed 24 feet below the street surface, leaving ample room above it. Placing the sewer at this depth makes its grade to the eastward somewhat flatter than would otherwise be the case, and necessitates making its size and the expense of building it somewhat greater. A sudden drop in grade of 6 feet and a change in diameter from 54 to 60 inches was made. Three blocks of 12-inch pipe sewer in Prospect place, which will be relieved of storm water by this new sewer, will not be disturbed, but will continue to receive house sewage as at present, the storm water which they now carry being taken into the new sewer.

Between Bedford and Nostrand avenues the new sewer will have a diameter of 72 inches and a capacity of 234 cubic feet per second.

At Nostrand avenue a 30-inch sewer from the south, carrying a storm flow of 146 cubic feet per second, collected from a drainage area of 87 acres, will be intercepted. The dry weather flow, 9 cubic feet per second, no storm water taken in. The diameter of the new sewer on Nostrand avenue is 72 inches and its capacity is increased to 332 cubic feet per second.

At Dean street a storm flow of 49 cubic feet per second takes in area 22-A. Dry weather flow, 2 cubic feet and storm flush, taken into old sewer. Continuing eastward through Dean street to New York avenue, a 30-inch storm sewer is intercepted from the south at the latter point, which carries a flow of 76 cubic feet per second from a drainage area of 41 acres. Its dry weather flow, amounting to 4 cubic feet per second and storm flow of 2 cubic feet per second, will continue on into the Marcy avenue sewer, as at present. The new sewer continues on easterly through Dean street to Brooklyn avenue, where it turns northward to Fulton street. Its size in Dean street, between Nostrand avenue and Brooklyn avenue, is 78 inches, capacity is 382 cubic feet per second.

At Dean street the storm flow of the present Brooklyn avenue sewer, amounting to 131 cubic feet per second, from an area of 82 acres, will be turned into the new sewer, and the dry weather flow, amounting to 8 cubic feet per second, will be allowed to continue on through Marcy avenue to Greene avenue, where it will be taken into the Greene avenue sewer. It is planned to preserve the old sewer between Dean street and Fulton street. The new sewer will be 90 inches in diameter and will have a capacity of 564 cubic feet per second.

At Fulton street the new sewer turns easterly for a distance of one short block, about 180 feet, to Tompkins avenue. This is the only place where a sewer is placed in Fulton street. The possibility of a subway in Fulton street makes it advisable to drop the grade of the sewer 100 feet south of the south line of Fulton street 7 feet to avoid interference. It is necessary to make the sewer grade much flatter from this point northerly and to increase its size to 126 inches. At the present time there is a 12-inch pipe sewer on each side of the roadway in Fulton street, and it is thought that it will not be necessary to disturb either of them in building the new storm sewer.

In Tompkins avenue, as far north as Macon street, the new sewer will be 126 inches in diameter. The 24-inch sewer at present in this street, although well above the grade of the new sewer, should be removed and replaced by a small pipe sewer on each side of the roadway, in order to care for house sewage which now flows to them. North of the junction of this 126-inch sewer at Macon street with the 144-inch sewer proposed for Macon street, the new sewer in Tompkins avenue will be 162 inches in diameter. At this point of junction the above 126-inch sewer from Brooklyn and Tompkins avenue will deliver the storm flow from 548 acres with the storm flow from the 144-inch sewer in Macon street from an area of 760 acres, which, together, will amount to 1,308 acres. The new sewer will require a capacity of 1,128 cubic feet per second. Its diameter will be 162 inches. From this junction on to the outlet it will be so large that it will be necessary to remove most of the present sewers from its path and replace them with small pipe sewers on each side of the roadway to care for house sewage. With the exception of a few short blocks these sewers are comparatively small and their removal and replacement will not involve large expense.

At Halsey street a 54-inch storm sewer crosses Tompkins avenue. The elevation of its invert is 33.01. The elevation of the invert of the new sewer will be 12.26. The new sewer is, therefore, well below the Halsey street sewer and no difficulty will be experienced in relieving the latter to any extent desired. Its storm flow, estimated at 102 cubic feet per second, will be diverted into Tompkins avenue, and the dry weather flow, estimated at 7 cubic feet per second, will be carried on to Marcy avenue and through Marcy avenue into the Greene avenue sewer. Sixty-seven acres of drainage area is now tributary to the Halsey street sewer at this point, which is in the midst of a badly flooded area, which extends for some distance to the north and east. Water rises after every severe storm at this point to an elevation of 51. That is, this is the elevation of the hydraulic grade of the Halsey street sewer at such times. The elevation of the street surface at this point is only 47.9, or 3.1 below hydraulic grade. Frequent flooding is, therefore, unavoidable under present conditions. After receiving the flow of the Halsey street sewer, the area tributary to the main sewer will be 1,375 acres, and the run-off 1,178 cubic feet per second net.

A 30-inch storm sewer which now discharges northward and eastward through Tompkins avenue and Hancock street, a distance of two blocks, into the 60-inch storm sewer in Marcy avenue, will, no doubt, have to be taken into the new sewer at Tompkins avenue.

At Monroe street the storm flow from an area of 29 acres lying to the eastward of Tompkins avenue, and amounting to 54 cubic feet per second, will be taken through small sewers built to replace the present sewers in Tompkins avenue. The new sewer will, therefore, care for 1,200 cubic feet per second from an area of 1,404 acres.

Two blocks of 30-inch brick sewer and 7 blocks of pipe sewer of various sizes, between Halsey street and Greene avenue, will be removed and rebuilt of sufficient size to care for the dry weather flow, the storm flow being taken into the new sewer at each intersecting street.

At Lexington avenue the storm flow from an area of 33 acres, amounting to 57 cubic feet per second, will be received into the new sewer, the capacity of which changes to 1,222 cubic feet per second from a total area of 1,437 acres.

At Greene avenue the proposed sewer will have a diameter of 162 inches and a capacity of 1,222 cubic feet per second. It will receive the entire flow of the Greene avenue sewer, amounting to 388 cubic feet per second, from a drainage area of 393 acres, which is 44 cubic feet per second less than the drainage area tributary to it east of Tompkins avenue. This 44 cubic feet per second is the total amount of storm water allowed to continue on in the old sewers tributary to the Greene avenue sewer in this district. It will cross Greene avenue 7.08 feet below the Greene avenue sewer, so that the construction necessary to accomplish the proposed diversion will be comparatively simple, and no obstruction to or interference with the flow of either sewer will occur in building. The diameter of the new sewer north of Greene avenue will be 180 inches and its capacity 1,457 cubic feet per second.

Between Greene avenue and Kosciusko street three blocks of pipe sewer (one block of 18-inch and two blocks of 24-inch) will be displaced and rebuilt, of sufficient capacity to carry the dry weather flow.

Sewers discharging considerable quantities of storm water into the Marcy avenue sewer at present cross Tompkins avenue at intersecting streets south of Kosciusko street, as follows:

	Diameter, Inches.	Drainage, Acres.
Kosciusko street	42	111
Dekalb avenue	30	21
Pulaski street	18	21
Hart street	18	13
Willoughby avenue	18	19

All of these sewers will cross above the present sewer and will be allowed to continue their discharge into the Marcy avenue sewer for the present, because the Marcy avenue sewer itself is diverted to the new sewer at Vernon avenue down stream from and at Greene avenue up stream from the points where these sewers empty into it. Its capacity is thus made ample to receive their discharge. Some of them that are surcharged to the eastward of Tompkins avenue may be relieved at Tompkins avenue. Kosciusko street in particular must be afforded relief for some distance to the eastward of Tompkins avenue. Thirty-three acres of its drainage area will be made tributary to the Greene avenue sewer, and it will thus be relieved partially of its present badly surcharged condition.

The diameter of the new sewer from Greene avenue northward will be 180 inches. It will have a capacity of 1,457 cubic feet per second.

The present 18-inch sewer in Hart street, east of Tompkins avenue, which passes southerly through Tompkins avenue to Pulaski street, where it joins the Pulaski street sewer, which becomes 36 inches in diameter, is at present relieved at Pulaski street and Tompkins avenue of a surface flow amounting to 20 cubic feet per second, by a 30-inch storm sewer which passes through Hart street, Marcy avenue and Willoughby avenue to Nostrand avenue, will be disturbed in Tompkins avenue and will be rebuilt for a distance of about 270 feet.

At Vernon avenue, where it turns to the westward as far as Nostrand avenue, a new 60-inch sewer designed to afford further relief to the Wallabout district will join. This new sewer will start at Park avenue and Sumner avenue, and will extend westerly through Park avenue to Tompkins avenue, and thence through Tompkins avenue to Union avenue.

Its size and capacity will be as follows:

Park avenue, between Sumner avenue and Throop avenue; diameter, 36 inches; capacity, 51 cubic feet per second; draining area, 24 acres.

Park avenue, between Throop avenue and Tompkins avenue; diameter, 42 inches; capacity, 51 cubic feet per second; draining area, 24 acres.

Tompkins avenue, between Park avenue and Floyd street; diameter, 48 inches; capacity, 76 cubic feet per second; draining area, 38 acres.

Tompkins avenue, between Floyd and Stockton streets; diameter, 54 inches; capacity, 93 cubic feet per second; draining area, 52 acres.

Tompkins avenue, between Stockton street and Myrtle avenue; diameter, 60 inches; capacity, 113 cubic feet per second; draining area, 66 acres.

Tompkins avenue, between Myrtle and Vernon avenues; diameter, 66 inches; capacity, 113 cubic feet per second; draining area, 82 acres.

This sewer receives the flow of a 30-inch sewer in Park avenue at Sumner avenue which drains 24 acres, as stated above, of territory lying on both sides of Broadway, between Park avenue and Jefferson avenue, and which contributes to the floods in this neighborhood. The new sewer will not disturb the old Park avenue sewer.

It was at first planned to carry this main outlet through Tompkins avenue to Park avenue, and thence through Park avenue to Classon. The excavation in Park avenue would have been comparatively light. The whole line would have avoided the elevated railroad tracks and fully 1,000 feet in length of proposed new sewer in Tompkins avenue and Park avenue would have been saved. It was found, however, that the grade of the subway tracks at Bedford avenue and Park avenue had recently been lowered several feet, making the crossing of the sewer at this point impracticable. It was therefore necessary to move it to Vernon avenue and Myrtle, where the headroom will be sufficient.

The Tompkins avenue sewer will also cross the lines of projected subways at Lafayette avenue, Gates avenue and Fulton street. A branch of it will also pass under Fulton street at Troy avenue. At all these points, however, it has been placed well below the grade of the subway, and no difficulty is anticipated.

Between Tompkins avenue and Nostrand avenue, the main outlet sewer will be 180 inches in diameter, and will still preserve its circular section.

At Marcy avenue it will receive the entire storm flow of the Marcy avenue sewer, which is 72 inches in diameter at this point. This amounts to 285 cubic feet per second from a drainage area of 206 acres. Its dry weather flow, amounting to 20 cubic feet per second, will be allowed to continue on to Wallabout street, as at present. The invert elevation of the Marcy avenue sewer is 17.2. That of the new outlet is 3.12. The construction required for the necessary diversion at the point of intersection will, therefore, be comparatively inexpensive and simple in design.

At Nostrand avenue two 48-inch sewers will be intercepted. One of these carries storm water only. Its entire flow is intercepted at Greene avenue, and will continue to be under the new arrangement. It also receives a small amount of storm water from the present storm sewer in Clifton place, between Grand avenue and Nostrand avenue. It is intended to divert this Clifton place sewer into Greene avenue sewer at Bedford avenue, so that it will contribute practically nothing to the proposed main outlet sewer.

The remaining 48-inch sewer in Nostrand avenue at present receives a large volume of house sewage, 25 cubic feet per second, collected from an area of 252 acres south of Greene avenue. It also carries 435 cubic feet per second of storm water from this same area. It is now relieved by a 48-inch at Hancock street into the Marcy avenue sewer. At present its storm flow is taken in at Greene avenue, and its dry weather flow is carried on to Wallabout street. This dry weather flow will also be diverted to Greene avenue, leaving only the small quantity of storm water which collects from a drainage area of 70 acres, amounting to 107 cubic feet per second, between Greene avenue and Vernon avenue, to be taken into the new sewer.

The drainage area tributary to the new sewer at this point is 2,200 acres. Its capacity is 1,655 cubic feet per second.

At this point the proposed sewer turns northward to Myrtle avenue, a distance of one block. The old storm sewer will, no doubt, have to be removed for this distance and need not be replaced. The combined sewer will, without doubt, be disturbed, and it may be necessary to replace it with one of sufficient size to take the reduced quantity of dry weather flow.

The new sewer in Myrtle avenue, between Nostrand avenue and Bedford avenue will be 180 inches in diameter, and will have the same capacity and size as in Nostrand avenue. Vernon avenue does not extend to the west of Nostrand avenue, so that the change of line to Myrtle avenue was necessary. Its construction under the elevated railroad structure will be expensive, but less so then it would be in any streets to the south of Myrtle avenue, because the depth of the sewer would be so great that tunnel construction would have to be resorted to. In Myrtle avenue it may be built in open cut, and the work can be done more rapidly. Then too it is of advantage to intercept all the sewers leading into the Wallabout district from the south as far north as possible, so as to make this relief as complete as possible. Myrtle avenue is the farthest north point where it is practicable for the sewer to pass under the projected subway on Bedford avenue without serious interference with its flow. The circular section, or one approximately circular, may be carried to within a short distance of Bedford avenue, where the available clear headroom under the subway is only 9 feet. The hydraulic grade line will have to be lowered at this point and the sewer section entirely changed for the remainder of the distance to the outlet. It will not be advisable to lower the invert grade to correspond with the hydraulic grade, a small portion of which it is thought may be regained on the west side of Bedford avenue.

A 48-inch sewer in Bedford avenue will be entirely removed by the subway as far south as Lafayette avenue. Its present flow may be intercepted at Greene avenue, and it may be replaced by a small pipe sewer north of this point.

In Myrtle avenue, between Nostrand avenue and Bedford avenue, there is at present a small pipe sewer on each side of the roadway. It may not be necessary to disturb either of these sewers, as there may be space between them to build the new sewer. The estimates of cost presented herewith have included the cost of rebuilding both of these sewers.

Between Bedford avenue and Skillman street, a distance of one block, the new sewer will have a broad twin section, which will occupy nearly the whole width of the roadway. The present 12-inch pipe sewers will have to be removed and rebuilt later, and all pipes and conduits now in the street will have to be supported during construction. All of this work is provided for in the attached estimates.

At Skillman street it has been thought wise to provide for a new sewer between DeKalb avenue and Myrtle avenue to care for the storm flow of the DeKalb avenue sewer, which receives the run-off from an area of 30 acres, amounting to 57 cubic feet per second, and a small dry weather flow of 3 cubic feet per second. The latter will be passed on through the present sewer in Skillman street to the north of Myrtle avenue. The new sewer in Skillman street will also care for a small storm flow from an area along Bedford avenue. Its size on DeKalb avenue, between Bedford avenue and Skillman street, is 42 inches. On Skillman street, between DeKalb avenue and Willoughby avenue, its size is 42 inches; between Willoughby avenue and Myrtle avenue it is 48 inches in diameter. As this sewer is made necessary principally by the construction of the subway on Bedford avenue, a large part of its cost should be borne by the Rapid Transit Commission.

At Wallabout street and Flushing avenue, the projected subway on Bedford avenue will occupy all the available space between the surface of the roadway and a point several feet below the level of mean high water, so that all sewer structures in these two streets will be cut off absolutely at Bedford avenue.

The Rapid Transit Commission will, therefore, be obliged to furnish an adequate outlet for the 36-inch sewer in Flushing avenue, and the 60-inch sewer in Wallabout street. Storm water from all points south of Vernon and Myrtle avenues and east of Bedford avenue will be entirely excluded from these sewers west of Bedford avenue, and flooding in this district should, therefore, entirely cease. They will still receive sufficient storm water from an area included within the old Nineteenth Ward to utilize to good advantage their present capacity. The outlet which the Commission will build should be of sufficient capacity to carry all storm water reaching Bedford avenue from the eastward, their present incapacity not being taken into consideration. As a matter of fact, the present sewer in Flushing avenue and Wallabout street will be inadequate as far to the east as Broadway after the new main sewer is built. The new main sewer in Tompkins, Vernon and Myrtle avenues will remove a large portion of the storm water which now reaches them.

When it is considered that this is the worst flooded area in the borough, it will not seem remarkable that this large diversion of their present tributary waters is not sufficient to relieve them. A new sewer discharging into the new outlet which the Rapid Transit Commission will build will be necessary in Wallabout street, from a point near Broadway to Marcy avenue, a distance of a little more than two blocks. Between Marcy and Nostrand avenues the grade of the present Wallabout street sewer is so low that it may be advisable to replace it entirely with one of proper design to discharge into the proposed outlet sewer to be built by the Rapid Transit Commission. The condition of this old sewer is known to be bad, but if it is found to be such that it can be used, it can be made use of in the new plan. East of Marcy avenue the new sewer will not need to be larger than the equivalent of 120 inches in diameter, which is designed to have a broad, low section. The expense of building it will be much less than that of enlarging the capacity of the present sewer. It will be 60 inches in diameter in Moore street, between Leonard street and Broadway; 84 inches in Wallabout street, between Broadway and Throop avenue; 102 inches in Wallabout street, between Throop and Harrison avenues; 108 inches in Wallabout street, between Harrison and Marcy avenues; 120 inches in Wallabout street, between Marcy and Lee avenues. The dry weather flow of this sewer is 60 cubic feet per second from an area of 600 acres. The storm flow of this sewer is 288 cubic feet per second, from an area of 241 acres. Its total capacity is, therefore, 348 cubic feet per second.

The above proposed sewers will accomplish the entire relief of this district. Their construction should be carried out before the subway in Bedford avenue can be put in operation, because storm water at times now overflows the street surfaces to a depth of at least two feet, and would subject the subway at such times to the danger of disastrous floods. A possible outlet for the Wallabout street sewer has been suggested through Lee avenue to Hewes street, and through Hewes street to Kent avenue. This is perhaps the shortest and best route that could be chosen, as Hewes street is the first street where there is sufficient head-room to pass under the subway.

Returning now to the main outlet sewer at Myrtle avenue and Skillman street, it turns to the northward through Skillman street, which is the first point where it is possible to leave the line of the elevated railroad, and follows Skillman street to Park avenue. Its capacity between these points, and, in fact, for the remainder of the distance to the outlet, will be equal to that of a circle the diameter of which is 186 inches. It will be a twin section 11½ feet in height as far as Flushing avenue; the height will change to 9 feet on account of lower surface grades and the proximity of the outlet chamber, built of reinforced concrete, and will be built in comparatively shallow cut. The cost of construction will not be excessive when compared with that of a circular section of equivalent capacity, and a sufficient space on each side will be left to accommodate all necessary structures, such as house sewers, water and gas pipes and electrical conduits. No structures of any considerable size will be encountered before the outlet is reached, except the surface railroad tracks on Classon avenue, and a 36-inch sewer in Classon avenue, between Flushing avenue and the point where the outlet turns to enter the canal. Special arrangements will have to be made for the dry weather flow of this sewer. The outlet should occupy a space the whole width of the canal, and reaching to the easterly side of Hewes street, so that the velocity of the water may be checked somewhat before entering the canal, otherwise it would be so great that considerable commotion would be caused at the head of the canal, so that it would be inconvenient for boats to lie within some distance of it. This outlet should be of special construction, and should be so designed that no deposit may accumulate in it because of the sudden checking of the current as it enters it. The outlet sewer designed for Hewes street will also enter this outlet chamber and will cross the present sewer at Kent avenue, delivering to it its dry weather flow and such portion of its storm water as it can care for.

The invert at the outlet will be placed 4.3 feet below mean high water, or approximately at the low water line. Its hydraulic grade will be 4.7 feet above mean high water. The effect of placing the invert at this depth will be to cause less disturbance to the headwaters of the canal, and at the same time a free discharge is insured.

An item of \$20,000 has been inserted in the estimates to cover the cost of this outlet.

The private property to the east of Hewes street under which this outlet must pass is now occupied by a lumber yard, so that no buildings will be affected, and the right-of-way required should not be exorbitantly expensive.

A complete design and estimates of cost were made for an alternative route for the outlet portion, which included sewers through Macon street, Nostrand avenue, Hancock street and Franklin avenue. It was found, however, that although this route crossed the Greene avenue sewer at a very advantageous point, near which its capacity changes abruptly, and that proper relief could be provided for all sewers in the watershed, expensive tunnel construction would have to be resorted to for such a great distance that the cost compared with that of the route chosen made its further consideration unwise.

The routes as above laid down involve the minimum amount of disturbance to street railroad traffic of any that could be chosen that would be practicable in other respects. The surface road on Tompkins avenue would be seriously interfered with and would, no doubt, be temporarily abandoned for a part of the distance between Park avenue and Fulton street, Marcy avenue, one block to the westward, and Summer avenue, two blocks to the eastward, are each provided with surface cars, so that the temporary interruption of this traffic on Tompkins avenue would not be a serious inconvenience to the residents or to the Transit Company.

Surface car traffic would also be interrupted on Myrtle avenue for a distance of about 1,400 feet, and on Park avenue and Classon avenue for a distance of nearly 2,000 feet. It is probable, however, that construction would not be under way on more than one of these three last named streets at one time, and traffic may easily be temporarily diverted to some nearby line without serious inconvenience. At a number of points the sewer will pass beneath surface car tracks, and at two points on Fulton street it will pass under elevated railroad tracks, but interference will be of short duration and will not be serious while it lasts. On no other street in the whole proposed system will there be interference with surface railroad traffic worth considering.

So far as the character of the pavement on various streets in the district is concerned there is not much choice. The streets are nearly all paved in a substantial manner and the expense of restoring pavements would be practically the same along any route that might be chosen.

Other considerations, such as topographical features of the watershed, the condition of the present sewers, etc., must necessarily be the governing ones in the choice of route and the character of the pavements could not be taken into consideration even though the cost of restoring them will on the whole be a large item of expense.

One important consideration in the choice of route has been the utilization of all sewers already built to as great an extent as possible. For some distance downstream from the various points of diversion they cannot under any circumstances be utilized to their full capacities, but with very few exceptions (and then only for short distances) they will still carry considerable volumes of storm water or house sewage, and in the majority of cases a large portion of their whole capacities are utilized.

At points of diversion the diverting weirs will be so arranged that sewers carrying house sewage only will receive a substantial flush from storm water, which will be of great benefit in keeping them in a sanitary condition.

The buildings along the line of the main outlet are, with few exceptions, of light weight and comparatively inexpensive. There should be little danger of damage to foundations. The whole line may be built in open cut and surface settlement should take place more promptly than has been the case on Greene avenue. Along the lower portion of the main sewer, where the size is greatest, the depth of excavation is least, and liability to damage by such settlement is correspondingly small. West of Bedford avenue, where the grade of the subway tracks makes it necessary to adopt a broad low section for the sewer, nearly the whole, and in some cases more than the whole, width of the roadway between curbs will be occupied. On Skillman street, in particular, for a distance of one block, where the width of the roadway is only 24 feet, the side walls will reach beyond the curb lines. The top of the sewer will be far enough below the surface so that other subsurface structures, such as water and gas mains, may be placed at sufficient depth. Room will also remain at the sides, for house sewers.

The question of the most economical design of sections has not been fully considered. It will, no doubt, be found advisable to build the broad double section from Bedford avenue to the outlet of reinforced concrete. The smaller sizes, which will generally be egg-shaped, may perhaps prove to be cheapest if built of brick, while the large circular sections should be very carefully considered before any style of construction is decided upon. Any one of a number of styles of construction will give acceptable results.

Out of consideration for the property owners along the streets through which the sewer will extend, and for the accommodation of traffic on these streets, a method of construction should be adopted which will allow as rapid progress as possible consistent with good work.

In front of unimproved property, or in suburban districts, where the highways do not bear heavy traffic, there would be little objection to any method of construction, providing the completed work was satisfactory.

This district is so well improved that it should not be made necessary to maintain long blocks of open trenches. For this reason concrete deposited in place, whether plain or reinforced, would be open to objection. Time must elapse before it sets sufficiently to support heavy back filling, and when reinforced more or less delay is caused by building forms and because of the necessity of carrying out the work in several distinct operations. Centres cannot be removed promptly, and the result is that either the work would proceed slowly or a large amount of it would be under way at all times, if it is to be done to the best advantage.

It is thought that concrete blocks provided with an invert lining of vitrified brick would form a most desirable and substantial section and one that can be placed in position more rapidly and cheaply than one of either brick work or concrete. Centres could be drawn promptly and back filling could be proceeded with even before the centres were drawn.

Division No. 2.

Returning to the consideration of the diversion of the Greene avenue sewer through an outlet in Gold street, and beginning at Greene avenue and Tompkins avenue, the first point where sewage of any kind is admitted to the outlet portion after the main relief sewer passes through Tompkins avenue and receives practically its entire flow at that point, a small amount of house sewage will be taken in from a number of blocks to the south of Greene avenue, amounting to about 4 cubic feet per second from an area of about 40 acres. Sufficient storm water will also be allowed to enter to properly flush this end of the sewer. This storm water will be collected from the above 40 acres.

At Marcy avenue, the first point of concentration for storm water, 192 cubic feet per second will be admitted from a drainage area of 145 acres lying to the south and extending as far as Dean street, the line of a proposed relief sewer, to the eastward to Brooklyn avenue and to the westward to Nostrand avenue. This will comprise the entire storm flow of the 60-inch storm sewer and the 72-inch combined sewer in this street. A volume of house sewage will also be received from an area of 763 acres, estimated at 76 cubic feet per second as a maximum. This house sewage now continues on through Marcy avenue into the Wallabout sewer.

At Nostrand avenue a volume of 111 cubic feet per second of storm water from an area of 72 acres, comprising the entire storm flow of a 42-inch storm sewer, and a 48-inch combined sewer will be received from the south. This drainage area extends southerly as far as Hancock street, and easterly and westerly a distance of two blocks. A dry-weather flow, estimated at 28 cubic feet per second will also be received at Nostrand avenue from a drainage area of 277 acres lying to the southward as far as the Eastern parkway. At present it continues on through Nostrand avenue to Wallabout street. The total amount of dry-weather flow taken into the Greene avenue sewer to this point is, therefore, 104 cubic feet per second from an area of 1,040 acres.

At Bedford avenue a 48-inch storm sewer and a 48-inch combined sewer draining an area of 170 acres, will discharge their entire contents at Greene avenue, amounting to 222 cubic feet per second of storm water, and 22 cubic feet per second of house sewage, from a drainage area of 218 acres. This drainage area lies between Prospect place on the south, Bedford avenue on the east, and Grand avenue on the west.

At Franklin avenue and Classon avenue no sewers discharge into the Greene avenue sewer.

At Grand avenue, the next point of concentration, a 48-inch combined sewer draining an area which lies to the south of Greene avenue, between Union street on the south, Classon avenue on the east, and Clinton avenue on the west, will discharge its entire contents at Greene avenue, consisting of 274 cubic feet per second of storm water from a drainage area of 148 acres, and dry-weather flow estimated at 23 cubic feet per second from an area of 232 acres. The dry-weather flow at present passes on through Grand avenue into the Flushing avenue sewer and discharges through the Navy Yard into the Wallabout channel.

No inflow is received west of Grand avenue until South Elliott place and Hanson place is reached, where storm water amounting to 138 cubic feet per second, and house sewage amounting to 8 cubic feet per second, both collected from a drainage area of 83 acres, will enter from a 48-inch combined sewer recently built to facilitate the construction of the Atlantic avenue subway. This drainage area lies to the north of Atlantic avenue and east of South Elliott place. At present the sewer continues through Hanson place to Ashland place, paralleling the line of the Greene avenue sewer and discharging its dry-weather flow through the present 60-inch combined sewer in Ashland place. The projected subway in Ashland place would in any case make necessary the removal of the sewer in this street. Under the present arrangement a new sewer would be necessary to care for the dry-weather flow. It is herein proposed to allow the 48-inch sewer in South Elliott place to discharge into the Greene avenue sewer at South Elliott place, and to alter the invert in the Greene avenue sewer for one block between South Elliott place and South Portland avenue, where the Gold street outlet will join it, so that the flow will be eastward.

At South Portland avenue the proposed outlet will receive from the Greene avenue sewer a maximum storm flow of 621 cubic feet per second, and a dry-weather flow of about 157 cubic feet per second. The new sewer from Hanson place northerly to Dekalb avenue, and in Dekalb avenue to Raymond street will be 138 inches in diameter, and will have a capacity of 778 cubic feet per second. At the latter point a total drainage area of 695 acres is tributary to it. Between South Portland avenue and Dekalb avenue the storm water collected from an area of 23 acres is taken into the new sewer. This amounts to 51 cubic feet per second. The dry-weather flow from this same area, amounting to 2 cubic feet per second is also taken in. This area lies to the eastward of South Portland avenue and is served by 12-inch and 15-inch pipe sewers. Between South Portland avenue and Raymond street the present pipe sewer in Dekalb avenue will be removed and rebuilt, of sufficient size to carry house sewage from the south side of the street only. The north side of the street is bounded by Washington Park.

At Raymond street and Dekalb avenue three sewers now discharge into the old Raymond street sewer, a 24-inch sewer in Dekalb avenue east of Raymond street, a 60-inch sewer in Ashland place, and a sewer of uncertain size in Dekalb avenue west of Raymond street, which collects the flow from six blocks and discharges through Rockwell place into Dekalb avenue. These sewers will contribute 5 cubic feet per second of dry-weather flow, and 99 cubic feet per second of storm water from a drainage area of 54 acres. The 60-inch sewer in Ashland place between Lafayette avenue and Dekalb avenue is at the present time nearly useless, and will remain so.

The old sewer in Raymond street, between Dekalb avenue and Johnson street, is in bad condition, and its present capacity is very uncertain. Repairs that would be necessary to put it in good condition would amount to an entire rebuilding of it. It is proposed to remove it entirely and replace it with the new sewer, which will be circular in section and will have a diameter of 144 inches as far as Johnson street and Hudson avenue, where its diameter changes to 150 inches and its capacity 1,067 cubic feet per second.

At intersecting streets between Dekalb avenue and Myrtle avenue small pipe sewers draining the blocks adjacent to Raymond street on each side of it will be taken in and will contribute a small quantity of both storm and dry-weather flow.

At Myrtle avenue a new sewer 54 inches in diameter will enter the Raymond street sewer from the east. This new sewer extends easterly along Myrtle avenue a distance of six blocks to Carlton avenue, where it receives the flow of the 36-inch combined sewer in Carlton avenue, amounting to 147 cubic feet per second from a drainage area of 62 acres. This includes the discharge from the 18-inch pipe sewer in Washington Park, which carries the storm flow from nearly one-half of the area of the park itself, amounting in all to 23 acres. The dry-weather flow from this area, amounting to 4 cubic feet per second, is also taken in.

At present there are two 12-inch pipe sewers in Myrtle avenue, between Carlton avenue and Raymond street. These will not necessarily have to be disturbed in building the new storm sewer, which is not of large size. Between Carlton avenue and North Portland avenue it will be 48 inches in diameter, and between North Portland avenue and Raymond street it will be 54 inches in diameter.

In Johnson street, between Raymond street and Hudson avenue there is at present a 66-inch sewer, which was built in connection with the Hudson avenue sewer, for the purpose of relieving the old Raymond street sewer, which formerly discharged through an old outlet in the Navy Yard. This old outlet is still in existence and collects a small amount of sewage and storm water from the territory west of Johnson street. It will be advisable to discontinue the use of the outlet as soon as possible and make provision for carrying its contents into the Hudson avenue sewer. In building the new sewer in Johnson street the present 66-inch sewer for a distance of two blocks will be entirely removed.

At Navy street and Johnson street, the next point of concentration, a volume of storm water estimated at 51 cubic feet per second will be received from a 48-inch sewer, which will carry the storm flow from an area of 22 acres. A small volume of house sewage, estimated at 2 cubic feet per second will also enter at this point.

At Hudson avenue a 48-inch sewer, recently built by the Rapid Transit Commission as an outlet for a number of sewers in the neighborhood of Fulton street, which were affected by the subway now under construction, will be taken into the new sewer and will deliver 114 cubic feet of storm water per second from a drainage area of 63 acres, which lies almost entirely on the south side of Fulton street and Flatbush avenue, between Fourth avenue and Bond street. This sewer will also deliver 6 cubic feet per second of house sewage.

At Fleet place, Prince street and Gold street 15-inch pipe sewers will be taken into the new sewer and will deliver a small quantity of sewage from a few blocks lying on the north side of Fulton street. This sewage will amount to 38 cubic feet per second and will be collected from 16 acres. The dry weather flow received from this same area will amount to 2 cubic feet per second.

Continuing on to the north through Gold street, the next point of concentration is at Tillary street, where an old sewer of uncertain size and capacity will deliver from the west a volume of storm water estimated at 156 cubic feet per second, and a dry weather flow of 9 cubic feet per second from a drainage area of 91 acres lying to the east of Fulton street and west of Gold street.

At Tillary street the diameter of the new sewer changes to 156 inches, and its capacity to 1,161 cubic feet per second. Between Tillary and Sands streets at several intersecting streets small pipe sewers, intercepted, discharge a volume of 66 cubic feet per second of storm water and 3 cubic feet per second of dry weather flow from 32 acres. At this point (Sands street) diameter of sewer becomes 162 inches as far as Plymouth street, where a special section commences which continues to the bulkhead line. From the bulkhead line to the pierhead line is only a distance of about 150 feet. The outlet itself will therefore be short.

This is the last point where any considerable volume of storm water will be intercepted before the outlet is reached. At each intersecting street a small pipe sewer will be taken in which will deliver the drainage waters from a small area. All of these sewers together drain an area of 6 acres, and will deliver 17 cubic feet per second of storm water and 1 cubic foot per second of house sewage. They all outlet at present into the Hudson avenue sewer.

Gold street and Johnson street are served at present by small pipe sewers, nearly all of which are 12 inches in diameter. These will have to be removed and replaced when the new sewer is built.

It is proposed to carry the outlet to the pierhead line through a substantial structure which may act as the foundation for any pier which it is desired to build hereafter. At present the Department of Street Cleaning occupies the site with a light wooden structure used for the purpose of loading garbage scows. A structure designed for this purpose may be rebuilt after the outlet is built at comparatively small expense.

The surface elevation of Gold street is so low that a short length of the main sewer adjacent to the outlet will have to be built broad and low in section, as a circular section of the necessary size could not be placed at a sufficient depth below the street surface. The additional cost of this section, as well as that of the outlet, have been included in the total estimated cost of the sewer.

The total discharge of this sewer at the outlet will amount to 997 cubic feet per second of storm water and 197 cubic feet per second of house sewage. This storm water is collected from a watershed, the total area of which is 1,033 acres.

The area from which house sewage is collected is 1,970 acres; 128 cubic feet per second of this house sewage now discharges at the foot of Division avenue, 32 cubic feet per second through the Navy Yard and the remainder at the foot of Hudson avenue.

The completion of the above design, though it has been rather a long task, has been a privilege, a pleasure and a professional opportunity. Six months were spent in completing it, yet this is none too long to devote to a problem of this size and importance. If as careful a set of estimates as can be made can be relied upon, and a large sum of money as indicated by them is saved, the time devoted to it has not been in vain. The patience of our superiors in bearing with what may have seemed to be undue deliberation is highly appreciated. If the work is worthy of credit it belongs to all those who have taken part in it. A generous portion should be given to Mr. George T. Hammond, who has given close attention to every detail.

Methods of Estimating Sizes of Storm Water Drains.

To recite the cause of the present regrettable condition of this sewer system, making necessary large expenditures for relief sewers, is a long story. It is undoubtedly true that the introduction of improved pavements, which permit of higher velocities of storm water over their surfaces and its more rapid delivery at the points of inlet, has had a decided influence in making sewers inadequate.

The old cobblestone pavement, which was formerly nearly the only pavement in use, was usually full of holes and irregularities of surface, which contained quantities of storm water and retarded its flow, so that it was delivered to the sewers more gradually. No doubt it could not be foreseen 40 years ago that streets would eventually be paved with asphalt, but it could have been foreseen within the last 12 years at least. Smooth pavements do not account for the whole difficulty, however. It is more fundamental than that. The responsibility for what is now known to be faulty design does not rest with any one man, nor does it call for unqualified reproach to those Engineers who are responsible for it. Forty years ago, when many of these sewers were built, the subject of rain-fall and run-off, and the laws governing the flow of water in open channels, were very imperfectly understood.

In 1852 the proper proportioning of storm water drains had become a matter of great importance to the various borough engineers of London. One of the ablest of these, John Rowe, surveyor of the Holborn and Finsbury sewers, made numerous observations of the storm discharge of sewers, and embodied the results of his observations in a series of tables. He considered that as a rain-fall of more than one inch per hour was of rare occurrence in London, this amount was a reasonable and practicable maximum, for which provision should be made in the design of storm water drains.

Gaugings of the Savoy street and Ratcliffe highways sewers in London, in 1857, by Mr. Bazalgette and others, and other sewer gaugings made in the same year under the direction of the London Commission, furnished the basis for Hawksley's conclusion that storm sewers should be designed for one-half inch rainfall per hour reaching them. Hawksley in about 1856 devised a formula based upon the results of Rowe's tables which expresses analytically the relation between the diameter and slope of a circular sewer and the magnitude of the drainage area in acres. This formula was as follows:

$$\text{Log. } D = \frac{3 \text{ Log. } A + \text{Log. } N + 6.8}{10} \quad \text{where}$$

D = the diameter in inches of a circular sewer sufficient to care for a rain-fall of one inch per hour,

A = the drainage area in acres,

N = the distance in feet in which the sewer falls one foot.

Divested of its logarithmical form and transposed to agree with more modern formulae, it may be written as follows:

$$Q = 3.946 A y \sqrt{\frac{S}{A}}$$

Where Q = volume of storm water, namely, the cubic feet per second reaching the sewer,

A = the drainage area in acres,

y = the rain-fall in inches per hour.

S = the sine of the slope of the sewer.

The above formula was introduced for use in the design of the Brooklyn sewers by James P. Kirkwood, Engineer of the Brooklyn Water Works, as stated in his report upon the water works and sewers of Brooklyn, in 1867. Adams later changed the original Hawksley formula to the following form, which he states gives slightly less results for smaller areas and increased sizes for larger areas, which experience had shown to be desirable. (Even at this early day apparently sewers were proving to be of insufficient capacity.)

$$\text{Log } D = \frac{2 \text{ Log } A + \text{Log } N - 3.79}{6}$$

The nomenclature being the same as in the original Hawksley formula, except that D = the diameter in feet of the sewer. Both of the above formulae call for a rain-fall of one inch per hour, one-half running off.

Both Kirkwood and Adams were among the foremost of their profession in their time, and their practice has been widely quoted and followed by engineers. They undoubtedly made use of the best information obtainable upon the subject. It is now known, however, that the gaugings of the London Commission were based upon average rates of rain-fall per hour, rather than upon maximum rates, and that they were defective in other respects; that Rowe's tables were defective, and that the formulae of Hawksley and Adams based upon them were radically and fundamentally wrong, for the following reasons:

They made the diameter of the sewer dependent solely upon the slope of the invert and the area to be drained, assuming the maximum rain-fall to be provided for at one-half inch per hour. They disregarded entirely the effect of the character of the surface of the water-shed as to imperviousness and slope, the character of the material of which the sewer was built, namely, whether it presented a rough or smooth surface, and also the fact that the hydraulic grade and not the invert grade should be considered. They made no provision for the effect of the hydraulic radius of sections upon their capacity, and finally they did not take into account the fact that the amount of rain-fall to be provided for varies in different localities, and in this locality at least is much greater than one inch per hour. A glance at the accompanying diagram will show the frequency of rain-falls on this water-shed, which greatly exceed the amount used in the formula by which the sewers were designed. One cause of their failure is therefore immediately apparent.

In 1880 Burkli-Zeigler published a paper in Zurich, entitled, "The Greatest Discharge of Municipal Sewers," in which he proposed the following formula:

$$Q = C R \sqrt[4]{\frac{S}{A}} \quad \text{in which}$$

Q = the volume of storm water per second reaching the sewer per unit of area drained,

C = a coefficient depending upon the character of the surface drained,

R = the average rain-fall in cubic units, per unit of area, per second,

S = the average slope of the water-shed per thousand,

A = the area of the drainage area.

All of the above units are of the metric system. Mr. R. McMath, of St. Louis, published in the transactions of the American Society of Civil Engineers in 1887, volume 16, a formula of the same general form as Burkli-Zeigler's, namely:

$$Q = A e R \sqrt[5]{\frac{S}{A}}$$

In this case, however, e = the proportion of the rain-fall reaching the sewer.

From the results of a large number of sewer gaugings in St. Louis, the area of the water-shed and the duration and intensity of the storm being known, approximately at least, McMath determined that for that City

R , or the maximum rain-fall to be considered should be 2.75 inches per hour, and e , the proportion of it to be provided for in the sewers, should be 75 per cent. Presumably this was for a well developed urban district.

The formulae of Burkli-Zeigler and McMath came into general use by engineers very rapidly, who welcomed them as an advance in the knowledge of the subject and the practice of sewer design. For the last twenty years therefore a fairly satisfactory method of computing the quantity of storm water to be provided for in fixing the size of a sewer has been available, and it seems as if it should have been made use of.

From gaugings of the Sixth avenue sewer in New York, made in 1888, Hering recommended a modification of McMath's formula, which gives somewhat greater results.

Parmeley, in the design of the Walworth street sewer in Cleveland, also used a modification of the McMath formula, which increased the sizes obtained. Neither of these formulae has come into general use.

In 1876 the formula of Kutter and Ganguillet for the flow of water in open channels became available for use in this country through a translation of their well known treatise upon the subject by Messrs. Hering and Trautwine. The use of this formula, which has been used the world over by engineers for years, together with that of McMath, may be said to have become standard for the last fifteen years.

In English measure Kutter's formula is $V = C \sqrt{RS}$

Where V = velocity in feet per second of the water in the sewer

R = hydraulic radius of the section of the sewer—area of the section divided

by the circumference (or perimeter) of the wetted section.

S = line of the slope of the water surface fall in a given distance, divided by

the distance.

C = a coefficient which is equal to 41.6.

$$C = \frac{41.6 + .00281 \frac{1}{S} + 1.811 \frac{1}{n}}{1 + \left(\frac{41.6 + .00281 \frac{1}{S}}{S} \right) \frac{1}{R}}$$

n is a coefficient, varying with the character of the surface of the material of which the sewer is built. For first class brick work, where particular pains are taken to obtain as smooth a surface as possible, n is often assumed as low as .012. Fteley & Stearns' experiments on the subway conduit, which is a brick structure, give n generally equal to .012. Many brick sewers in American cities have been designed, using n at this value. The Sewerage Commission of the City of Baltimore (1897) recommended that the value of n for brick sewers should be assumed as .014. Even this value of n assumes that the quality of the brick work is to be above the average and it has been thought safe, therefore, to use a somewhat more conservative value, which is suitable for brick work of ordinary character. Brick inverts may be so laid that it would be proper to use a smaller value for this coefficient, but the inner surfaces of arches are not ordinarily as smooth, centres are left in place until the mortar has become so hardened that joints cannot be struck and more or less unevenness is usually found above the spring line. Sewers built of concrete, or which have a vitrified brick lining, present a much smoother surface and their capacities are considerably greater than similar sections built of brick.

Inasmuch as a very conservative value of n has been used and as the capacity of a channel increases quite rapidly as n decreases or the surface becomes smooth, other things being equal, it is thought that the design is well within limits, if it is decided to use brick work throughout, and that by the use of materials which will provide as smooth a surface as practicable, especially in the larger sizes, velocities may be somewhat increased toward the outlet (which is always desirable), and a small reduction in size might in places be permissible.

Kuichling, following the suggestion of Professor Talbot, proposed, in 1889, in his report upon the east side trunk sewer of Rochester, what he called the "rational method" for the design of storm sewers. He based his recommendations upon an extended series of observations of the duration and intensity of rainfall and upon sewer gaugings coincident with rainfall observations, giving percentages of rainfall running off under widely varying conditions. He established the following general principles, which are accepted by all authorities upon the subject.

First—The percentage of rainfall discharged from a given area is nearly constant for rains of all considerable intensities and lasting equal periods of time. This is accounted for by the fact that the impervious surface remains constant.

Second—This percentage varies directly with the degree of urban development of the district, namely, with the amount of the impervious surface.

Third—This percentage increases rapidly and directly or uniformly with the duration of the maximum intensity of the rainfall until a period is reached which is equal to that of the time required for concentration of the drainage waters from the entire area tributary to the points of observation. The said percentage increases slowly after this period is reached until complete saturation of partially permeable surfaces is accomplished.

Fourth—This percentage becomes larger when a moderate rain has immediately preceded a heavy downpour, thus by saturation increasing the extent of the impervious surface.

No general formula is necessary to make use of this method. Starting at the headwaters of the system at the first storm water inlet, the time required for water to concentrate at this inlet from the most distant point tributary to it is estimated. A rainfall intensity corresponding to this time is taken from the diagram and the quantity of water reaching the sewer in this time and the necessary size of the sewer to care for it are computed. This operation is repeated from point to point along the line wherever necessary, the intensity of the rainfall considered becoming smaller as the time increases until the outlet is reached.

This method is certainly correct in theory and is a distinct advance over other methods in use, but to be able to use it successfully we must know with reasonable accuracy the time required for storm water falling upon the farthest points of the watershed to concentrate at the nearest sewer inlets. This requires also a knowledge of the rapidity of flow of storm water along street gutters, from yards, and over improved and unimproved surfaces generally. Comparatively simple observations would determine this, or at least would add much to our present knowledge of the subject. At present, however, there is little or no definite information in regard to it. This is perhaps the principal reason why this method of determining the size of storm water drains has not come into more general use. It has been claimed that this method has the definite advantage over others that the element of time is made the controlling one in determining Q , and that other methods do not take time into account. This is only partially correct. For instance, in McMath's formula,

$$Q = A e R \sqrt[5]{\frac{S}{A}}$$

$e R$ = the quantity of storm water reaching the sewer for a unit of area. $A e R$ therefore = the total quantity from the whole area under consideration. The remain-

der of the expression— $\sqrt[5]{\frac{S}{A}}$ cannot be so easily explained, but inasmuch as it

was derived from the results of a large number of actual sewer gaugings and represents conditions as they occurred, it is thought that the element of time must in

some unexplainable way be taken into account in this expression. This cannot be disproven, and Engineers have been more content to rely upon the use of this formula than upon one which depends so much more upon theory and upon the individual judgment of the Engineer, even though it is conceded that the theory is correct.

It is confidently predicted, however, that in the future when experimental data have been obtained sufficient to make Kuichling's method of procedure more certain in the results obtained it will come into more general use. However that may be, his experiments and investigations have added materially in other ways to our knowledge, and have pointed out the way along which further advances should be made.

In the use of McMath's formula in the present design it was assumed that the reasonable maximum rainfall to be considered was 3 inches per hour. From the diagram it will be seen that this corresponds to 30 minutes of time, that is, from the rainfall records of the last fourteen years it is found that those storms which continued throughout the period of time as great or greater than thirty minutes, with very rare exceptions, were of less intensity than 3 inches per hour. It is estimated that fifteen or twenty minutes will be required for storm waters to concentrate at the nearest sewer inlets from the remotest points of the watershed, and that therefore as only a short distance through the sewer will be traversed in the remaining ten minutes, practically the whole length of the sewer will be taken care of as to the

element of time by the expression $\frac{5}{A} \sqrt{\frac{S}{A}}$ in McMath's formula.

In order to estimate the capacity of storm water drains accurately it is of the utmost importance that accurate records of rainfall should have been kept upon the watershed under consideration for a number of years. It is not sufficient to know the total amounts of precipitation occurring during the entire duration of storms, the total precipitation per day or even per hour. A continuous record, giving rates of precipitation at all times during the continuation of storms is necessary. A storm may continue throughout several hours, giving a small average rate of precipitation, while the larger part of the rainfall may have occurred in a few short periods of exceptionally heavy downpour. This is, in fact, the habit of the great majority of storms. Obviously storm sewers designed to care for average rates of precipitation would be entirely inadequate and would be liable to cause flooding for a distance from the headwaters dependent upon the duration of rates of precipitation in excess of the average. Since the introduction of continuous self-registering rain gauges such records have been easy to keep. It seems as if it would be wise to maintain several such rain gauges at various points throughout the Borough, so that sufficient and reliable information in regard to the rainfall may hereafter be at hand. These gauges are comparatively inexpensive and require little attention to keep in working order. They may be placed at points where employees of the City are already stationed and the necessary attention could be given them without extra expense. Unfortunately, no records of rainfall of value have been kept in the Bureau of Sewers. The only records of this kind that are available for this Borough are those kept by the Department of Water Supply, Gas and Electricity. These have been carefully kept by a continuous rain gauge located in the Municipal Building for the last fourteen years. These records are the ones made use of in the design of the proposed storm sewers, and were used in making up the attached rainfall diagram. It was not thought necessary to collect extensive rainfall data from neighboring cities, as is frequently done in reports upon sewerage projects. The data which we have for Brooklyn have been so carefully kept and extend over such a long period that in comparison the information which could be obtained from other cities would be of little value for our purpose. This diagram shows all the storms occurring in this Borough within fourteen years, which are considered by the United States Weather Bureau as excessive and which occurred with sufficient frequency to require consideration. This diagram has been drawn with vertical ordinates giving rates of precipitation and abscissas giving time in minutes. A curved line has been drawn, enveloping practically all such storms. The equation of this curve has been found

$$\text{to be } R = \frac{150}{t + 20}$$

Where R = cubic feet of water per second per acre or inches per hour of rain fall,
 t = the duration of the maximum rates of precipitation.

Storms exceeding those enveloped by this curve occur at such rare intervals that it would seem to be unwise to make provision for them. Storm sewers have been made of sufficient capacity to care for all storms, which in duration and intensity do not exceed those called for by the above equation. Some of the equations similar to that above, which have been deduced for other cities and localities, are as follows:

$$R = \frac{360}{t} \text{ established in 1885 by Professor Nipher for St. Louis.}$$

$$R = \frac{3.73 - .051t}{t} \text{ for } t \text{ less than 60.}$$

$$R = \frac{.99 - .002t}{t} \text{ for } t \text{ less than 60.}$$

$$R = \frac{360}{t + 30} \text{ for rare rainfalls.}$$

$$R = \frac{105}{t + 15} \text{ for ordinary maximum rainfalls.}$$

$$R = \frac{120}{t + 20} \text{ established in 1891 by Prof. Talbot for Atlantic Central States.}$$

$$R = \frac{180}{t + 20} \text{ established in 1903 by Kuichling for Atlantic City.}$$

$$R = \frac{180}{t + 20} \text{ established in 1906 by Baltimore Sewerage Commission for Baltimore.}$$

Others similar to these have been established for other American cities. As is to be expected, no two of them agree exactly, each city or locality having a rainfall record peculiarly its own, which must be carefully determined before the design of storm water drains can be intelligently undertaken.

The shape and configuration of watershed are also important factors to be considered in estimating the quantity of storm water to be cared for. It is evident that a long and narrow watershed will not deliver surface waters at the point of outlet as rapidly as one approximately circular or square, having substantially the same surface slope. A smaller watershed of this shape may frequently furnish a greater maximum run-off than one of greater area but of greater length. Good judgment and care must be used in the application of any formula, and a thorough understanding of the method of its derivation, its range of applicability, and the meaning of its different functions is necessary to avoid running into error. The percentage of the whole rainfall reaching the sewers is dependent also upon the degree of imperviousness of the watershed. This, in fact, is one of the most important points to be considered. In arriving at a proper percentage to be allowed upon the watershed under consideration, as well as various others throughout the borough, the following points were noticed:

First—From roofs which are entirely impervious, nearly all the water runs off. A small amount is lost by evaporation, by retention in small irregularities of surface, etc., but at least 95 per cent. should be considered as reaching the sewer.

Second—From roadways paved with smooth pavement and paved sidewalks a slightly less percentage runs off than from roofs, owing to their greater irregularity of surface, absorption by accumulations of dirt, etc. About 90 per cent. is thought to be a proper proportion to allow for such surfaces.

Third—Second class walks and pavements with open joints retain a larger proportion of the rainfall, and an appreciable amount percolates through into the earth below. It is estimated that 50 per cent. of the entire rainfall will reach the sewer from such surfaces.

Fourth—Macadam or gravel pavements, the poorer class of walks, etc. It is usually considered that 30 per cent. of the rainfall will reach the sewer from such surfaces.

Fifth—Unpaved and unimproved surfaces, such as yards, dirt roads, etc. About 10 per cent. of the entire rainfall may be considered as reaching the sewer from such surfaces.

Sixth—From paved alleys, it is considered that the run-off will be as great as from sidewalks of first class, namely, 90 per cent.

To arrive at a proper percentage to allow for all classes of surfaces combined, as they are here found, twenty-four typical blocks, located in various parts of the drainage area and improved, as it is reasonable to expect that the whole area will be improved within the next twenty-five years, were carefully platted to scale, showing the areas in each case covered with the different surfaces described above. The percentages of the areas of different degrees of imperviousness were then calculated, as shown in the following table. It appears from this table that the total percentage of run-off which may reasonably be expected from this district when fully improved is 75 per cent. Provision was therefore made for this amount.

Class of Surface.	Total Area, Per Cent.	Degree of Imperviousness, Per Cent.	Run-off En-tire Rainfall, Per Cent.
Roofs	40	95	38
Yards and unpaved surfaces.....	22	10	02.2
Roadways and sidewalks.....	35	90	31.5
Paved alleys.....	3	90	02.7
			74.4

It is not thought advisable to go into the question of the adequacy of old sewers in detail in this report. Wherever it has been necessary, in order to obtain the information required to properly proportion a new relief sewer, their adequacy has been determined, but computations covering all of them in the district have not been made. In nearly all cases, where capacities have been tested by modern methods, they were found to be deficient. Wherever the deficiency is not great and they discharge under only a small head, it is probable that no harm will come from it, and no further provision would have to be made hereafter for their relief.

The fact that sewers laid well below the deepest basements which are to be drained are at times slightly surcharged is not in itself very objectionable. Under some circumstances the internal pressure might be great enough to cause rupture or the occasional escape of storm water through leaky joints might not be allowable. Usually this is not the case. On the contrary, the increased velocity of discharge might be of benefit in keeping them clean. There are a few cases where their deficiency is so great that new sewers will no doubt be necessary. These may be considered hereafter, when it is demonstrated that the provision of a new and free outlet by building the proposed relief sewers has not lowered the hydraulic grade line sufficiently to prevent flooding. The discharge of these old inadequate sewers will be somewhat more gradual, and in consequence the sizes of the relief sewers, as planned, will be somewhat more ample than theory would indicate.

The volume of house sewage is so small in comparison to the volume of storm water which must be provided for in a system of combined sewers that it does not ordinarily enter into the calculations. In this case, however, a large area, which will eventually contain a moderately dense population, is tributary to each of a number of existing sewers which are intercepted, and the volume of house sewage forms an appreciable portion of the total volume to be cared for. Wherever diverting weirs are used for the purpose of separating the dry weather flow from the storm flow, it is also necessary to estimate the volume of the dry weather flow carefully. This is measured very closely by the water supply. In the present case the greatest density of population to be found on the watershed is, according to the census of 1905, 140 per acre. It is not probable that this density will become greater than 200 per acre within a future period of time, which should be considered.

The annual report of the Department of Water Supply, Gas and Electricity for the year 1906 gives the maximum average daily water consumption as 98 gallons per capita per day for the Borough of Brooklyn. The average for the winter months will be somewhat in excess of this amount. Add to this the daily maximum, which usually occurs on Monday or Tuesday, the hourly maximum which occurs between 8 and 10 a. m. and the normal increase in consumption which may reasonably be expected to occur, together with ground water amounting to .03 cubic feet per acre per second, and the maximum daily dry weather flow for which it is thought reasonable to make provision for the above population, amounts to 150 gallons per capita, or .1 cubic foot per second per acre. This is about 53 per cent. in excess of the present average per capita consumption.

The Metropolitan Sewerage Commission of New York has recently raised the question of purification of all house sewage before permitting its discharge into the tidal waters about the City, and has called attention to the advisability of so establishing all future outlets that sewage may be intercepted and delivered to points where it may be purified without prohibitive expense.

The contingency that all the house sewage of this borough may be purified seems to be somewhat remote. In any case it is reasonable to suppose that it would be undertaken last where, as in this case, the present method and place of disposal is least objectionable. The collection of house sewage from the district in question, and its delivery at points where it would be possible and proper to purify it, would be in itself a large undertaking.

Any changes contemplated in the disposition of dry weather flow of any of the sewers affected by new construction will not affect the question of future purification. Its consideration should not be allowed to complicate the question of disposal of storm water at the present time.

Accompanying the report, of which the foregoing data are a somewhat condensed resume, are plans showing the proposed sewers, and estimates in detail of the expected cost. A few remarks are pertinent concerning these estimates, and estimates of expected cost of work generally.

In all such estimates it must be borne in mind that the basis of estimation will be the cost of work done at a time already past, and under conditions which are constantly changing. The cost of labor and of all the materials used in construction is subject to a wide fluctuation, and at present promises to advance greatly. The extent of such advance cannot be forecast, and it does not seem possible or proper to attempt to discount it at this time.

The estimates of cost are not based upon records kept in a systematic manner by this bureau, because no such records have been kept. Data as to unit prices have been obtained from any source available. Each unit cost used represents the actual cost of recent work carried out under similar conditions in this borough. It is thought that by the use of unit costs, comparative estimates may be made, which are entirely fair and correct, because, though wages and prices may change, such changes will affect all estimates alike and comparisons based upon them will remain nearly constant. It is to be assumed, of course, that methods of work remain the same.

An intelligent answer to questions of cost cannot be given unless experience upon similar work, under similar conditions, has provided data that may be relied upon, or unless records of cost of similar work, which have been carefully kept, are available. It is a duty, therefore, that an engineer owes to his profession, to himself and to his employers, to keep a systematic record of cost of all work upon which he is engaged, and make the information so acquired available to those similarly employed. It is still sometimes argued that such records are of little value, because conditions vary so greatly that the range of applicability is small, and an inexperienced man cannot safely use them. There is a temptation to think that such arguments are made by those who have neglected this important part of their work, or who seek to excuse their failure to make useful to others such information as they possess. A sufficient answer is that at the present time there is scarcely a single large contracting firm or corporation, which is carrying out work successfully, or an

engineering office, under whose supervision construction work is done, that is not keeping careful records of cost. Engineering periodicals are full of cost data, and several books dealing with that subject alone have had such a large sale that it is fair to conclude that engineers are well supplied with them.

It is hoped that contracts may be entered into for the full amount of the appropriation for relief sewers during the coming season, and that substantial progress may be made in construction.

It should be borne in mind that these relief sewers are only a portion of those which are necessary. They should all be undertaken as rapidly as they can be reached, to the end that the City may be relieved entirely from damage from flooding. The present appropriation is insufficient to complete the sewers already authorized, and a new one should be sought as soon as the present one is exhausted.

Prices of Labor and Materials.

In regard to the increased cost of building sewers in recent years, it may not be out of place to call attention at this time to the fact that besides the natural increase in wages from year to year, an important item affecting the work of this Bureau has been the adoption by the State of the Labor Law, which received the approval of the Governor on May 19, 1906. Where men are paid by the day and the hours of labor have been reduced from ten to eight per day, as required by this law, it can readily be seen that the increase in this item alone, assuming the same pay per day, has been twenty-five (25) per cent. The advance in the prices of materials has kept pace with that of labor, as will be seen from the following.

In March, 1907, bulletin of the United States Bureau of Labor, which was recently issued, there are given the prices of various commodities arranged in groups for a period of seventeen years, from 1890 up to and including 1906. The groups affecting the work of contractors are, the lumber and material group and the metals and implement group, the wholesale prices of the various items of same being given for the New York market, except for such articles as have their primary market in some other locality.

The present investigation, covered by this report, shows that the wholesale prices, considering 258 commodities in all of the nine groups as a whole, reached a higher level in 1906 than at any other time during the seventeen-year period covered.

The average for the year 1906 was 5.6 per cent. higher than for 1905; 36.5 per cent. higher than that for 1897, the year of lowest prices during the seventeen-year period, and 22.4 per cent. higher than the average for the ten years from 1890 to 1899.

Prices reached their highest point during the seventeen-year period in December, 1906, the average for that month being 4.1 per cent. higher than the average for the year 1906, and 6.3 per cent. higher than the average for December, 1905. Of the 258 articles for which wholesale prices were obtained, 30 showed no change in average price for the year, and 50 showed a decrease in price for the year as compared with 1905, while 178 showed an increase in price.

The following table of the two groups affecting contract work shows the number of articles in the group, the per cent. of increase or decrease in the average price for 1906, as compared with that of 1905, and the number of articles that increased or decreased in price.

TABLE I.

Per Cent. of Increase or Decrease in Average Prices for 1906, as Compared with Those of 1905, and Number of Articles that Increased or Decreased in Price, by Groups of Commodities.

Group.	Number of Articles.	Per Cent. of Increase.	Per Cent. of Decrease.	Increase.	Number of Articles Showing No Change in Price.	Decrease.
Metal and implements.....	38	10.4	.....	29	7	2
Lumber and building materials	27	9.6	.....	24	.....	3

The following table shows by relative prices the changes in the average wholesale prices of the articles for which prices were secured from 1890 to 1906, inclusive. The relative price in this table is simply a percentage. The base on which the relative price is computed is not the price in any one year, but the average price for the ten years from 1890 to 1899, inclusive.

In computing the relative prices for each year, the relative prices for all the commodities were added, and the sum divided by the number of commodities.

To assist in comparing wholesale prices in 1906 with the prices each year back to 1890, another column is given in the table, showing the per cent. of the increase in prices for 1906 over the prices for each of the preceding years.

TABLE II.

Relative Prices of Commodities, 1890 to 1906, and Per Cent. of Increase in Prices for 1906, over Prices for Each Preceding Year.

Year.	Relative Price of All Commodities.	Per Cent. of Increase in 1906 Over Each Preceding Year.
1890.....	112.9	8.4
1891.....	111.7	9.6
1892.....	106.1	15.4

Year.	Relative Price of All Commodities.	Per Cent. of Increase in 1906 Over Each Preceding Year.
1893.....	105.6	15.9
1894.....	96.1	27.4
1895.....	93.6	30.8
1896.....	90.4	35.4
1897.....	89.7	36.5
1898.....	93.4	31.0
1899.....	101.7	20.4
1900.....	110.5	10.8
1901.....	108.5	12.8
1902.....	112.9	8.4
1903.....	113.6	7.7
1904.....	113.0	8.3
1905.....	115.9	5.6
1906.....	122.4	.....

The relative prices appearing in this table are based on 251 articles in 1890 and 1891, on 253 articles in 1892, on 255 articles in 1893, on 256 articles in 1894, on 258 articles in 1906, and from 1899 to 1903, and on 261 articles in 1897 and 1898.

Having shown the movement in wholesale prices for the period from 1890 to 1906 in all commodities taken as a whole, the following table is now given showing the movement in two of the groups previously referred to. This table gives the relative prices and the per cent. of increase, or, in a few instances, decrease of prices for 1906, as compared with prices for each preceding year.

TABLE III.

Relative Prices of Commodities, 1890 to 1906, and Per Cent. of Increase in Prices for 1906 over Prices for Each Preceding Year for two Groups of Commodities Affecting Contract Work.

Year.	Lumber and Building Materials.		Metals and Implements.	
	Relative Price.	Per Cent. of Increase in 1906 Over Each Preceding Year.	Relative Price.	Per Cent. of Increase in 1906 Over Each Preceding Year.
1890.....	111.8	25.3	119.2	13.4
1891.....	108.4	29.2	111.7	21.0
1892.....	102.8	36.3	106.0	27.5
1893.....	101.9	37.5	100.7	34.3
1894.....	96.3	45.5	90.7	49.1
1895.....	94.1	48.9	92.0	47.0
1896.....	93.4	50.0	93.7	44.3
1897.....	90.4	55.0	86.6	56.1
1898.....	95.8	46.2	86.4	56.5
1899.....	105.8	32.4	114.7	17.9
1900.....	115.7	21.1	120.5	12.2
1901.....	116.7	20.1	111.9	20.8
1902.....	118.8	17.9	117.2	15.4
1903.....	121.4	15.4	117.6	15.0
1904.....	122.7	14.2	109.6	23.4
1905.....	127.7	9.6	122.5	10.4
1906.....	140.1	.....	135.2	.....

In this table the average relative prices of metals and implements are based on 37 articles from 1890 to 1893, 38 in 1894 and 1895, and from 1899 to 1906, and 39 from 1896 to 1898; of lumber and building materials on 26 articles from 1890 to 1894, and 27 from 1895 to 1906; thus metals and implements reached its lowest average in 1898, and highest in 1906; lumber and building materials, the lowest in 1897 and highest in 1906. The average for all commodities combined was lowest in 1897, and highest in 1906.

No attempt has been made in any way to go into the causes of the rise and fall of prices. The aim has been to give the prices as they actually prevailed in the market. The relative prices or index numbers must be accepted merely as showing the course of prices, both of the individual articles and the market in general.

The subjoined table gives the average yearly actual wholesale prices for several kinds of tools and materials from 1900 to 1906, with the average for the years 1890 to 1899 for comparison, and also the percentage of increase in price of the year 1906 over 1905, which show generally the upward trend in prices in recent years.

TABLE IV.

Table Showing Average Yearly Actual Wholesale Prices for Several Kinds of Tools and Material.

	x1890-99.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	Per Cent. Increase in 1906 Over 1905.
Tools.									
Augers, extra, 3/4-inch, each.....	\$0.161	\$0.200	\$0.170	\$0.180	\$0.231	\$0.240	\$0.307	\$0.357	16.3
Axes, M. C. O., Yankee, each.....	.469	.483	.417	.483	.505	.579	.632	.671	6.2
Chisels, extra, socket firmer, 1-inch, each.....	.189	.242	.230	.270	.280	.300	.397	.419	5.6
Files, 8-inch mill, bastard, per dozen.....	.853	1.090	1.050	1.050	1.050	1.040	1.037	1.022	21.4
Hammers, Maydole, No. 1 1/2, each.....	.361	.419	.423	.423	.466	.466	.466	.466	.....
Planes, Bailey No. 5, each.....	1.322	1.414	1.460	1.510	1.530	1.530	1.530	1.710	11.8
Saws, cross-cut, Disston, each.....	1.604	1.604	1.604	1.604	1.604	1.604	1.604	1.604	.....
Saws, hand, Disston No. 7, per dozen.....	12.780	12.600	12.600	12.600	12.600	12.600	12.600	12.950	2.8
Shovels, Ames No. 2, per dozen.....	7.866	9.120	9.120	9.355	8.020	7.653	7.620	7.620	.....
Trowels, M. C. O., birch, 10 1/2-inch, each.....	.340	.340	.340	.340	.340	.340	.340	.340	.....
Materials.									
Barb wire, galvanized, per 100 pounds.....	2.526	3.394	3.038	2.954	2.738	2.508	2.383	2.428	1.9
Brick, common domestic, per 1,000.....	5.563	5.250	5.766	5.385	5.906	7.495	8.104	8.547	5.5
Cement, Portland, domestic, per barrel.....	61.996	2.158	1.889	1.950	2.029	1.460	1.427	1.575	10.4
Cement, Rosendale, per barrel.....	.887	1.017	1.019	.865	.890	.802	.833	.950	14.0
Hemlock, per 1,000 feet.....	11.963	16.500	15.000	15.833	16.792	17.000	17.875	21.896	22.5
Lead, pig, per pound.....	.038	.045	.044	.041	.043	.044	.048	.059	22.9
Lead pipe, per 100 pounds.....	4.818	5.121	5.048	5.217	5.196	4.795	5.225	6.421	22.9

	x1890-99.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	Per Cent. Increase in 1906 Over 1905.
Lime, common, per pound.....	.833	.683	.774	.806	.787	.825	.891	.947	6.3
Nails, cut, 8-penny, fence and common, per 100 pounds.....	1.827	2.250	2.113	2.133	2.196	1.819	1.825	1.931	5.8
Nails, wire, 8-penny, fence and common, per 100 pounds.....	2.162	2.633	2.365	2.104	2.075	1.906	1.896	1.958	3.3
Oak, white, plain, per 1,000 feet.....	37.429	40.833	36.771	40.875	44.833	46.500	47.333	50.417	6.5
Pine, white, boards, No. 2, barn, per 1,000 feet.....	17.110	21.500	20.875	23.500	24.000	23.000	24.167	29.750	23.1
Pine, yellow, per 1,000 feet.....	18.465	20.708	19.667	21.000	21.000	21.417	24.917	29.333	17.7
Rope, manilla, 3/4-inch, per pound.....	.093	.132	.109	.135	c.115	c.117	c.120	c.125	4.2
Screws, wood, 1-inch, No. 10, flat head, per gross.....	.151	.182	.105	.095	.109	.095	.105	.106	....
Spruce, per 1,000 feet.....	14.349	17.375	18.000	19.250	19.188	20.500	21.417	25.542	19.2

x Average price for 1890-1899.

b Average price for 1895-1899.

a Decrease.

c 7-16-inch rope.

During the year the Bureau has moved into commodious new quarters on the tenth floor of the Mechanics' Bank Building, where there are more suitable accommodations for carrying on its work. The old quarters on the top floor of the Municipal Building were entirely unsuitable for public offices. They were badly lighted and ventilated, unsanitary, badly arranged and altogether too small. The change has been of great benefit in every way, as I believe will be made apparent by an improvement in the character and an increase in the amount of work done.

Many additions are being made to the equipment, such as new surveying instruments, horses and wagons for field parties and Engineers in charge of construction, new electric printing machine, suitable office furniture, etc. A number of changes are also under way in the manner of keeping records of work done.

The engineering force of the Bureau, is, with few exceptions, enthusiastic in the effort to make this one of the best, if not the best and most effective Bureau in the City, and we shall not rest contented until it is accomplished.

An organization adapted to its work is a machine, every piece of which is responsible for the performance of its own particular function. Finished work is the result of the co-operation of the whole organization, and credit for it properly goes with the responsibility. There should be no disposition to shirk the former and monopolize the latter.

Such an organization it is the aim to build up, and we bespeak the encouragement of our superiors in the effort to do it.

Yours respectfully,

E. J. FORT, Chief Engineer of Sewers.

Brooklyn, January 5, 1907.

Hon. JAMES DUNNE, Superintendent, Bureau of Sewers:

Dear Sir—I respectfully submit my annual report of work done and material used in maintaining the sewerage system in the Borough of Brooklyn, from January 1, 1906, to December 31, 1906, inclusive:

In submitting this report I beg to state that the work performed during the year of 1906, was done in a faithful, conscientious manner by the men attached to this Bureau.

The result of cleaning sewer basins shows the greatest number cleaned in the history of the Bureau of Sewers. The total number cleaned during the year 1906 was 25,386, showing an increase over the year 1905 of 8,132. The average cost of cleaning basins during the year 1905 was \$1.79 per basin; the average cost of cleaning basins during the year 1906 was \$1.65 per basin.

I would earnestly recommend that prompt action be taken to relieve the congested condition of the North Portland avenue repair yard, which has proven entirely inadequate for the wants of this Bureau, and would respectfully suggest that a site for a new repair yard, in a more central location, covering about five city lots, would be of great benefit to this Bureau.

In conclusion I would call your attention to the practice of sweeping street refuse into the sewer basins by employees of the Department of Street Cleaning. This matter has been a very troublesome and expensive one in the past, and it is very important that stringent means be adopted to stop any further trouble from this source.

New sewer connection permits issued.....	5,884
Repairs to sewer connection, permits issued.....	1,365
Complaints received.....	1,622
Complaints attended to.....	1,330
Complaints referred to other departments.....	67
Complaints found not needing attention.....	204
Complaints unfinished.....	1
Basins examined.....	49,768
Basins cleaned.....	25,386
Basins raised.....	5
Basins lowered.....	11
Basins relieved.....	31

Basin connections cleaned and repaired.....	150
Basin pans reset.....	303
Basins repaired.....	284
Basin pans set, new.....	79
Basins altered.....	30
Basin hoods set.....	49
Basins cleaned of snow.....	5,999
Park basins built.....	9
Catch basins built.....	1
Deposit removed from basins, cubic yards.....	33,423
Manhole covers set.....	348
Manhole covers deafened.....	9
Manhole covers reset.....	14
Manhole heads set.....	77
Manhole heads raised.....	42
Manholes lowered.....	10
Manholes cleaned.....	71
Manholes repaired.....	23
Manhole heads reset.....	42
Bulkheads removed and built.....	24
Market pans and frames set.....	8
Drains cleaned.....	4
Dangerous holes filled in.....	9
Sewers repaired, feet.....	242
Sewers examined, linear feet, brick.....	521,380
Sewers examined, linear feet, pipe.....	1,964,090
Sewers cleaned, linear feet, pipe.....	1,196,900
Sewers cleaned, linear feet, brick.....	20,350
Sewers repaired, linear feet, brick.....	30
Sewage pumped, Twenty-sixth Ward Disposal Works, gallons.....	3,483,502,690
Sewage pumped, Thirty-first Ward Disposal Works, gallons.....	1,430,894,077
Fluid sludge removed, Twenty-sixth Ward Disposal Works, cubic feet.....	2,827,848
Fluid sludge removed, Thirty-first Ward Disposal Works, cubic feet.....	2,886,268
Cellars pumped out.....	85
Manhole heads and covers replaced.....	1

Material Used.

Hard brick.....	26,685
Cement, barrels.....	88
Granite basin heads.....	15
Granite mud sills.....	15
Granite back sills.....	10
Granite cheek stones.....	10
Spruce plank, 2 by 9 by 13.....	130
Vitrified pipe, feet.....	394
Cement pipe, feet.....	51
Basin hoods and plates.....	20
Manhole heads.....	49
Manhole covers.....	229
Basin pans.....	43
Bluestone flags.....	40
Bluestone curbing.....	2
Market pans and frames.....	7
Foundation built for pump, Twenty-sixth Ward.....	1

Average cost of cleaning basins, per basin, \$1.65.

Average cost of cleaning basins, per cubic yard, \$1.25.

Respectfully submitted,

THOMAS J. MCGEE, Superintendent of Maintenance.

TABLE No. 1.

Gallons of Sewage Pumped at Twenty-sixth Ward Disposal Works, One Week in Each Month, 1906.

Week of	From	To	Monday.	Hours.	Tuesday.	Hours.	Wednesday.	Hours.	Thursday.	Hours.	Friday.	Hours.	Saturday.	Hours.	Sunday.	Hours.
January.....	1	7	9,847,200	24	9,593,760	24	8,882,720	21	4,477,440	11	9,819,040	24	9,856,000	24	9,760,960	24
February.....	12	18	9,841,920	24	9,935,200	24	10,137,600	24	10,206,240	24	10,334,720	24	10,190,400	24	10,190,400	24
March.....	19	25	8,412,800	20	6,332,480	15	9,537,440	24	9,588,480	24	9,611,360	24	9,505,760	24	9,980,960	24
April.....	16	22	8,125,920	20	10,208,000	24	13,157,760	30	9,912,320	24	9,954,560	20	10,023,200	24	10,054,880	24
May.....	21	27	9,736,320	24	9,720,640	24	12,469,600	31	9,491,680	24	9,743,360	24	10,146,400	24	7,636,640	18
June.....	11	17	15,658,720	39	13,046,880	35	9,924,640	24	10,026,720	24	9,966,880	24	9,662,400	24	10,155,200	24
July.....	16	22	9,894,720	24	9,961,600	24	9,794,400	24	9,745,120	24	9,808,480	24	7,342,720	18	8,360,000	20
August.....	20	26	9,829,600	24	9,801,440	24	9,829,600	24	7,131,520	18	6,082,560	16	6,967,840	17	6,096,640	16
September.....	17	23	9,709,920	24	12,466,080	31	9,660,640	24	9,672,960	24	9,574,400	24	9,782,080	24	9,688,800	24
October.....	8	14	10,030,240	24	13,087,360	31	9,854,240	24	9,611,360	24	9,833,120	24	9,989,760	24	9,894,720	24
November.....	12	18	9,685,280	24	12,664,960	31	9,644,800	24	9,636,000	24	9,632,480	24	9,514,560	24	9,581,440	24
December.....	10	16	9,711,680	24	12,412,960	31	9,736,320	24	9,644,800	24	9,790,880	24	9,611,360	24	9,678,240	24
Total.....			120,484,320	295	129,229,360	318	122,629,760	274	110,144,640	279	114,151,840	276	112,592,480	275	111,078,880	270

*Gallons per capita per day of 24 hours.....

98.0

97.5

107.4

94.6

99.2

98.2

98.7

* Based on population of 100,000.

Area equals 2,382 acres.

Population per acre equals 42.

TABLE No. 2.

Gallons of Sewage Pumped Monthly, from 1900 to 1906, Inclusive.

Month.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
January.....	130,714,973	90,271,440	53,289,490	191,815,892	276,668,480	257,436,920	270,929,120
February.....	97,215,132*	78,587,638	79,461,332	195,767,280	272,856,320	138,638,720	272,365,280
March.....	127,391,858	91,869,612	54,379,892	206,243,002	295,322,720	123,085,600	279,655,200
April.....	102,017,937	89,319,735	211,749,853	276,765,780	262,092,160	223,601,840	286,725,120
May.....	109,469,046	97,632,882	225,689,084	280,701,962	295,359,680	251,872,720	306,298,080

Month.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
June	120,571,297	96,667,199	222,254,820	275,059,840	259,554,240	302,211,360	313,246,120
July	108,806,307	90,325,499	231,569,212	227,092,800	262,148,480	298,387,320	287,428,120
August	108,704,597	139,721,357	199,008,876	288,775,520	218,467,480	292,377,360	277,553,760
September	96,202,337	133,754,439	203,098,650	260,157,920	278,912,840	276,547,040	299,394,480
October	104,140,976	106,007,867	128,567,516	251,084,240	245,824,480	270,714,840	289,623,840
November	82,489,777	52,472,374	165,558,966	279,783,680	250,391,680	273,592,000	297,228,800
December	93,865,423	59,969,368	129,981,654	139,891,840	251,826,080	274,952,480	303,054,400
Population	66,086	71,698	77,310	82,922	88,534	94,146	99,758
Gallons per capita, maximum month.....	63.8, January.	62.9, August.	96.6, June.	112.2, August.	121.0, March.	107.0, June.	104.5, June.

TABLE No. 1.
Gallons of Sewage Pumped at Station No. 2, Coney Island, One Week in Each Month, 1906.

Week of	From	To	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.
January	15	21	1,219,480	1,248,024	1,202,036	1,228,466	1,211,551	1,198,864	1,202,036
February	12	18	1,146,004	1,143,890	1,146,004	1,167,148	1,141,776	1,227,409	1,309,870
March	12	18	1,788,782	1,828,956	1,821,555	1,545,626	1,165,034	1,181,949	1,208,379
April	2	8	1,322,028	1,621,744	1,667,204	1,621,744	1,468,450	1,285,026	1,267,582
May	14	20	1,294,012	1,230,580	1,230,580	1,154,462	1,167,148	1,384,932	1,294,012
June	11	17	2,570,900	2,604,740	2,496,640	2,368,800	2,408,280	2,505,100	2,462,800
July	9	15	2,498,520	2,330,260	2,327,440	2,402,640	2,402,640	2,323,680	2,354,700
August	13	19	2,589,700	2,645,160	2,553,040	2,533,330	2,468,440	2,518,260	2,468,440
September	3	9	1,821,720	2,058,600	2,398,880	2,449,640	2,434,600	2,348,120	2,377,360
October	1	7	1,650,640	1,631,840	1,593,300	1,424,048	1,446,249	1,306,699	1,154,462
November	5	11	1,023,633	1,064,600	939,850	936,150	985,839	987,953	1,039,756
December	3	9	929,278	1,269,697	1,746,494	1,472,679	1,221,066	1,220,008	1,234,809

TABLE No. 2.
Gallons of Sewage Pumped Monthly, from 1902 to 1906, Inclusive.

Month.	1902.	1903.	1904.	1905.	1906.	Inches of Rainfall.					
						1902.	1903.	1904.	1905.	1906.	Average.
January	37,714,473	51,140,900	38,360,564	38,498,995	39,303,524	2.50	3.64	3.20	3.24	2.82	3.08
February	45,688,390	47,263,207	35,547,883	35,128,113	32,924,908	6.02	3.84	2.19	2.64	2.23	3.38
March	50,399,411	56,438,760	39,211,019	38,100,959	41,394,137	4.31	4.18	3.54	3.85	5.41	4.26
April	37,527,088	55,116,064	37,541,027	36,824,919	38,187,649	3.39	3.19	4.74	2.61	5.60	3.91
May	36,964,363	53,579,424	39,884,590	36,889,408	38,534,940	1.20	0.44	2.01	0.83	5.29	1.95
June	42,765,181	54,525,090	44,572,277	40,699,557	65,389,030	5.87	8.76	2.61	4.92	1.91	4.81
July	46,427,910	54,215,596	44,792,751	45,786,010	72,300,100	2.69	3.46	5.40	3.97	3.93	3.89
August	44,566,872	52,773,027	56,885,478	58,057,391	69,873,960	3.68	6.36	8.76	5.40	3.32	5.50
September	46,919,143	44,590,592	46,039,474	54,692,960	58,248,040	4.19	2.37	3.36	7.17	3.08	4.03
October	45,473,166	52,046,979	38,862,513	55,466,580	40,793,621	6.49	12.02	3.54	2.61	5.77	6.09
November	40,951,176	36,890,566	40,687,399	46,518,720	29,309,284	1.69	1.07	2.47	1.69	1.32	1.65
December	51,845,598	18,474,000	38,155,933	42,474,266	37,867,846	6.44	2.76	2.59	3.49	4.11	3.88

TABLE No. 1.
Gallons of Sewage Pumped at Station No. 3, Coney Island, One Week in Each Month, 1906.

Week of	From	To	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.
January	1	7	672,100	658,000	676,800	686,200	648,600	662,700	658,000
February	12	18	647,535	658,107	655,464	663,393	644,892	652,821	652,821
March	19	25	660,750	660,750	660,750	652,821	660,750	652,821	660,750
April	9	15	681,894	737,397	650,178	652,821	650,178	660,750	753,255
May	7	13	663,393	660,750	652,821	663,393	647,535	655,464	652,821
June	18	24	666,036	634,320	666,036	663,393	629,034	671,322	666,036
July	23	29	673,965	573,531	679,251	673,965	576,174	666,036	681,894
August	20	26	667,400	662,700	484,100	672,100	695,600	686,200	676,800
September	3	9	667,400	658,000	672,100	672,100	479,400	672,100	672,100
October	8	14	662,700	686,200	676,800	662,700	488,800	681,500	672,100
November	19	25	676,608	673,965	671,322	676,608	565,602	700,395	692,466
December	24	30	544,458	695,109	703,038	695,109	695,109	700,395	703,038

TABLE No. 2.
Gallons of Sewage Pumped Monthly, from 1902 to 1906, Inclusive.

Month.	1902.	1903.	1904.	1905.	1906.	Inches of Rainfall.					
						1902.	1903.	1904.	1905.	1906.	Average.
January	17,839,589	23,906,463	19,346,760	18,133,622	20,573,525	2.50	3.64	3.20	3.24	2.82	3.08
February	16,189,036	16,417,595	19,019,028	16,817,409	18,379,422	6.02	3.84	2.19	2.64	2.23	3.38
March	18,696,837	20,931,702	23,791,400	19,293,500	20,369,601	4.31	4.18	3.54	3.85	5.41	4.26
April	18,312,375	21,613,768	18,087,950	18,950,400	19,893,861	3.39	3.19	4.74	2.61	5.60	3.91
May	18,598,129	23,428,212	19,740,567	19,547,300	20,314,098	1.20	0.44	2.01	0.83	5.29	1.95
June	16,384,952	24,615,184	18,632,674	19,143,100	19,500,054	5.87	8.76	2.61	4.92	1.91	4.81
July	17,684,842	25,234,300	15,044,056	20,033,940	20,012,796	2.69	3.46	5.40	3.97	3.93	3.89
August	17,620,881	19,542,342	16,021,866	20,356,386	20,388,600	3.58	6.36	8.76	5.40	3.32	5.50
September	17,480,271	18,701,868	17,154,391	19,830,429	18,931,600	4.19	2.37	3.36	7.17	3.08	4.03
October	13,271,015	31,864,249	17,277,291	20,086,645	20,116,000	6.49	12.02	3.54	2.61	5.77	6.09
November	18,837,454	14,721,510	16,962,774	19,600,488	19,682,421	1.69	1.07	2.47	1.69	1.32	1.65
December	23,357,777	7,360,000	17,893,110	20,285,025	21,249,720	6.44	2.76	2.59	3.49	4.11	3.88

TABLE No. 1.
Gallons of Sewage Pumped at Station No. 4, Coney Island, One Week in Each Month, 1906.

Week of	From	To	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.
January	15	21	1,480,250	1,496,370	1,415,460	1,467,230	1,415,770	1,418,560	1,366,480
February	5	11	1,890,000	1,811,250	1,732,500	1,890,000	1,890,000	1,890,000	1,852,500
March	12	18	1,496,250	1,931,250	2,103,750	1,713,750	1,653,750	2,283,750	2,126,250

Week of	From	To	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.
April	16	22	1,528,610	1,474,360	1,616,960	1,516,520	1,554,340	1,545,350	1,568,600
May	14	20	1,677,410	1,609,520	1,636,800	1,588,440	1,659,120	1,661,600	1,745,303
June	18	24	1,563,020	1,696,630	1,656,020	2,531,380	2,527,350	2,742,380	2,000,163
July	23	29	1,708,720	1,677,100	1,657,725	1,723,290	1,753,360	1,736,620	1,721,123
August	20	26	1,732,900	1,623,780	1,749,640	1,878,320	1,775,680	2,289,280	2,705,030
September	10	16	2,230,840	1,612,620	1,637,730	1,659,430	1,735,380	1,698,180	1,762,970
October	1	7	1,743,130	1,749,020	1,674,620	1,687,640	1,766,380	1,690,740	1,717,400
November	19	25	1,625,640	1,720,810	1,731,970	1,701,900	1,732,280	1,730,110	1,631,530
December	17	23	1,329,435	1,380,120	1,970,440	2,024,690	2,024,290	1,946,850	1,865,330

TABLE No. 2.

Gallons of Sewage Pumped Monthly—From 1902 to 1906 Inclusive.

Month.	1902.	1903.	1904.	1905.	1906.	Inches of Rainfall.					Average.
						1902.	1903.	1904.	1905.	1906.	
January	75,380,220	70,143,750	55,489,214	74,180,330	46,892,710	2.50	3.64	3.20	3.24	2.82	3.08
February	68,927,455	51,837,000	61,563,492	61,381,085	48,217,500	6.02	3.84	2.19	2.64	2.23	3.38
March	68,693,260	63,240,000	68,220,260	49,301,780	56,008,495	4.31	4.18	3.54	3.85	5.41	4.26
April	68,543,291	65,983,905	58,515,616	43,055,280	46,457,840	3.39	3.19	4.74	2.61	5.60	3.91
May	90,177,078	55,465,867	56,188,558	48,293,235	50,608,895	1.20	0.44	2.01	0.83	5.29	1.95
June	85,509,770	51,357,453	56,645,953	54,005,825	56,806,280	5.87	8.76	2.61	4.92	1.91	4.81
July	45,603,635	55,415,542	52,628,080	56,110,595	51,952,001	2.69	3.46	5.40	3.97	3.93	3.89
August	52,963,490	55,589,648	68,607,076	53,787,480	62,266,465	3.58	6.36	8.76	5.40	3.32	5.50
September	53,780,843	57,869,090	76,656,282	59,546,618	54,904,350	4.19	2.37	3.36	7.17	3.08	4.03
October	67,686,125	109,398,600	72,221,715	53,518,500	51,927,480	6.49	12.02	3.54	2.61	5.77	6.09
November	58,368,510	56,561,884	67,936,197	39,831,590	50,634,470	1.69	1.07	2.47	1.69	1.32	1.65
December	64,118,663	28,280,942	70,114,631	40,840,020	41,945,470	6.44	2.76	2.59	3.49	4.11	3.88

TABLE No. 1.

Contracts Entered Into During the Year 1906, Dating from January 1 to December 31

Location of Work.	Nature of Work.	Contractor.	Date of Contract, 1906.	Estimated Cost.
Norman avenue, northeast corner of Russell street; northeast corner of Humboldt street, and northwest corner of Moultrie street.....	Basins	Philip Hayes.....	Jan. 2	\$474 00
Junius street, from Pitkin avenue to Blake avenue, with outlet sewer in Blake avenue, etc.....	Sewer construction.....	Philip Hayes.....	Jan. 2	3,923 29
Sutter avenue, from Rockaway avenue to Chester street.....	Sewer construction.....	Philip Hayes.....	Jan. 2	537 47
Bay Eighth street, from Benson avenue to Bath avenue, and outlet sewer in Benson avenue, etc....	Sewer construction.....	O'Grady Bros.....	Jan. 2	7,774 03
All four corners of Eighth avenue and Sixtieth street.....	Basins	Donegan & Redmond.....	Jan. 26	492 00
Easterly side of Nostrand avenue, from a point about 100 feet south of Lexington avenue to a point about 35 feet north of Greene avenue.....	Reconstructing storm sewer.....	P. J. McCauley	Feb. 20	7,532 77
Sixtieth street, from Second avenue to Third avenue, and outlet sewers in Sixtieth street, etc.....	Sewer construction.....	Murphy Bros.....	Feb. 24	8,362 12
East Twenty-first street (Kenmore place), from Emmons avenue to end of existing sewer north of Emmons avenue.....	Sewer construction.....	Murphy Bros.....	Feb. 24	1,185 48
Rogers avenue, from Clarendon road to Flatbush avenue, with outlet sewer in Avenue D, etc.....	Sewer construction.....	Sigretto & Mannino Company..	Feb. 26	7,836 16
Fifteenth avenue, from Sixtieth street to Sixty-sixth street.....	Sewer construction.....	Sigretto & Mannino Company..	Feb. 26	8,359 42
Furnishing and delivering coal for various disposal works for year 1906.....	Coal	Howard S. Bowns.....	Mar. 2	10,773 00
Caton avenue, from Parade place to East Seventeenth street.....	Sewer construction.....	James Riley	Mar. 7	385 14
First avenue, from Bay Ridge avenue to Wakeman place.....	Sewer construction.....	Patrick J. McCauley.....	May 18	7,264 65
Webster avenue, from Ocean parkway to Gravesend avenue.....	Sewer construction.....	Patrick J. McCauley.....	May 18	3,397 40
Eighty-fourth street, from First avenue to Second avenue.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,547 54
Northerly side of Parkside avenue, from St. Paul's place to Ocean avenue, etc.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	2,611 66
Eleventh avenue, from Eighteenth street to Terrace place.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,055 27
Prospect street, from Vernon avenue to Beverley road.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,399 16
Ninety-seventh street, from Shore road to Marine avenue.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,784 66
Fourth avenue, east side, from Ninety-fifth street to Ninety-seventh street.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	954 92
Forty-fourth street, from Fifth avenue to Sixth avenue.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,708 74
Third avenue, from Sixtieth street to Sixty-first street, etc.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	20,506 99
Fifty-fourth street, from Sixth avenue to Seventh avenue.....	Sewer construction.....	Sigretto & Mannino Company..	May 23	1,597 50
Furnishing and delivering manhole heads and covers for use of Bureau of Sewers.....	Manholes, heads and covers.....	Escaba Manufacturing and Supply Company.....	May 26	1,522 41
Furnishing and delivering lime, cement, brick, fireclay and soda for use of Bureau of Sewers for year 1906.....	Lime, cement, brick, fireclay and soda..	Audley Clarke Company.....	May 26	6,866 25
Fifty-third street, from Thirteenth avenue to Fifteenth avenue, with outlet sewer in Fifty-third street, etc.....	Sewer construction.....	Donegan & Redmond.....	May 26	9,388 30
Fifty-seventh street, from Fourteenth avenue to Fifteenth avenue.....	Sewer construction.....	Donegan & Redmond.....	May 26	1,586 25
Furnishing and delivering hardware for use of Bureau of Sewers.....	Hardware	Cavanagh Bros. & Co.....	May 28	1,629 43
Clinton place, from Crescent street to a point 275 feet west thereof.....	Sewer construction.....	Henry Newman.....	May 28	803 90
Dean street, from Saratoga avenue to summit east of Saratoga avenue, etc.....	Sewer construction.....	Henry Newman.....	May 28	1,940 40
Irving avenue, from Halsey street to Putnam avenue.....	Sewer construction.....	Henry Newman.....	May 28	7,115 80
Forty-first street, from Seventh avenue to New Utrecht avenue.....	Sewer construction.....	Henry Newman.....	May 28	6,411 48
President street, from Bedford avenue to Nostrand avenue.....	Sewer construction.....	Clinton Construction Company.	May 29	3,722 30
Forty-eighth street, from Thirteenth avenue to the summit from Fourteenth to Fifteenth avenue....	Sewer construction.....	Clinton Construction Company.	May 29	3,075 15
Furnishing and delivering chemicals and disinfectants for use in Twenty-sixth and Thirty-first Wards Disposal Works for year 1906.....	Chemicals and disinfectants.....	Abram L. Hirsh.....	May 29	1,419 00
Outlet sewer in Benson avenue, from Bay Twenty-sixth street to Twenty-first avenue; sewer basins, Bay Twenty-sixth street, westerly corner of Eighty-sixth street, etc.....	Sewer and basins.....	James P. Graham.....	June 1	1,470 36
Bay Eleventh street, from Eighty-sixth street to Benson avenue.....	Sewer construction.....	James P. Graham.....	June 1	1,767 65
Weirfield street, from Knickerbocker avenue to the boundary line between boroughs of Brooklyn and Queens	Sewer construction.....	Philip Hayes.....	June 2	1,951 51
Decatur street, from Knickerbocker avenue to borough line of Queens, etc., etc.....	Sewer construction.....	Philip Hayes.....	June 5	2,533 86
East Fortieth street, from Avenue C (Clarendon road) to Ditmas avenue (Foster avenue).....	Sewer construction.....	Murphy Bros.....	June 5	4,116 35
Eightieth street, from First avenue to Second avenue.....	Sewer construction.....	Murphy Bros.....	June 5	1,556 52
Thirtieth avenue, from Seventy-ninth street to Eighty-second street, with outlet sewer in Eighty-second street, etc.....	Sewer construction.....	Murphy Bros.....	June 5	3,603 47
Forty-first street, from summit west of Seventh avenue to Seventh avenue.....	Sewer construction.....	Murphy Bros.....	June 5	1,072 05
Kenmore place, from Avenue G to the end of existing sewer north of Avenue G.....	Sewer construction.....	James P. Graham.....	June 5	676 34
Eighth avenue, from Seventieth street to Seventy-second street.....	Sewer construction.....	James P. Graham.....	June 5	1,198 48
The Bowery, from Jones' walk to Steeplechase walk.....	Sewer construction.....	Christopher Nally	June 5	7,885 00
Furnishing of forage for use of Bureau of Sewers for year 1906.....	Forage	Gasteiger & Schaefer.....	June 11	1,032 70
Northeast and northwest corners of East Twenty-fifth street and Foster avenue.....	Basins	Wm. F. Riley.....	June 11	358 00
Northeast and northwest corners of East Sixteenth street and Cortelyou road.....	Basins	Wm. F. Riley.....	June 11	358 00
Eighteenth avenue, from East Fourth street to the old New Utrecht town line, with outlet sewers in Third street, etc.....	Sewer construction.....	Donegan & Redmond.....	June 12	18,795 75
Excavation in Paerdegat basin, from Flatlands avenue to Avenue M.....	Excavation	Henry Newman	June 20	4,100 00
Imlay street, all four corners of Verona street; all four corners of Commerce street, etc.....	Reconstructing basins.....	Patrick J. McCauley.....	June 29	2,040 00
Pitkin avenue, south side, from Powell street to Van Sinderen avenue.....	Sewer construction.....	Pasquale Porzio	June 29	1,443 00
Northeast and northwest corners of Grant avenue and Union avenue.....	Basins	James Riley.....	July 2	378 00
Northeast corner of Atlantic avenue and Russell place.....	Basin	James Riley.....	July 2	215 00
Fourth avenue, westerly side, from Eighty-second street to Eighty-sixth street.....	Sewer construction.....	E. M. Culp.....	July 9	4,226 12

Location of Work.	Nature of Work.	Contractor.	Date of Contract, 1906.	Estimated Cost.
East Eighteenth street, southwest corner of Dorchester road and northeast and northwest corners of Ditmas avenue	Basins	Wm. F. Riley	July 27	537 00
Seventeenth avenue, north, south and west corners of Benson avenue and east corner of Cropsey avenue	Basins	Wm. F. Riley	July 27	596 00
Eighth street, from Second avenue to the end of the existing sewer easterly thereof	Sewer construction	Wm. F. Riley	July 27	602 20
Forty-second street, from Seventh avenue to Eighth avenue	Sewer construction	Sigretto & Mannino Company	July 30	2,792 10
Fifty-ninth street, from Seventh avenue to Eighth avenue	Sewer construction	Sigretto & Mannino Company	July 30	2,646 90
Brooklyn avenue, from Avenue G (Glenwood road) to Avenue H	Sewer construction	E. M. Culp	Aug. 8	1,642 15
Southeast and southwest corners of Jerome street and Belmont avenue; all four corners of Jerome street and Sutter avenue; southwest corner of Jerome street and Dumont avenue, etc.	Basins	John J. Creem	Aug. 9	1,776 00
Dean street, from Ralph avenue to Howard avenue	Sewer construction	James P. Graham	Aug. 16	1,527 87
Sixty-seventh street, from Fourth avenue to Fifth avenue	Sewer construction	James P. Graham	Aug. 16	2,696 20
Northwest corner of Norman avenue and Russell street	Basin	Philip Hayes	Aug. 17	192 00
Southeast corner of Hausman street and Nassau avenue	Basin	Philip Hayes	Aug. 17	175 00
Eighty-fourth street, from Twentieth avenue to Twenty-first avenue, with an outlet sewer in Twenty-first avenue, etc.	Sewer construction	John J. Creem	Aug. 18	34,440 00
Avenue D, from East Twenty-third street to Rogers avenue	Sewer construction	J. L. Carey	Aug. 21	4,386 10
East Thirty-fourth street, from Flatbush Waterworks to Avenue F (Farragut road)	Sewer construction	E. M. Culp	Aug. 24	1,477 25
Eighty-second street, from Sixth avenue to Fort Hamilton avenue	Sewer construction	E. M. Culp	Aug. 24	955 50
East Twenty-sixth street, from Clarendon road to Avenue D	Sewer construction	J. L. Carey	Aug. 27	2,131 25
Senator street, from Fourth avenue to Fifth avenue, with outlet sewers, etc.	Sewer construction	J. L. Carey	Aug. 27	6,455 55
East Twenty-fifth street, from Clarendon road to Avenue D	Sewer construction	J. L. Carey	Aug. 27	2,051 60
Fifty-first street, from Fourteenth avenue to Fifteenth avenue, with outlet sewers in Fifty-first street, etc.	Sewer construction	John J. Creem	Aug. 28	36,547 00
East Thirty-first street, from Church avenue to Beverley road, etc.	Sewer construction	John J. Creem	Aug. 28	14,589 00
Newkirk avenue, northeast and southeast corners of East Eighteenth street, etc.	Basins	Wm. F. Riley	Aug. 28	869 88
Eighty-fifth street, from Sixteenth avenue to Seventeenth avenue, etc.	Sewer construction	Hammond & Sloane, Incorporated	Aug. 29	28,432 18
Reconstructing Newkirk avenue, from East Eighteenth street to Flatbush avenue	Reconstruction	Donlon Contracting Company	Sept. 8	9,939 70
Northeast and northwest corners of East Fifteenth street and Ditmas avenue	Basins	Chas. F. Vachris	Sept. 12	306 00
Southeast and southwest corners of Neptune avenue and West Fifth street	Basins	James P. Graham	Sept. 21	380 00
Warehouse avenue, from Surf avenue to Neptune avenue, etc.	Sewer construction	Murphy Bros.	Oct. 3	9,782 30
North and east corners of Bay Thirteenth street and Cropsey avenue	Basins	Chas. F. Vachris	Oct. 3	318 00
East Third street, from Ditmas avenue to Avenue F, etc.	Sewer construction	James P. Graham	Oct. 5	10,575 95
Huntington street, from Henry street to Hicks street	Sewer construction	James P. Graham	Oct. 10	1,123 92
New York avenue, from Beverley road to Clarendon road	Sewer construction	James P. Graham	Oct. 10	2,120 00
Hemlock street, from Glenmore avenue to Pitkin avenue	Sewer construction	James P. Graham	Oct. 10	1,162 75
Southwest corner of Fenimore street and Rogers avenue	Basin	Pasquale Porzio	Oct. 13	145 00
East Twenty-second street, from Avenue G north to existing sewer	Sewer construction	Pasquale Porzio	Oct. 13	1,114 07
Northwest corner of Pitkin avenue and Osborn street	Basin	Pasquale Porzio	Oct. 13	190 00
Park place, from Hopkinson avenue to Eastern Parkway Extension, etc.	Sewer construction	Pasquale Porzio	Oct. 13	801 05
Southeast corner of St. Mark's place and Rogers avenue	Basin	Chas. F. Vachris	Oct. 15	249 00
Northerly corner of Fourth avenue and Ninety-ninth street	Basin	Chas. F. Vachris	Oct. 15	200 00
East corner of Bath avenue and Fourteenth avenue	Basin	Chas. F. Vachris	Oct. 15	162 00
Congress street, from Columbia street to East river	Sewer construction	J. L. Carey	Oct. 15	3,927 19
Seventy-ninth street, from Sixteenth avenue to Eighteenth avenue	Sewer construction	Murphy Bros.	Oct. 17	5,659 05
Fifty-second street, from Thirteenth avenue to Fourteenth avenue	Sewer construction	Sigretto & Mannino Company	Oct. 19	2,726 01
Dredging Newtown creek canal, at and in the canal and basin, included within the boundaries of Johnson avenue, Montrose avenue, Morgan avenue and Varick avenue	Dredging	John F. Clarke	Oct. 25	2,983 00
New Jersey avenue, southwest corner of Highland Boulevard; northwest corner of Evergreen place, etc.	Basins	Chas. F. Vachris	Oct. 25	379 00
East Nineteenth street, from Newkirk avenue to Foster avenue	Sewer construction	Donlon Contracting Company	Oct. 25	1,401 75
Huntington street, from Henry street to Hamilton avenue	Sewer construction	Donlon Contracting Company	Oct. 25	837 25
Lexington avenue, south side, from Ralph avenue westerly to existing sewer	Sewer construction	Pasquale Porzio	Oct. 27	1,368 77
Beverley road, northeast corner of Flatbush avenue, etc.	Basin	J. L. Carey	Oct. 29	552 00
Northeast corner of Stratford road (East Eleventh street) and Slocum place	Basin	J. L. Carey	Oct. 29	194 00
Southwest corner of Madison street and Stuyvesant avenue	Basin	J. L. Carey	Oct. 29	204 00
Northeast corner of Gates avenue and Reid avenue	Basin	J. L. Carey	Oct. 29	249 00
Relief sewer in Carroll street, from Third avenue to Gowanus canal	Relief sewer	Newman Construction Company	Oct. 30	14,293 22
Flatbush avenue, from Nostrand avenue to Avenue N, with outlet sewers, etc.	Sewer construction	Borough Construction Company	Oct. 30	53,015 00
Seventy-third street, from Fourteenth avenue to Fifteenth avenue, with outlet sewers in Seventy-third street, etc.	Sewer construction	Borough Construction Company	Oct. 30	54,477 75
Fourteenth avenue, from Sixty-fifth street to Seventy-fifth street	Sewer construction	P. J. McCauley	Nov. 1	18,400 00
Northeast corner of Bond street and Third street	Basin	Chas. F. Vachris	Nov. 20	157 00
Northeast and southeast corners of Winthrop street and Rogers avenue	Basins	Chas. F. Vachris	Nov. 20	288 00
Farragut road, northeast and northwest corners of East Twenty-eighth street; southeast and southwest corners of East Twenty-ninth street, etc.	Basins	Chas. F. Vachris	Nov. 20	1,651 00
Eighty-fourth street, from Fort Hamilton avenue to Seventh avenue	Sewer construction	Sigretto & Mannino Company	Nov. 20	1,801 44
Fourth avenue, westerly side, from Ninety-second street to Ninety-fifth street, etc.	Sewer construction	Sigretto & Mannino Company	Nov. 20	4,427 00
Eighty-fifth street, from Fort Hamilton avenue to Seventh avenue	Sewer construction	Sigretto & Mannino Company	Nov. 20	2,487 50
Fifty-first street, from First avenue to Second avenue	Sewer construction	Sigretto & Mannino Company	Nov. 20	1,967 75
Fortieth street, from Seventh avenue to New Utrecht avenue	Sewer construction	Sigretto & Mannino Company	Nov. 20	6,226 00
Sixty-first street, from Fifth avenue to Sixth avenue	Sewer construction	Sigretto & Mannino Company	Nov. 20	2,235 00
Barrett street, from Pitkin avenue to Sutter avenue	Sewer construction	Pasquale Porzio	Nov. 23	2,766 45
Northeast corner of East Eighteenth street and Albemarle road	Basin	J. L. Carey	Nov. 23	194 00
Southwest corner of Schenck avenue and Atlantic avenue	Basin	J. L. Carey	Nov. 23	214 00
Northeast and northwest corners of East Thirty-second street and Avenue D	Basins	J. L. Carey	Nov. 23	308 00
Lott street, from Tilden avenue to Beverley road	Sewer construction	J. L. Carey	Nov. 23	1,540 41
Brooklyn avenue, from Avenue C to Canarsie lane	Sewer construction	J. L. Carey	Nov. 30	1,253 16
Southwest corner of East Seventh street and Beverley road; northeast and northwest corners of East Seventh street and Avenue C, etc.	Basins	J. L. Carey	Nov. 30	2,102 90
Eighty-seventh street, from Narrows avenue to Second avenue	Sewer construction	Donegan & Redmond	Nov. 30	4,007 00
Dredging Gowanus canal	Dredging	R. G. Packard Company	Dec. 3	11,340 00
Southeast and southwest corners of Sutter avenue and Van Siclen avenue, and southeast corner of Warwick street and Sutter avenue	Basins	Chas. F. Vachris	Dec. 3	411 00
Northeast and northwest corners of East Fifteenth street and Dorchester road	Basins	Pasquale Porzio	Dec. 8	310 00
Blake avenue, from Powell street to Junius street, etc.	Sewer construction	Pasquale Porzio	Dec. 8	1,181 85
Martense street, from Flatbush avenue to Bedford avenue	Sewer construction	Sigretto & Mannino Company	Dec. 13	3,245 00
Battery avenue and Dahlgren place, between Eighty-eighth and Ninetieth streets, etc.	Sewer construction	Sigretto & Mannino Company	Dec. 13	6,442 81
West Twenty-third street, from Mermaid avenue to Neptune avenue, etc.	Sewer construction	Sigretto & Mannino Company	Dec. 17	6,301 75
Bushwick avenue, from Garden street to Beaver street	Sewer construction	Leo E. Kelly	Dec. 17	2,150 25
North and south sides of Avenue G at Brighton Beach Railroad	Basins	Leo E. Kelly	Dec. 17	319 00
Etna street, from Force Tube avenue to Hale avenue, etc.	Sewer construction	J. L. Carey	Dec. 20	3,200 46
East Fourth street, from Avenue C to Church avenue, etc.	Sewer construction	J. L. Carey	Dec. 20	8,088 20
Pine street, from Etna street southerly to the end of existing sewer between Etna street and Ridgewood avenue	Private sewer	Isaac Harris	Mar. 28	.....
Forty-second street, between Thirteenth and Fourteenth avenues	Private sewer	E. M. Culp	May 24	.....
East Sixteenth street, between Ditmas avenue and Newkirk avenue; East Seventeenth street, between Ditmas avenue and Newkirk avenue	Private sewer	Daniel Douglass	June 6	.....
Fifty-fourth street, from a point about 490 feet westerly therefrom	Private sewer	Henry Newman	June 27	.....
Sterling place, from East New York avenue to a point 140 feet west therefrom	Private sewer	O'Grady Bros.	July 16	.....
South side of Linden avenue, commencing 376 feet 2 inches east of Nostrand avenue, running thence west to Nostrand avenue	Private sewer	Jas. Riley	Aug. 8	.....
Union street, from Kingston avenue to a point within 50 feet west of Albany avenue	Private sewer	E. M. Culp	Sept. 24	.....
Linden avenue, north side, between Nostrand avenue and a point about 153 feet east thereof	Private sewer	Wm. F. Riley	Oct. 4	.....
North side of Lexington avenue, running to a point 200 feet east of Stuyvesant avenue	Private sewer	Newman Construction Company	Nov. 19	.....
Eldert street, between Knickerbocker avenue and Irving avenue	Private sewer	Henry Newman	Nov. 28	.....
Total				\$631,094 59

TABLE
Contracts on Which All Work Was

Date of Contract.	Location of Work.	12-inch Pipe.	15-inch Pipe.	18-inch Pipe.	24-inch Pipe.	12-inch Cast-iron Pipe.	16-inch Cast-iron Pipe.
Map L, District 24.							
May 29, 1906	President street, from Bedford avenue to Nostrand avenue.....	663.0	757.8	....	....	....	....
Nov. 29, 1905	Reconstructing Flushing avenue, north side, from Gerry street to a point about 223 feet east of Gerry street.....	113.0	....	....	....	....	....
Feb. 20, 1905	Reconstructing storm sewer easterly side of Nostrand avenue, from a point about 100 feet south of Lexington avenue to a point about 35 feet north of Greene avenue.....	....	....	....	....	....	....
Map N, District 29.							
July 27, 1906	Eighth street, from Second avenue to the end of existing sewer easterly thereof.	167.0	....	....	....	....	....
May 23, 1906	Forty-fourth street, from Fifth avenue to Sixth avenue.....	753.0	....	....	....	....	....
Dec. 29, 1905	Reconstructing Fifty-sixth street, from Fourth avenue to Fifth avenue.....	....	718.4	24.4	....	....	....
Map O, District 37.							
Dec. 29, 1905	Calver street, from Oakland street to Jewell street.....	487.0	214.7	25.0	....	....	....
June 2, 1906	Decatur street, from Hamburg avenue to borough line of Queens.....	377.3	725.7	....	....	....	....
June 2, 1906	Weirfield street, from Knickerbocker avenue to borough line of Queens.....	760.3	119.0	....	....	....	....
Dec. 29, 1905	Reconstructing Himrod street, from Evergreen avenue to Knickerbocker avenue..	44.3	1,635.0	573.5	37.0	....	....
May 28, 1906	Irving avenue, from Halsey street to Putnam avenue.....	....	81.5	1,038.5	....	....	....
May 28, 1906	Dean street, from Saratoga avenue to summit east of Saratoga avenue.....	300.0	42.0	....	....	....	....
	Saratoga avenue, from Dean street to Pacific street.....	....	288.5	....	....	....	....
Nov. 25, 1904	Vandam street, from Meeker avenue to Bridgewater street.....	7.6	518.5	49.0	....	....	....
	Bridgewater street, from Vandam street to Norman avenue.....	....	....	....	....	....	....
	Norman street, from Bridgewater street to Morgan avenue.....	....	....	....	....	....	....
Map S, District 39.							
*Jan. 20, 1905	Reconstructing Sutter avenue, from Euclid avenue to Fountain avenue.....	....	....	....	....	....	....
Nov. 16, 1905	Eastern parkway extension, northerly side, from Prospect place to Rockaway avenue.....	540.0	....	....	....	....	....
Jan. 2, 1906	Junius street, from Pitkin avenue to Blake avenue.....	1,514.1	....	....	....	....	....
	Blake avenue, from Junius street to Snediker avenue.....	276.2	243.9	....	....	....	....
Jan. 2, 1906	Sutter avenue, from Rockaway avenue to Chester street.....	271.4	....	....	....	....	....
May 28, 1906	Clinton place, from Crescent street to a point 275 feet west thereof.....	307.2	....	....	....	....	....
June 29, 1906	Pitkin avenue, south side, from Powell street to Van Sinderen avenue.....	424.3	....	....	....	48	....
Nov. 29, 1905	Rockaway avenue, from Lott avenue to Hegeman avenue.....	602.0	....	....	....	....	....
	Basins, Rockaway avenue, northwest and southwest corners of Dumont avenue; northwest corner of Livonia avenue and northwest corner of Riverdale avenue.	....	....	....	....	....	....
Map T, District 40.							
†Nov. 25, 1904	Sherman street, from Reeve place to Greenwood avenue.....	....	....	....	....	....	....
June 5, 1906	Eighth avenue, from Seventieth street to Seventy-second street.....	246.0	258.0	....	....	....	....
May 23, 1906	Eleventh avenue, from Eighteenth street to Terrace place.....	269.0	....	....	....	....	....
Feb. 26, 1906	Fifteenth avenue, from Sixtieth to Sixty-sixth street.....	540.0	259.0	261.0	188.0	....	87
May 28, 1906	Forty-first street, from Seventh avenue to New Utrecht avenue.....	817.0	779.7	682.1	....	....	....
July 30, 1906	Forty-second street, from Seventh avenue to Eighth avenue.....	818.0	....	....	....	....	....
May 29, 1906	Forty-eighth street, from Thirteenth avenue to summit between Fourteenth and Fifteenth avenues.....	1,248.7	133.5	....	....	....	....
Dec. 4, 1905	Fifty-third street, from Sixth avenue to Seventh avenue.....	700.0	44.0	....	....	....	....
May 26, 1906	Fifty-third street, from Thirteenth avenue to Seventeenth avenue.....	1,542.0	760.0	44.0	870.0	....	....
May 23, 1906	Fifty-fourth street, from Sixth avenue to Seventh avenue.....	700.0	44.0	....	....	....	....
Dec. 18, 1905	Fifty-sixth street, from Twelfth avenue to Thirteenth avenue.....	700.8	45.0	....	....	....	....
	Twelfth avenue, from Fifty-sixth street to Fifty-seventh street.....	....	....	253.0	....	....	....
May 26, 1906	Twelfth avenue, from Fifty-eighth street to Sixtieth street.....	246.8	260.6	....	....	....	....
	Fifty-seventh street, from Fourteenth avenue to Fifteenth avenue.....	700.0	44.0	....	....	....	....
July 30, 1906	Fifty-ninth street, from Seventh avenue to Eighth avenue.....	700.0	45.0	....	....	....	....
Feb. 24, 1906	Sixtieth street, from First avenue to Third avenue.....	762.4	720.0	45.0	....	....	....
	First avenue, from Sixtieth street to Sixty-fourth street.....	....	....	264.6	259.0	....	....
Mar. 7, 1906	Caton avenue, from Parade place to East Seventeenth street.....	....	137.5	....	....	....	....
May 18, 1906	Webster avenue, from Ocean parkway to Gravesend avenue.....	1,006.0	546.0	29.0	....	....	....
May 23, 1906	Prospect street, from Vernon avenue to Beverley road.....	594.2	43.2	....	....	....	....
May 23, 1906	Parkside avenue, northerly side, from St. Paul's place to Ocean avenue.....	....	....	723.8	....	....	....
Map T, District 40, and Map U, District 41.							
May 18, 1906	First avenue, from Bay Ridge avenue to Wakeman place.....	328.0	....	261.0	261.0	....	....
Map T, District 40; Map U, District 41; Map V, District 42, and Map W, District 43.							
May 23, 1906	Third avenue, from Sixtieth to Sixty-first street.....	....	....	....	....	....	....
	Third avenue, from Sixty-seventh street to Bay Ridge avenue.....	244.0	259.0	264.0	....	....	....
	Third avenue, from Silliman place to Seventy-third street.....	718.0	....	....	....	....	....
	Third avenue, from Seventy-fourth to Seventy-seventh street.....	733.0	....	....	....	....	....
	Third avenue, from Eightieth to Eighty-third street.....	742.0	....	....	....	....	....
	Third avenue, from Eighty-fourth to Eighty-fifth street.....	238.0	....	....	....	....	....
	Third avenue, from Eighty-sixth to Eighty-eighth street.....	473.0	....	....	....	....	....
	Third avenue, from Eighty-ninth to Ninetieth street, northerly intersection.....	114.0	....	....	....	....	....
	Third avenue, from Marine avenue to Ninety-ninth street.....	150.0	97.0	....	....	....	....
Dec. 26, 1905	Seventy-sixth street, from Second avenue to Third avenue.....	718.0	43.0	....	....	....	....
	Seventy-fifth street, from Shore road to Narrows avenue.....	249.0	....	....	....	....	....
	Seventy-fifth street, from First avenue to Second avenue.....	761.0	....	....	....	....	....
Map U, District 41.							
Dec. 26, 1905	Shore road, from Seventy-fifth to Seventy-first street.....	260.0	916.0	32.0	....	....	....
	Seventy-fifth street, from First avenue to Second avenue.....	761.0	....	....	....	....	....
Map V, District 42.							
July 9, 1906	Fourth avenue, west side, from Eighty-second street to Eighty-sixth street.....	260.0	333.0	259.0	305.0	....	....
*Oct. 27, 1904	Seventy-ninth street, from present terminus to bulkhead line.....	....	....	....	....	....	....
Dec. 5, 1904	Eighty-seventh street, from Second avenue to Fourth avenue.....	....	....	....	....	....	....
June 5, 1906	Eightieth street, from First avenue to Second avenue.....	700.0	44.0	....	....	....	....
May 23, 1906	Eighty-fourth street, from First avenue to Second avenue.....	700.0	44.0	....	....	....	....

No. 2.

Completed During the Year 1906.

24-inch Cast-iron Pipe.	30-inch Reinforced Concrete.	30-inch Brick.	36-inch Brick.	42-inch Brick.	72-inch Brick.	132-inch Brick.	Manholes.	Sewer Basins.	6-inch House Connection Drain.	Total Cost.
....	14	3	....	\$4,029 24
....	533 63
....	473.5	....	....	2	....	....	7,914 41
....	2	1	....	706 13
....	8	....	....	1,822 94
....	8	....	....	2,240 12
....	7	2	....	2,340 42
....	9	....	....	2,866 70
....	9	....	....	2,071 97
....	22	1	....	6,715 87
....	258.9	....	....	....	....	....	9	12	....	7,559 22
....	3	....	....	2,270 81
....	2	....	....
....	6	2	....
....	301.3	....	....	....	3	....	....	9,202 85
....	325.5	....	....	....	4	....	....
....	10,019 51
....	5	....	....	1,414 68
....	16	....	....	4,220 39
....	4	....	....
....	3	....	....	591 65
....	4	....	....	853 69
....	6	....	....	1,867 80
....	7	2	....	2,255 45
....	4	....
....	33 00
....	4	1	....	1,346 45
....	4	3	....	1,219 69
89	246.0	....	....	....	....	16	7	....	9,675 94
....	20	4	....	7,298 41
....	7	2	910	2,851 53
....	14	....	....	3,378 84
....	8	....	....	1,599 60
....	29	5	....	9,965 83
....	8	....	....	1,782 81
....	8	....	....	4,177 73
....	3	4	....
....	4	2	....
....	8	....	....	1,765 78
....	8	1	980	2,685 23
....	15	1	....	9,619 09
....	473.0	....	....	....	....	8	6	....
....	1	....	....	431 60
....	16	....	....	3,807 80
....	7	....	....	1,496 23
....	7	1	....	3,375 46
....	525.0	....	....	....	....	15	11	....	7,602 62
....	2	....	20,034 03
....	6	7	....
....	8	3	....
....	9	....	....
....	9	2	....
....	3	....	....
....	6	....	....
....	1	4	....
....	3	3	....
....	8	....	....
....	3	....	....	6,411 88
....	8	2	....
....	12	....	....
....	9	7	....	4,539 90
....	390	....	....	....	....	45,925 80
....	3,095 80
....	8	....	....	1,682 64
....	8	....	....	1,669 12

Date of Contract.	Location of Work.	12-inch Pipe.	15-inch Pipe.	18-inch Pipe.	24-inch Pipe.	12-inch Cast-iron Pipe.	16-inch Cast iron Pipe.
Map V, District 42, and Map W, District 43.							
Dec. 4, 1905	Eighty-eighth street, from Fort Hamilton avenue to Fifth street.....	558.0	....	....	....	....	....
	Gelston avenue, from Eighty-eighth street to Ninety-second street.....	....	498.0	547.0	....	....	....
Map W, District 43.							
Dec. 20, 1902	Proposed street through northern portion of Dyker Beach Park, between Eleventh and Seventh avenues.....	....	....	....	....	....	....
	Ninety-second street, from Seventh avenue to New York bay.....	....	....	....	....	....	....
May 23, 1906	Ninety-seventh street, from Shore road to Marine avenue.....	....	626.0	43.0	....	....	....
May 23, 1906	Fourth avenue, east side, from Ninety-fifth street to Ninety-seventh street.....	359.0	....	....	....	....	....
Nov. 17, 1905	Fifth avenue, from Ninetieth street to Ninety-fourth street.....	1,055.0	68.0	....	....	....	....
June 5, 1906	Thirteenth avenue, from Seventy-ninth street to Eighty-second street.....	712.0	....	....	....	....	....
	Eighty-second street, from Thirteenth avenue to Fourteenth avenue.....	....	718.0	43.0	....	....	....
June 1, 1906	Bay Eleventh street, from Eighty-sixth street to Benson avenue.....	700.0	....	....	....	....	....
	Benson avenue, from Bay Twenty-sixth street to Twenty-first avenue.....	45.0	....	254.0	....	....	....
June 1, 1906	Bay Twenty-sixth street, westerly corner of Eighty-sixth street.....	....	....	....	....	....	....
	Easterly corner of Cropsey avenue; northerly corners of Benson avenue and Bay Twenty-sixth street.....	....	....	....	....	....	....
Map X, District 44, and Map Y, District 45.							
June 5, 1906	East Fortieth street, from Avenue C (Clarendon road) to Ditmas avenue (Foster avenue).....	774.6	800.0	....	....	....	....
Map Y, District 45.							
Feb. 26, 1906	Rogers avenue, from Clarendon road to Flatbush avenue.....	2,364.6	87.0	....	....	....	....
	Avenue D, from Rogers avenue to East Twenty-eighth street.....	....	....	....	266.5	....	....
	Newkirk avenue, from Rogers avenue to East Twenty-eighth street.....	....	268.5	....	....	....	....
June 5, 1906	Kenmore place, from Avenue G to end of existing sewer north of Avenue G..	261.0	40.0	....	....	....	....
July 16, 1903	Brooklyn avenue, from Avenue H to Avenue J.....	....	....	....	....	....	....
	Avenue J, from Brooklyn avenue to East Fortieth street.....	....	....	....	....	....	....
	East Fortieth street, from Avenue J to Flatlands avenue.....	....	....	....	....	....	....
	Flatlands avenue, from East Fortieth street to Paerdegat avenue.....	....	....	....	....	....	....
Aug. 8, 1906	Brooklyn avenue, from Avenue G (Glenwood road) to Avenue H.....	774.3	....	....	....	....	....
Aug. 24, 1906	East Thirty-fourth street, from Flatbush Water Works to Avenue F (Farragut road).....	379.0	....	....	....	....	....
Map CC, District 49.							
Sept. 9, 1905	Stillwell avenue, westerly side, from Mermaid avenue to Neptune avenue.....	752.0	....	....	....	....	....
Sheepshead Bay.							
Feb. 24, 1906	East Twenty-first street (Kenmore place), from Emmons avenue to end of existing sewer north of Emmons avenue.....	518.8	....	....	....	....	....
Sewers Necessitated by Atlantic Avenue Improvement.							
Nov. 16, 1903	Vanderbilt avenue, between Atlantic avenue and Pacific street.....	....	....	....	....	....	....
	Carlton avenue, between Atlantic avenue and Pacific street.....	....	....	....	....	....	....
	Fifth avenue, between Atlantic avenue and Pacific street.....	....	....	....	....	....	....
	Pacific street, between Vanderbilt avenue and Flatbush avenue.....	....	....	....	....	....	....
	Atlantic avenue, south side, between a point east of Vanderbilt avenue and Flatbush avenue.....	....	....	....	....	....	....
	Atlantic avenue, north side, between a point east of South Elliott place and Fort Greene place.....	....	....	....	....	....	....
	Fort Greene place, between Atlantic avenue and Hanson place.....	....	....	....	....	....	....
	South Elliott place, between Atlantic avenue and Hanson place.....	....	....	....	....	....	....
	Hanson place, between South Elliott place and Ashland place.....	....	....	....	....	....	....
Sewer Basins.							
June 29, 1906	Reconstruction, Imlay street, all four corners of Verona street.....	....	....	....	....	....	....
Jan. 2, 1906	All four corners of Commerce street and all four corners of Bowne street.....	....	....	....	....	....	....
	Norman avenue, northeast corner of Russell street, northeast corner of Humboldt street and northwest corner of Moultrie street.....	....	....	....	....	....	....
Aug. 17, 1906	Northwest corner of Norman avenue and Russell street.....	....	....	....	....	....	....
Aug. 17, 1906	Southeast corner of Hausman street and Nassau avenue.....	....	....	....	....	....	....
July 2, 1906	Northeast corner of Atlantic avenue and Russell place.....	....	....	....	....	....	....
Nov. 17, 1905	Northwest corner of Crescent street and Hill street.....	....	....	....	....	....	....
July 2, 1906	Northeast and northwest corners of Grant avenue and Union avenue.....	....	....	....	....	....	....
Aug. 9, 1906	Southeast and southwest corners of Jerome street and Belmont avenue.....	....	....	....	....	....	....
	All four corners of Jerome street and Sutter avenue.....	....	....	....	....	....	....
	Southwest corner of Jerome street and Dumont avenue.....	....	....	....	....	....	....
	All four corners of Jerome street and Livonia avenue.....	....	....	....	....	....	....
	Northeast and northwest corners of Jerome street and New Lots road.....	....	....	....	....	....	....
Oct. 19, 1905	Northeast corner of Westminster road and Cortelyou road.....	....	....	....	....	....	....
Oct. 19, 1905	Bedford avenue, northeast and northwest corners of Carroll street, northeast and northwest corners of Crown street, northeast corner of Montgomery street, southeast corner of Linden avenue, northeast and northwest corners of Church avenue and intersection of westerly curb line of Bedford avenue and easterly curb line of Flatbush avenue.....	....	....	....	....	....	....
Jan. 26, 1906	All four corners of Eighth avenue and Sixtieth street.....	....	....	....	....	....	....
Jan. 11, 1906	Northeast and northwest corners of East Sixteenth street and Cortelyou road....	....	....	....	....	....	....
Aug. 28, 1906	Newkirk avenue, northeast and southeast corners of East Eighteenth street, northwest and southeast corners of East Nineteenth street, northeast corner of East Twenty-first street and northwest corner of East Twenty-third street....	....	....	....	....	....	....
Oct. 29, 1906	Beverly road, northeast corner of Flatbush avenue, northwest and southwest corners of East Twenty-second street.....	....	....	....	....	....	....
Dec. 18, 1905	Narrows avenue, northeast and southeast corners of Seventy-fourth street, northeast and southeast corners of Seventy-sixth street, northeast, southeast and northwest corners of Seventy-seventh street, northeast and southeast corners of Seventy-eighth street.....	....	....	....	....	....	....
Dec. 21, 1905	Northeast corner of Seventy-ninth street and Seventh avenue.....	....	....	....	....	....	....
Oct. 15, 1906	East corner of Bath avenue and Fourteenth avenue.....	....	....	....	....	....	....
July 27, 1906	Seventeenth avenue, north, south and west corners of Benson avenue, and east corner of Cropsey avenue.....	....	....	....	....	....	....
Dec. 26, 1905	Northeast and northwest corners of New York avenue and Avenue H.....	....	....	....	....	....	....
June 11, 1906	Northeast and northwest corners of East Twenty-fifth street and Foster avenue..	....	....	....	....	....	....
Supplies.							
April 6, 1905	Forage for year 1905.....	....	....	....	....	....	....
April 17, 1905	Rubber goods for year 1905.....	....	....	....	....	....	....
May 4, 1905	Hardware for year 1905.....	....	....	....	....	....	....
May 28, 1906	Hardware for year 1906.....	....	....	....	....	....	....
Total.....		35,839.9	14,306.0	5,715.9	2,186.5	48	87

* Items reported in 1905.

† House connections only.

24-inch Cast-iron Pipe.	30-inch Reinforced Concrete.	30-inch Brick.	36-inch Brick.	42-inch Brick.	72-inch Brick.	132-inch Brick.	Manholes.	Sewer Basins.	6-inch House Connection Drain.	Total Cost.
....	6	2	....	4,348 12
....	11	2	....
....	670,472 58
....	8	....	....	....
....	7	....	....	1,870 17
....	4	....	....	1,011 43
....	11	1	....	3,554 83
....	9	2	....	3,857 61
....	8	....	....
....	8	....	....	2,043 81
....	4	....	....	1,700 23
....	
....	4	....	....
....	17	....	....	4,477 60
....	25	5	....	8,522 02
....	2	1	....
....	2	1	....	731 13
....	3	....	....	322,847 92
....	
....	1,819 22
....	4	....	469	1,705 14
....	8	....	....	3,576 40
....	5	2	....	1,363 66
....	76,858 94
....	
....	2,356 83
....	12	....
....	3	....	524 95
....	1	....	221 87
....	1	....	196 87
....	1	....	248 88
....	1	....	223 31
....	2	....	423 87
....	2	....	1,939 85
....	4	....
....	4	....	146 50
....	2	....
....	1,328 54
....	4	....	643 00
....	2	....	406 86
....	6	....	951 60
....	3	....	594 33
....	9	....	1,223 41
....	1	....	221 49
....	1	....	185 08
....	4	....	745 27
....	2	....	345 32
....	2	....	423 75
....	1,120 83
....	3,757 06
....	445 65
....	1,629 43
89	258.9	1,244.0	626.8	473.5	390	8	606	192	2,359.0	\$1,360,035 65

‡ Items reported in 1904 and 1905.

Payments to contractors during the year 1906.....	\$543,651 21
Engineering and inspection during the year 1906.....	26,878 66
	<hr/>
Cost during the year 1906.....	\$570,529 87
Cost prior to the year 1906.....	789,505 78
	<hr/>
Total cost of contracts.....	\$1,360,035 65

TABLE
Contracts in Progress

Date of Contract.	Location of Work.	Pipe Sewers.					Reinforced Concrete.							
		9-inch.	12-inch.	15-inch.	18-inch.	24-inch.	30-inch.	36-inch.	48-inch.	54-inch.	60-inch.	132-inch.	144-inch.	
Map D, District 9.														
Oct. 15, 1906	Congress street, from Columbia street to East river.....	....	550	....	....	....	....	....	....	....	....	....	....
Map I, District 21.														
Nov. 29, 1905	Eckford street, between Engert and Driggs avenues.....	....	7.2	36	....	....	....	....	....	....	....	....	....
Dec. 7, 1905	Quay street, from East river to West street.....	....	....	....	....	....	....	....	....	....	....	....	....
	West street, from Quay to North Fifteenth street.....	....	....	....	....	....	....	....	....	....	....	....	....
	North Fifteenth street, from West street to Engert avenue....	....	....	....	....	....	....	....	60	60	....	....	....
	Engert avenue, from North Fifteenth to Humboldt street.....	....	....	....	620	520	....	....	....	....	....	....	....
	Engert avenue, from Russell street to North Henry street.....	....	....	180	....	....	....	....	....	....	....	....	....
	Wythe avenue, from Norman avenue to North Fifteenth street	....	....	....	....	....	....	....	....	....	....	....	....
Map J, District 22.														
Nov. 16, 1905	Reconstruction, Baltic street, between Third and Fourth avenues	....	....	....	1	....	....	....	....	....	....	....	....
Oct. 10, 1906	Huntington street, from Henry to Hicks street.....	....	400	40	....	....	....	....	....	....	....	....	....
Oct. 25, 1906	Huntington street, from Henry street to Hamilton avenue....	....	....	....	....	....	....	....	....	....	....	....	....
Map L, District 24.														
June 26, 1905	*Albany avenue, from St. Mark's avenue to Prospect place....	....	....	....	....	....	....	....	....	....	....	....	....
Map N, District 29.														
Nov. 20, 1906	Fifty-first street, from First to Second avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Map O, District 37.														
Altering and Reconstructing.														
Feb. 2, 1905	Knickerbocker avenue, between George street and Johnson	....	....	....	....	....	....	....	....	....	....	290	....
	Johnson avenue, between Knickerbocker avenue and Bushwick	....	....	....	....	....	....	....	....	....	....	....	260
Sept. 9, 1905	*Jefferson street, from Irving to Wyckoff avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 25, 1905*	Reconstruction, Broadway, easterly side, from Greene avenue	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 11, 1905	to Grove street.....	....	....	....	....	....	....	....	....	....	....	....	....
	Grove street, from Broadway to Bushwick avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 11, 1905	India street, from a point 300 feet east of Oakland street to	....	....	....	....	....	....	....	....	....	....	....	....
	Provost street .....	....	....	....	....	....	....	....	....	....	....	....	....
Aug. 16, 1906	Dean street, from Ralph to Howard avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 27, 1906	Lexington avenue, south side, from Ralph avenue westerly to	....	225	....	....	....	....	....	....	....	....	....	....
	existing sewer .....	....	....	....	....	....	....	....	....	....	....	....	....
Dec. 17, 1906	Bushwick avenue, from Garden to Beaver street.....	....	....	....	....	....	....	....	....	....	....	....	....
Map S, District 39.														
Oct. 11, 1905	Eastern parkway, southerly side, from Pitkin avenue to De-	....	....	....	....	....	....	....	....	....	....	....	....
	graw street, from Eastern Parkway Extension to Howard	....	....	....	....	....	....	....	....	....	....	....	....
	avenue .....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 13, 1906	Park place, from Hopkinson avenue to Eastern Parkway Extension	....	179	....	....	....	....	....	....	....	....	....	....
	Basin at northeast corner of Park place and Hopkinson avenue	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 10, 1906	Hemlock street, from Glenmore to Pitkin avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Nov. 23, 1906	Barrett street, from Pitkin to Sutter avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Dec. 8, 1906	Blake avenue, from Powell street to Junius street, and a	....	....	....	....	....	....	....	....	....	....	....	....
	sewer basin at the southeast corner of Blake avenue and	....	....	....	....	....	....	....	....	....	....	....	....
Dec. 20, 1906	Hopkinson avenue .....	....	....	....	....	....	....	....	....	....	....	....	....
	Etna street, from Force Tube avenue to Hale avenue, and from	....	....	....	....	....	....	....	....	....	....	....	....
	Norwood avenue to Richmond street, and sewer basins,	....	....	....	....	....	....	....	....	....	....	....	....
	Etna street, northeast corner of Euclid avenue, southwest	....	....	....	....	....	....	....	....	....	....	....	....
	corner of Pine street, northeast, northwest and southwest	....	....	....	....	....	....	....	....	....	....	....	....
	corners of Hemlock street, and northwest corner of El-	....	....	....	....	....	....	....	....	....	....	....	....
	dert's lane .....	....	....	....	....	....	....	....	....	....	....	....	....
Map T, District 40.														
Oct. 5, 1906	East Third street, from Ditmas avenue to Avenue F.....	....	800	....	....	....	....	....	....	....	....	....	....
	Ditmas avenue, from East Third street to East Fifth street...	....	....	....	....	....	....	....	....	....	....	....	....
Dec. 20, 1906	Avenue F, from East Third street to Ocean parkway.....	....	....	....	....	....	....	....	....	....	....	....	....
	East Fourth street, from Avenue D to Church avenue; Avenue	....	....	....	....	....	....	....	....	....	....	....	....
	D, from East Fourth street to East Fifth street.....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 25, 1906	East Nineteenth street, from Newkirk avenue to Foster avenue.	....	294	....	....	....	....	....	....	....	....	....	....
Aug. 28, 1906	East Thirty-first street, from Church avenue to Beverley road.	....	....	....	1,020	....	....	....	....	....	....	....	....
	Beverley road, from East Thirty-first street to Rogers avenue.	....	....	....	....	....	....	....	....	....	....	....	....
	Eighteenth avenue, from East Fourth street to the old New	....	....	....	....	....	....	....	....	....	....	....	....
	Utrecht town line.....	....	511	202	....	....	....	....	....	....	....	....	....
June 12, 1906	Third street, from Eighteenth avenue to Foster avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
	Eighteenth avenue, northeast and northwest corners of East	....	....	....	....	....	....	....	....	....	....	....	....
	Fifth street, and south side of Eighteenth avenue, opposite	....	....	....	....	....	....	....	....	....	....	....	....
	East Fifth street.....	....	....	....	....	....	....	....	....	....	....	....	....
Aug. 23, 1905*	Twentieth street, from Terrace place to Vanderbilt street....	....	....	....	....	....	....	....	....	....	....	....	....
	Vanderbilt street, north side, from Twentieth to East Fifth street	....	....	....	....	....	....	....	....	....	....	....	....
Nov. 20, 1906	Fortieth street, from Seventh avenue to New Utrecht avenue.	....	....	....	....	....	....	....	....	....	....	....	....
June 5, 1906	Forty-first street, from the summit west of Seventh avenue to	....	....	....	....	....	....	....	....	....	....	....	....
	Seventh avenue .....	....	463	....	....	....	....	....	....	....	....	....	....
Aug. 28, 1906	Fifty-first street, from Fourteenth to Seventeenth avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
	Seventeenth avenue, from Fifty-first to Fifty-third street....	....	....	....	....	....	....	....	....	....	....	....	....
	Fifty-third street, from Seventeenth to Nineteenth avenue....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 19, 1906	Fifty-second street, from Thirteenth to Fourteenth avenue....	....	....	700	35	....	....	....	....	....	....	....	....

TABLE No. 3.

Sewers, etc., Built by Other Departments, Commissions, etc., Under Supervisor of Bureau of Sewers During the Year 1906.

Location.	Built by	12-inch Pipe Sewer.	120-inch Reinforced Concrete.	Manholes.	Basins.
Beverly road, from East Fifteenth street to Brighton Beach Railroad.....	Grade Crossing Commission.....	93	....	2	....
Avenue C, from East Fifteenth street to Brighton Beach Railroad.....	Grade Crossing Commission.....	107	....	2	....
Avenue D, from East Fifteenth street to Brighton Beach Railroad.....	Grade Crossing Commission.....	110	....	2	....
Ditmas avenue, from East Fifteenth street to Brighton Beach Railroad.....	Grade Crossing Commission.....	109	....	2	....
Foster avenue, at Brighton Beach Railroad.....	Grade Crossing Commission.....	....	105	....	....
Sewer basin, northeast corner of Atlantic avenue and Nostrand avenue.....	Atlantic Avenue Improvement Commission....	....	....	....	1
Sewer basin, southeast corner of White and Siegel streets.....	Henry Newman, under Commissioner's order..	....	....	....	1
Total.....	.....	419	105	8	2

No. 4.

to December 31, 1906.

Brick.								Cubic Yards.	Manholes.	Basins.	6-inch House Con- nection Drain.	Contract Price.
30-inch.	36-inch.	42-inch.	48-inch.	54-inch.	78-inch.	120-inch.	132-inch.					
....	5	....	....	\$3,927 19
....	2	2	....	1,102 40
....
....	75	....	840	....	....	....	....	....	7	....	....	92,426 20
....	625	....	....	....	....	....	....	....	14	....	....	....
....	1	....	....	....
250	3	....	....	....
....	1	....	....	2,859 82
....	3	....	320	1,123 92
....	837 25
....	1,087 74
....	1,967 75
....	550	470	....	6	....	....	113,976 10
....	1,415 25
....	5,704 06
....	618 23
....	1,527 87
....	4	....	....	1,368 77
....	2,150 25
....	1,543 04
....	2	....	64	801 05
....	1	....	1,162 75
....	2,766 45
....	1,181 85
....	3,200 46
....	2	....	....	10,575 95
....	8,088 20
....	3	....	....	1,401 75
....	8	....	....	14,589 00
....	535	545	....	....	....	....	8	1	....	....
61	49	306	373	....	....	....	....	....	14	10	....	18,795 75
....	1,003	....	....	....	....	....	9	6	....	....
....	3	....	3,560 87
....	6,226 00
....	3	1	....	1,072 05
....	36,547 00
....	6	....	....	2,726 01

IIII

[illegible]

Date of Contract.	Location of Work.	Pipe Sewers.					Reinforced Concrete.						
		9-inch.	12-inch.	15-inch.	18-inch.	24-inch.	30-inch.	36-inch.	48-inch.	54-inch.	60-inch.	132-inch.	144-inch.
Map T, District 40.													
Jan. 3, 1905*	Nostrand avenue, from Midwood street to Hawthorne street..	....	....	....	....	....	....	....	....	....	....	....	....
	Hawthorne street, from Nostrand to New York avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
	New York avenue, from Hawthorne to Martense street.....	....	....	....	....	....	....	....	....	....	....	....	....
	Martense street, from New York to Bedford avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Oct. 20, 1905	*Forty-seventh street, from Thirteenth to Fourteenth avenue..	....	....	....	....	....	....	....	....	....	....	....	....
Aug. 2, 1905	*Church avenue, between East Eleventh street and East Fifteenth street, and basins at the northeast, northwest and southeast corners of East Sixteenth street; northeast, northwest and southeast corners of East Seventeenth street, and northeast corner of Ocean avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Sept. 19, 1905	*Fiftieth street, from Thirteenth to Fourteenth avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Map V, District 42.													
Oct. 20, 1905	*Eighty-first street, from First to Second avenue.....	....	....	....	....	....	....	....	....	....	....	....	....
Map W, District 43.													
Aug. 18, 1906	Eighty-fourth street, between Twentieth and Twenty-first avenues	....	....	....	....	....	....	....	....	....	....	....	....
	Twenty-first avenue, between Eighty-fourth street and Benson avenue .....	....	....	....	....	....	....	....	....	....	....	....	....
Dredging.													
Oct. 25, 1906	Dredging Newtown creek canal at and in the canal and basin included within the boundaries of Johnson avenue, Montrose avenue, Morgan avenue and Varick street.....	....	....	....	....	....	....	....	....	....	....	....	....
Dec. 3, 1906	Dredging Gowanus canal.....	....	....	....	....	....	....	....	....	....	....	....	....
Supplies.													
May 26, 1906	Furnishing and delivering lime, etc.....	....	....	....	....	....	....	....	....	....	....	....	....
Mar. 2, 1906	Furnishing and delivering coal for various disposal works for the year 1906.....	....	....	....	....	....	....	....	....	....	....	....	....
May 29, 1906	Furnishing and delivering chemicals and disinfectants for use in Twenty-sixth and Thirty-first Wards Disposal Works for the year 1906.....	....	....	....	....	....	....	....	....	....	....	....	....
June 11, 1906	Furnishing forage for use of Bureau of Sewers for year 1906	....	....	....	....	....	....	....	....	....	....	....	....
May 26, 1906	Furnishing and delivering manhole heads, covers, etc., for use of the Bureau of Sewers.....	....	....	....	....	....	....	....	....	....	....	....	....
Removing Deposits.													
Dec. 10, 1904	Removing deposits, etc., for brick sewers.....	....	....	....	....	....	....	....	....	....	....	....	....
Total.....		1,150	9,632.8	3,171	4,289	3,577.4	3,991	1,283	1,145	60	60	290	260

* Items reported in 1905.

TABLE No. 5.
Showing Sewers Reconstructed, Removed or Abandoned During the Year 1906.

Location of Work.	Pipe Sewers.				Brick Sewers.				Man-holes. Basins.	
	9-inch.	12-inch.	15-inch.	18-inch.	42-inch.	90-inch.	120-inch.	144-inch.		
Map I, District 21....	Engert avenue, from Graham street to North Henry street.....	*390	*155	....	....	....	....	....	....	....
Map L, District 24....	Storm sewer, Nostrand avenue, easterly side, from a point about 100 feet south of Lexington avenue to a point about 35 feet north of Greene avenue .....	....	....	....	473.5	....	....	....	1	....
Map L, District 24....	Flushing avenue, north side, from Gerry street easterly.....	....	113	....	....	....	....	....	....	....
Map N, District 29....	Fifty-sixth street, from Fourth avenue to Fifth avenue.....	....	....	*718.4	*24.4	....	....	....	7	....
Map O, District 37....	Knickerbocker avenue, from George street to Johnson avenue.....	....	....	....	....	550	760	....	8	....
Map O, District 37....	Johnson avenue, from Knickerbocker avenue to Bushwick place.....	....	....	....	....	....	....	260	2	....
Map O, District 37....	Himrod street, from Knickerbocker avenue to Evergreen avenue.....	....	*2,085	....	....	....	....	....	20	....
Map T, District 40....	Seventh avenue, at Forty-first street.....	....	*60	....	....	....	....	....	....	....
Map T, District 40....	Beverley road, from East Fifteenth street to Brighton Beach Railroad....	....	....	....	135	....	....	....	1	....
	Cortelyou road, from East Fifteenth street to Brighton Beach Railroad....	....	....	145	....	....	....	....	2	....
	Avenue D, from East Fifteenth street to Brighton Beach Railroad.....	....	145	....	....	....	....	....	2	....
	Ditmas avenue, from East Fifteenth street to Brighton Beach Railroad....	....	....	....	145	....	....	....	1	....
Map T, District 40....	Newkirk avenue, from East Eighteenth street to Flatbush avenue.....	....	....	....	1,853	....	....	....	6	....
Map T, District 40....	Foster avenue, from East Fifteenth street to East Sixteenth street.....	....	....	....	....	....	105	....	....	....
Map W, District 43....	Twenty-first avenue, from Benson avenue to Eighty-fourth street.....	....	....	925	....	....	....	....	8	....
Sewer Basins.										
Map J, District 22....	Imlay street, all four corners of Verona street; all four corners of Commerce street, and all four corners of Bowne street.....	....	....	....	....	....	....	....	....	12
Total.....		390	2,558	1,788.4	24.4	2,606.5	550	865	260	58 12

* Built originally under private contract.

Payments made contractors during the year 1906.....	\$161,930 57
Engineering and inspection during the year 1906.....	47,612 31
Cost during the year 1906.....	\$209,542 88
Cost prior to the year 1906.....	160,953 21
Total cost of contracts.....	\$370,496 09

TABLE No. 6.
Built by Private Contract During the Year 1906, from January 1 to December 31.

Date Approved.	Location.		Pipe Sewers.			6-inch House Connection Drain.	Man-holes.	Basins.
			10-inch.	12-inch.	15-inch.			
Sept. 24, 1906	Union street, from Kingston avenue to a point within 50 feet west of Albany avenue	Map L, District 24.....	....	646.0	37	....	7	2
Nov. 19, 1906	Lexington avenue, north side, running to a point 20 feet east of Stuyvesant avenue	Map O, District 37.....	200	37.0	....	....	4	..
Nov. 28, 1906	Eldert street, from Knickerbocker avenue to Irving avenue.....	Map O, District 37.....	....	600.0	30	....	4	..
Nov. 28, 1906	Pine street, from Etna street southerly to end of existing sewer between Etna street and Ridgewood avenue.....	Map S, District 39.....	....	347.2	....	....	3	..
July 16, 1906	Sterling place, from East New York avenue to a point 140 feet west therefrom....	Map S, District 39.....	....	185.8	....	....	3	..
May 24, 1906	Forty-second street, from Thirteenth avenue to Fourteenth avenue.....	Map T, District 40.....	....	700.0	43	....	8	..

Brick.								Cubic Yards.	Manholes.	Basins.	6-inch House Connection Drain.	Contract Price.
30-inch.	36-inch.	42-inch.	48-inch.	54-inch.	78-inch.	120-inch.	132-inch.					
....	67,277 93
....	
....	
....	
....	1,247 08
....	3,997 26
....	1,617 81
....	1,235 84
....	34,440 00
....	925	....	....	....	4	....	....
....	7,200	....	....	....	2,983 00
....	11,340 00
....	6,866 25
....	10,773 00
....	1,419 00
....	1,032 70
....	1,522 41
....	7,744	....	....	....	36,600 00
311	2,004	2,620	2,751	945	925	550	470	16,944	283	84	6,538	\$1,883,347 31

Date Approved.	Location.		Pipe Sewers.			6-inch House Connection Drain.	Man- holes.	Basins.
			10-inch.	12-inch.	15-inch.			
June 6, 1906	East Sixteenth street, from Ditmas avenue to Newkirk avenue.....	Map T, District 40.....	....	550.4	....	....	5	..
	East Seventeenth street, from Ditmas avenue to Newkirk avenue.....		....	546.0	....	....	5	..
June 27, 1906	Fifty-fourth street, from Eleventh avenue to a point about 490 feet westerly therefrom	Map T, District 40.....	....	518.0	....	....	5	..
Aug. 8, 1906	Linden avenue, south side, commencing 376 feet 2 inches east of Nostrand avenue and running thence west to Nostrand avenue.....	Map T, District 40.....	....	375.0	49	....	5	..
Oct. 4, 1906	Linden avenue, north side, from Nostrand avenue to a point about 153 feet east thereof	Map T, District 40.....	....	213.6	....	60	3	..
July 15, 1905	Lefferts avenue, from Bedford avenue to Nostrand avenue (both sides).....	Map T, District 40.....	....	40.0*	....	....	..	..
Total.....			200	4,759.0	159	60	52	2

TABLE No. 7.

Total Amount of Work Done on Construction of Sewers from January 1, 1906, to December 31, 1906.

		Feet.	Miles.
9-inch pipe sewer	Public contract.....	1,150.0	0.218
12-inch pipe sewer	Public contract.....	45,472.7	8.612
15-inch pipe sewer	Public contract.....	17,477.0	3.310
18-inch pipe sewer	Public contract.....	10,004.9	1.895
24-inch pipe sewer	Public contract.....	5,763.9	1.092
		79,868.5	15.127
30-inch brick sewer	Public contract.....	1,555.0	0.295
36-inch brick sewer	Public contract.....	2,630.8	0.498
42-inch brick sewer	Public contract.....	3,093.5	0.586
48-inch brick sewer	Public contract.....	2,751.0	0.521
54-inch brick sewer	Public contract.....	945.0	0.179
72-inch brick sewer	Public contract.....	390.0	0.074
78-inch brick sewer	Public contract.....	925.0	0.175
120-inch brick sewer	Public contract.....	550.0	0.104
132-inch brick sewer	Public contract.....	478.0	0.091
		13,318.3	2.523
30-inch reinforced concrete sewer..	Public contract.....	657.9	0.125
36-inch reinforced concrete sewer..	Public contract.....	1,283.0	0.243
48-inch reinforced concrete sewer..	Public contract.....	1,145.0	0.217
54-inch reinforced concrete sewer..	Public contract.....	60.0	0.011
60-inch reinforced concrete sewer..	Public contract.....	60.0	0.011
132-inch reinforced concrete sewer..	Public contract.....	290.0	0.055
144-inch reinforced concrete sewer..	Public contract.....	260.0	0.049
		3,755.9	0.711
12-inch cast iron pipe sewer.....	Public contract.....	48.0	0.009
16-inch cast iron pipe sewer.....	Public contract.....	87.0	0.016
24-inch cast iron pipe sewer.....	Public contract.....	89.0	0.017
		224.0	0.042

		Feet.	Miles.
10-inch pipe sewer	Private contract.....	200.0	0.038
12-inch pipe sewer	Private contract.....	4,759.0	0.901
15-inch pipe sewer	Private contract.....	159.0	0.030
		5,118.0	0.969
12-inch pipe sewer	Built by Grade Crossing Commission.....	419.0	0.079
120-inch reinforced concrete sewer..	Built by Grade Crossing Commission.....	105.0	0.020
		105.0	0.020
Total.....		102,808.7	19.471

TABLE No. 8.

Total Amount of Sewers, etc., Reconstructed, Removed or Abandoned, from January 1, 1906, to December 31, 1906.

		Feet.	Miles.
12-inch pipe sewer	Built under public contract....	258.0	0.049
15-inch pipe sewer	Built under public contract....	1,070.0	0.203
		1,328.0	0.252
42-inch brick sewer	Built under public contract....	2,606.5	0.494
90-inch brick sewer	Built under public contract....	550.0	0.104
120-inch brick sewer	Built under public contract....	865.0	0.164
144-inch brick sewer	Built under public contract....	260.0	0.049
		4,281.5	0.811
9-inch pipe sewer	Built under private contract...	390.0	0.074
12-inch pipe sewer	Built under private contract...	2,300.0	0.436
15-inch pipe sewer	Built under private contract...	718.4	0.135
18-inch pipe sewer	Built under private contract...	24.4	0.005
		3,432.8	0.650
Total.....		9,042.3	1.713

Net increase in mileage for the year 1906 = 17.758 miles.

TABLE No. 9.

Number of Miles of Sewers Completed from January 1, 1858, to December 31, 1906.

Size.	Miles.
9-inch pipe	4.402
12-inch pipe	359.960
12-inch cast-iron pipe	0.009
15-inch pipe	102.070
16-inch cast-iron pipe	0.309
18-inch cast-iron pipe	0.021
18-inch pipe	67.506
18-inch brick	0.023
24-inch cast-iron pipe	0.024
24-inch pipe	24.199
24-inch brick	10.720
30-inch cast-iron pipe	0.028
30-inch pipe	1.420
30-inch brick	25.848
30-inch reinforced concrete	0.545
36-inch cast-iron pipe	0.011
36-inch brick	22.553
36-inch reinforced concrete	0.292
42-inch wooden	0.122
42-inch brick	11.543
42-inch reinforced concrete	0.056
48-inch cast-iron pipe	0.249
48-inch wooden	0.315
48-inch brick	15.018
48-inch reinforced concrete	0.217
54-inch reinforced concrete	0.011
54-inch brick	7.380
60-inch brick	10.793
60-inch reinforced concrete	0.011
66-inch brick	4.533
72-inch brick	7.893
78-inch brick	6.548
78-inch reinforced concrete	0.190
84-inch brick	3.079
90-inch reinforced concrete	0.082
90-inch brick	2.219
94-inch brick	0.190
96-inch brick	1.147
102-inch brick	0.879
108-inch brick	1.530
120-inch reinforced concrete	1.161
120-inch brick	3.791
126-inch brick	1.193
132-inch brick	1.901
132-inch reinforced concrete	0.055
138-inch brick	0.688
144-inch brick	3.480
144-inch reinforced concrete	0.049
156-inch brick	0.760
162-inch brick	0.736
168-inch brick	1.393
180-inch brick	1.739
187-inch brick	0.289

Built Under Private Contract.

Size.	Miles.
9-inch pipe	4.667
10-inch pipe	0.088
12-inch pipe	47.554
15-inch pipe	12.097
18-inch pipe	6.876
24-inch pipe	0.779
30-inch brick	0.557
36-inch brick	0.324
42-inch brick	0.050
48-inch brick	0.140
Total	784.312

TABLE No. 10.

Number of Connections Made With Sewers from 1859 to December 31, 1906.

Year.	Number.	Year.	Number.
1859	422	1876	2,237
1860	1,695	1877	2,110
1861	4,896	1878	1,999
1862	3,168	1879	1,908
1863	1,984	1880	1,664
1864	1,301	1881	1,872
1865	1,519	1882	2,058
1866	3,605	1883	2,626
1867	2,922	1884	3,079
1868	3,286	1885	3,162
1869	3,501	1886	3,093
1870	2,972	1887	3,295
1871	2,861	1888	3,302
1872	2,845	1889	3,937
1873	5,276	1890	3,168
1874	3,648	1891	3,137
1875	2,786	1892	3,068

Year.	Number.	Year.	Number.
1893	2,245	1902	2,093
1894	2,174	1903	2,444
1895	3,440	1904	4,526
1896	3,696	1905	5,888
1897	3,300	1906	5,884
1898	2,562		
1899	2,608	Total	139,984
1900	2,478		
1901	2,244		

TABLE No. 11.

Contracts Under Investigation During the Year 1906, as to Violations of Specifications in Year 1905, on Account of Use of Cement Pipe.

Contract.	Contractor.	Amount Bid.
Sixty-second street, from Third avenue to Fifth avenue.....	Donlon Contracting Company	\$4,949 39
Eighty-fifth street, from First avenue to Third avenue.....	H. A. Rutan & Co.	5,476 90
Greenwood avenue, north side, from Coney Island avenue to East Second street.....	H. A. Rutan	9,282 60
*Jefferson street, from Wyckoff avenue to St. Nicholas avenue	P. J. Murray	882 25
Nostrand avenue, from Midwood street to Hawthorne street, etc.	J. J. Creem	67,277 93
Maple street, from Rogers avenue to Nostrand avenue.....	P. J. Murray	2,160 90
*Sixty-seventh street, from Second avenue to Thrd avenue, etc.	Donegan & Redmond	16,154 79
Rogers avenue, east side, from Linden avenue to Martense street	P. J. Murray	1,507 53
Third avenue, from Ninety-second street to Ninety-fourth street	E. M. Culp	1,456 00
Newkirk avenue, from Coney Island avenue easterly to East Eighteenth street.....	Jas. Riley	11,531 85
Sixtieth street, from Ninth avenue to Fort Hamilton avenue.	O'Grady Bros.	1,574 75
East Thirty-first street, from Flatbush avenue to Glenwood road	P. J. Murray	1,471 04
Albany avenue, from St. Mark's avenue to Prospect place....	P. J. Murray	1,087 74
East Twenty-third street, from Avenue G to a point about 500 feet north, etc.	P. J. Murray	932 06
†Seventh avenue, from Seventy-ninth to Ninety-second streets, etc.	P. J. Murray	248,477 07
*Sewer and basins, Church avenue, from East Eleventh street to East Fifteenth street, etc.	Jas. Riley	3,997 26
Jefferson street, from Irving avenue to Wyckoff avenue.....	J. L. Carey	1,415 25
Twentieth street, from Terrace place to Vanderbilt street, etc.	Jas. Jennings & Co.	3,560 87
Sixty-first street, from Third avenue to Fourth avenue, etc..	Donlon Contracting Company	2,251 17
Fifty-sixth street, from Seventh avenue to Eighth avenue....	O'Grady Bros.	1,778 33
†Rogers avenue, from Vernon avenue to Avenue C, etc.	P. J. Murray	14,426 11
Eastern Parkway extension, south side, from Pitkin avenue to Degraw street, etc.	J. L. Carey	1,543 04
*Fiftieth street, from Thirteenth avenue to Fourteenth avenue	Donegan & Redmond	1,617 81
Sixth avenue, from Seventy-third street to Seventy-fourth street, etc.	Sigretto & Mannino Company	16,629 77
Eighty-eighth street, from First avenue to Narrows avenue....	Murphy Bros.	1,363 87
Bay Twenty-third street, from Eighty-sixth street to Benson avenue, etc.	Jas. Jennings & Co.	3,522 28
Sewer basins, Farragut road, northwest corner of Flatbush avenue, etc.	Jas. Jennings & Co.	1,904 00
India street, from Oakland street to end of existing sewer, etc.	J. L. Carey	618 23
Sixty-fifth street, from Fifth avenue to Eighth avenue.....	Donegan & Redmond	7,815 95
Seventy-first street, from Tenth avenue to Eleventh avenue..	Murphy Bros.	1,250 73
Sherman street, from Tenth avenue to Eleventh avenue.....	J. L. Carey	1,553 78
*Forty-seventh street, from Thirteenth avenue to Fourteenth avenue	J. J. Creem	1,247 08
Third avenue, from Seventy-seventh street to Seventy-ninth street	O'Grady Bros.	1,308 75
*Eighty-first street, from First avenue to Second avenue....	J. J. Creem	1,235 84
Reconstruction, Broadway, from Greene avenue to Grove street, etc.	C. J. Phillips	5,704 06
Ovington avenue, from Sixth avenue to Seventh avenue....	J. J. Creem	1,069 60
Ovington avenue, from Fifth avenue to Sixth avenue.....	Murphy Bros.	1,109 05
Reconstruction, Baltic street, from Third avenue to Fourth avenue	O'Grady Bros.	2,859 82
Basin, northwest corner of Fifth avenue and Ninth street...	Wm. P. Burke	146 00
Bay Twenty-third street, from Bath avenue to Cropsey avenue	P. J. McCauley	1,995 37
Basin, southerly corner of Beecker street and St. Nicholas avenue	J. J. Maloney	157 00
Basins, northeast and northwest corners of Hopkinson avenue and Blake avenue.	J. J. Maloney	286 00
Eckford street, from Engert avenue to Driggs avenue.....	Donlon Contracting Company	1,102 70
†Ocean parkway, west side, from Beverley road to Avenue C, etc.	J. L. Carey	7,903 76
Basins, northeast and northwest corners of Dumont avenue and Hendrix street.	J. J. Maloney	292 00
Total		\$465,888 28

* Final payment in office of Comptroller.

† Contracts still uncompleted in construction.

TABLE No. 12.

Showing Results of Cement Tests in Sewer Construction During Year 1906.

Brand.	1 Day, Neat.		7 Days, Neat.		7 Days, 2 to 1.		7 Days, 3 to 1.		28 Days, Neat.		28 Days, 2 to 1.		28 Days, 3 to 1.	
	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.
Adirondack	15	217	15	401	8	200	7	138	4	458	1	309	3	167
Alpha	45	322	45	689	39	404	6	257	9	696	6	432	3	283
Alsen	138	205	138	652	96	355	42	225	52	733	17	402	35	287
Atlas	65	390	65	664	58	393	7	225	11	695	5	448	6	290
Giant	2	315	2	673	1	419	1	214	1	705	..	..	1	312
Hudson	11	232	11	624	11	347	..	..	..	..	..	..	..	..
Helderberg	1	320	1	552	1	285	..	..	..	..	..	..	..	..
Invictor	1	352	1	563	1	280	..	..	1	599	1	384	..	..
Iron Clad	20	375	20	589	10	333	10	248	4	660	1	368	3	323
Lehigh	5	310	5	632	3	363	2	191	2	711	..	..	2	256
Nazareth	2	169	2	557	2	319	..	..	..	..	..	..	..	..

Brand.	1 Day, Neat.		7 Days, Neat.		7 Days, 2 to 1.		7 Days, 3 to 1.		28 Days, Neat.		28 Days, 2 to 1.		28 Days, 3 to 1.	
	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.	No. of Tests.	Average Pounds.
Penn Allen.....	21	333	21	636	20	393	1	229	3	691	1	465	2	278
Pennsylvania.....	27	268	28	659	27	352	1	168	..	...	..	...	..	...
Phoenix.....	8	318	8	574	8	355	..	...	..	...	..	...	..	...
Reliance.....	63	254	61	503	60	282	6	154	3	560	3	276	..	...
Trowel.....	24	201	24	546	12	313	12	160	11	708	11	...	11	264

BOROUGH OF BROOKLYN.

SUPPLEMENTAL REPORT FOR THE YEAR 1906.

The City of New York,
Office of the President of the Borough of Brooklyn,
Brooklyn, January 8, 1907.

Hon. GEORGE B. McCLELLAN, Mayor, The City of New York:

Sir—The Charter, in section 383, provides that the President of the Borough shall make annual report of the work of his office to the Mayor. In order that I may comply with this provision, the Commissioner of Public Works, the several Bureau heads and the Engineers are now preparing statements which will show this work in detail. Meanwhile, I am able to submit to you as a supplement to the annual report which is to follow, a special statement upon the subject uppermost in the public mind, and the one which has seemed to me so intimately related to the safety and convenience of the community that it was deserving of the greater part of my time and attention.

Transportation has become so necessary a thing in cities, it means so much to every individual member of the community, that the service of it will soon take its place naturally and completely as a function of government, and there is now a public demand that the absolute control of it rest in the hands of the municipal authorities, which has partially undergone an inevitable transmutation into the forms of law. There is nothing revolutionary in this; it is evolutionary, a step-by-step process in line with the whole scheme of our industrial, material and social progress. To illustrate with a concrete example the proposition that a reversion to old methods in this connection would be to sin against the light, we can consider a minute the so-called "McDonald plan" recently submitted to the Board of Rapid Transit Commissioners. The scheme in itself is scientifically sound. It is the only one under advisement now which goes to the point of completion as a continuous service system. If, however, the City's credit were pledged to build this subway for operation by a corporation, it might indeed perform some service for those within walking distance of its stations, but it really would be taking only a small bite of a very large apple: as a general measure of relief it would be practically valueless. If, on the other hand, the City, as it has legal authority to do now, were to expend ten million dollars on the construction of the road, and retain the right to make contracts for operation at so much per mile and per car, with corporations whose lines approximate or intersect the line of the McDonald subway, then indeed would this improvement be of immense value as a solvent of our problem, opening up as it would a channel of circulation to the clogged transportation systems which are fed by the population of every section of the Borough, and eliminating naturally the troublesome two fare factor. It is all the difference between the old method and the new, between planning with a view to the profits of a corporation and planning with a view simply to the public convenience and the proper and uniform development of the entire city. This subject in its application to various transportation lines planned and authorized is treated with regard to details of practice in a letter addressed to the Board of Estimate and Apportionment, which is among a number of communications attached hereto and made a part of this report (see 2-A and 2-B).

Every suggestion of relief from transportation evils interests intensely the Borough of Brooklyn. It is unnecessary to point out the difference between the conditions here and those in Manhattan and The Bronx, due to the difference in conformation. In Manhattan and The Bronx the increase in transportation facilities, while it has not kept pace with that in population, has shown a tendency to move with it. In Brooklyn the situation with regard to transportation seems almost on a dead centre, while every year superimposes the population of a very considerable city upon our already large population. For instance, the Building Superintendent of this office reports to me that the number of buildings completed in 1906 will house 108,000 persons. This is what makes the work of improving transportation conditions so important in the case of the President of the Borough of Brooklyn. His power in the matter is painfully limited—membership in the Board of Estimate and Apportionment giving him some little weight, and the control of permits for track repair, etc., being a sort of a bludgeon influence; but, whatever his power may be, it is his duty, as it seems to me, to use it resolutely and vigorously. Up to this conception of the obligations of the office I have tried to live during the year; it was in the spirit of it that I dealt with the local transportation corporations, that I corresponded with the Rapid Transit Commission, and advised and voted in the Board of Estimate and Apportionment. It was in this spirit that I acted in connection with the various bridge relief plans advanced. I have not been in full agreement with the proponents of some of them, but I have voted for all of them, surrendering my own views in some instances in the hope that I might be wrong and those who differed with me right as to absolute efficacy of the relief scheme proposed. This was particularly true of the "Bridge loop plan" submitted to the Board of Estimate and Apportionment by the Bridge Commissioner last March. It did not seem possible to me that this loop could be built without a surrender by the City of valuable franchises for no compensation, and while this consideration would have had little weight had I been convinced that the "loop" would solve the problem before us, my doubts on this point gave it added gravity. Another thing which made an unfavorable impression was the atmosphere of humbug and deceit which some of those interested in a financial sense in the project threw over it, and with which they undoubtedly did mislead the great body of its honest protagonists. If the purpose was to do a real public service, there was no need of presenting it in a false light, even if such a need would justify such a presentation. They said that the "loop" was to be temporary. On that ground they asked the City to build it and turn it over to the railroad companies as a gift, surrendering also without compensation a valuable franchise for a third track on the Third avenue elevated railroad to the Interborough Company, without whose consent the "loop" as then considered could not be constructed. How shallow was this pretence as to the "temporary" nature of the proposed franchise was indicated by the arguments used by the Brooklyn Rapid Transit Company and those who spoke for it, when the subway loop project collided with the elevated loop plan. It was urged:

First—That the subway loop would be of no service to the people of Brooklyn if it could not be used by the Brooklyn Rapid Transit Company, which has practically a monopoly of the transportation lines of Brooklyn.

Second—That the subway loop could not be used by the Brooklyn Rapid Transit Company without a complete change in the rolling stock equipment of that corporation, which would in turn necessitate the reconstruction of the elevated system in Brooklyn. This change Mr. E. W. Winter, President of the Brooklyn Rapid Transit Company, said his corporation would not make.

This ingenious argument was conclusive against the underground loop, but it also left the "temporary loop" proposition very wobbly on its poor, weak legs.

Nevertheless, I voted for the plan in the Board of Estimate and Apportionment.

The failure of the plan in the Rapid Transit Board has caused to be revived another which has all the merits and few of the objectionable features of the so-called Stevenson loop. This is the plan for an elevated loop connection through Centre street. It has the former scheme's basic virtue of continuous train operation. Its greater arc makes it far more serviceable to the people of Brooklyn, enabling them to leave and board the trains at points close to Broadway, in Manhattan. Its construction will not involve the use of the Interborough Company's Third avenue elevated structure and the free gift to the corporation of a third track franchise. There

is still something of the same old pretence of "temporary tenure" by the operating companies, but the statement of Mr. Winter, at a hearing before the Commission, that his corporation would pay 4½ per cent. as rental, indicates a more honest attitude toward the City on the part of the railroad company. If this attitude shall continue, I believe the City and the company can arrive at a satisfactory settlement as to terms, and the loop can be constructed. Meanwhile, the report of the Burr Commission for bridge relief is to be submitted to the Board of Estimate and Apportionment by the Commissioner of Bridges, and it is to be hoped these plans, if found satisfactory, will be adopted without delay, or that, if they be faulty, their faults will be clearly indicated at once, so that no more time may be wasted. I believe, if the plan is to be adopted, it should be altered so as to take in a portion of the relief plan advanced by Mr. Nels Poulson, of Brooklyn, which plan, with some few slight modifications was indorsed by Mr. R. W. Creuzbaur, Consulting Engineer to the Borough President. A copy of Mr. Creuzbaur's report on this subject is attached hereto. (See Exhibit No. 1.)

The franchise for the operation of a street surface railroad in Livingston street is distinctly related to the bridge relief proposition and involves also the relief of the congested condition of Fulton street. Livingston street was formerly 50 feet wide. The width was increased to 80 feet more than a year ago. The Nassau Electric Railroad Company, one of the operating companies of the Brooklyn Rapid Transit Company, applied for a franchise in Livingston street from Court street to Flatbush avenue, and on Lafayette avenue, from Flatbush avenue to Fulton street. The application was referred to the Bureau of Franchises of the Board of Estimate and Apportionment, and Mr. Harry P. Nichols, the Assistant Engineer in charge of that Bureau, wrote to me with regard to the matter early in 1906. I have always regarded this street as a key street in relation to surface railroad conditions. It is the only down-town street through which a railroad could be run with profit by the City, should the City in the future be authorized by the Legislature to operate a street surface railroad. I suggested to Mr. Nichols that the City ought not to surrender this street, but should build the railroad itself and lease it to any railroad corporation desiring to use it. The Corporation Counsel, to whom the matter was referred, denied the power of the City to do this. I then suggested that the contract with the Nassau Company contain a "non-exclusive" clause, retaining for the City the right to use the tracks either for its own railroad, or consent to the use of them by other railroad companies upon reasonable compensation to the company holding the original franchise. This clause Mr. Nichols inserted in the contract form which he submitted with his report upon the matter on June 19, 1906. The report contained provisions which the railroad company refused in the main to consider. The company's officials objected to the provisions requiring:

First—The Brooklyn Rapid Transit Company to agree to charge a single 5-cent fare for a continuous ride, not only in Livingston street and Lafayette avenue, but on all branch lines (this would mean a 5-cent Coney Island service).

Second—The company to equip its cars so as to run part of the distance by underground and part by overhead trolley power.

Third—The company to pay a large stated amount annually for the privilege granted.

The report of Mr. Nichols was practically ignored by the railroad corporation for several months, until, in fact, I requested that the president of the company be called before the Board of Estimate and Apportionment last November. He then wrote a letter to the Board setting forth the terms suggested by Mr. Nichols, which the railroad company would accept and those which it rejected. The matter was referred by the Board to the Comptroller and the President of the Borough of Brooklyn. Representatives of the company have been in conference with me since that time, and we have agreed upon terms which I think will be satisfactory to the Committee and to the Board. The cardinal points of the agreement are:

First—The City to retain the right to use for its own purpose or consent to the use by other railroad corporations of the tracks and equipment.

Second—The Nassau Company to pay to the City 3 per centum per annum on its gross earnings, such gross earnings, in so far as this grant is concerned, to consist of a uniform rental which the Nassau Company shall charge to all corporations using its tracks and equipment (in Livingston street and Lafayette avenue), whether said companies be subsidiary companies of the Brooklyn Rapid Transit Company or not.

Third—The company to pave with material to be determined by the President of the Borough the roadway between the rails and a strip two feet in width on each side of the tracks, and to maintain such pavement.

Fourth—The term of the grant to be ten years.

In connection with the Livingston street franchise, the railroad representatives have asked that the Board consider a Tillary street bridge connection, and I have requested the borough consulting engineer to take up this matter. What is sought is a track connection with the Fulton street line, striking into the bridge terminal yard just below Tillary street. This connection was requested early in the year by the company at the suggestion of an engineer in this office who had worked out a plan for the division of east bound and west bound cars, so as to avoid the criss-crossing about the Borough Hall, which now adds to the difficulties and danger of transportation.

There has been during the year, and especially in the early part of the year, considerable friction between this office and the Brooklyn Rapid Transit Company relative to permits for the opening of streets for the purpose of the construction of new lines. The railroad companies now combined under the Brooklyn Rapid Transit obtained, about 1893, various franchises from the Brooklyn Board of Aldermen and from the Highways Commissioner or other authorities of the county towns of Flatlands, Flatbush, Gravesend and New Utrecht. The extensions thus provided for were so numerous that one cannot escape the conviction that most of these franchises were obtained not with the idea of using them, but with the deliberate purpose of excluding possible competitors from the streets. The rapid growth of the borough gave a promise of profit from the operation of some of the lines, and, in 1903, the Brooklyn, Queens County and Suburban Railroad Company made application for a permit to open Saratoga avenue for the purpose of constructing a street surface railway. The Commissioner of Public Works refused to grant the permit on the ground that the franchise had lapsed, and the company sued for a writ of mandamus against the President of the Borough of Brooklyn. The case was argued before Judge Kelly in Special Term of the Supreme Court in Kings County, who denied the petition of the corporation on July 18, 1904. The matter was finally taken before the Appellate Division on the railroad company's motion, and that division sustained Judge Kelly. There was another appeal, and the matter was finally determined by the Court of Appeals on May 8, 1906, the opinion of the Court being expressed by Justice Hiscock and reading as follows:

"The railroad company, petitioner and appellant, sought by mandamus to compel the proper authorities of the Borough of Brooklyn to permit it to construct a double track extension of its street surface railroad upon Saratoga avenue, in said borough. The learned Appellate Division has affirmed the order of the Special Term denying this application, upon the ground that the petitioner through inaction had forfeited its franchise and right to construct said extension. This determination involved the decision that the self-executing forfeiture provisions of section 5, of chapter 565, of the Laws of 1890, known as the Railroad Law, applied to street surface railroads, and conversely, that section 99 of said law, applicable solely to said railroads, and which also relates to forfeitures, but is not self-executing, is not exclusive and does not exempt them from the provisions of the other section.

"We agree with the conclusions adopted by the courts below upon this point, and are thereby led to an affirmance of the order appealed from.

"The facts presenting the questions involved upon this appeal are simple and not the subject of controversy.

"The Broadway Railroad Company for many years prior to 1893 had been a street surface railroad corporation owning and operating a double-track street surface railroad on Broadway and other streets in the City of Brooklyn. On May 28, 1893, it caused to be filed and recorded a certificate of extension of its road between certain limits upon Saratoga avenue in said city. On July 24, 1893, the Common Council of said city granted its consent to said railroad company to construct, maintain and operate said proposed extension. In November, 1893, the Brooklyn, Queens County and Suburban Railroad Company, the petitioner herein, was duly incorporated as a street surface railroad corporation, and upon January 16, 1894, being then the lessee of the rights, property and franchises of the Broadway Railroad Company, took a surrender and transfer of all the capital stock of said latter company, which thereby became merged into and with the Brooklyn, Queens County and Suburban Railroad Company, which in turn thereby became the owner of, among other property, the right, privilege and franchise above referred to, to construct and operate the extension in Saratoga avenue. Some time between January 16, 1894, and September 30, 1903, the petitioner obtained the requisite consents of property owners for the construction of said extension, but down to the time of the institution of this proceeding at said latter date it had never taken any steps to commence to complete the construction of the same.

"Section 5 of the Railroad Law above referred to at the time its franchise was granted to petitioner and for several years thereafter, so far as applicable, provided: 'If any domestic railroad corporation shall not, within five years after its certificate of incorporation is filed, begin the construction of its road and expend thereon ten per centum of the amount of its capital, or shall not finish its road and put it in operation in ten years from the time of filing such certificate, its corporate existence and powers shall cease.' This section is found in article I of the Railroad Law, which concededly is applicable to steam railroads.

"Section 99 of said law, so far as applicable at the times in question, provided: 'In case any such (street surface railroad) corporation shall not commence the construction of its road, or of any extension or branch thereof within one year after the consent of the local authorities and property owners, or the determination of the General Term as herein required, shall have been given or renewed, and shall not complete the same within three years after such consents, its rights, privileges and franchises in respect to such railroad extension or branch, as the case may be, may be forfeited.'

"This provision is found in article 4 of said Railroad Law, which relates solely to street surface railroads. From this fact and for various reasons claimed to be deducible therefrom or in connection therewith, the learned counsel for the appellant argues that it repeals or at least excluded the operation of section 5 heretofore quoted upon street surface railroads.

"The importance of this contention so far as this proceeding is concerned is that the provisions of section 5 are concededly self-executing and, if applicable, have forfeited petitioner's rights to its franchise for the extension in question, while the provisions of section 99 are only the basis for forfeiture proceedings which have never been taken.

"Some decisions have been made by this court which at the outset help to guide us to the adverse answer which we have determined to make to the appellant's contention.

"In 1850 the general act to authorize the formation of railroad corporations was adopted, being chapter 140 of the Laws of that year. Chapter 775 of the Laws of 1867 amended said act of 1850, by providing that if any corporation formed under the latter 'shall not, within five years after its articles of association are filed and recorded in the office of the Secretary of State, begin the construction of its road, and expend thereon ten per cent. on the amount of its capital, or shall not finish its road and put it in operation in ten years from the time of filing its articles of association, as aforesaid, its corporate existence and powers shall cease.'

"In *Matter of Brooklyn, W. & N. Ry. Co.* (72 N. Y., 245), this court held that street surface railroad companies might be incorporated under the general act of 1850, and that the amendment of 1867 just quoted was applicable to them. This decision was made in 1878. The amendment of 1867 is practically the same provision now found in and quoted from section 5 of the Railroad Law. Therefore, we have it as a starting point that as late as 1878 street surface railroads might be incorporated under the general act of 1850 and were subject for lack of commencement and completion of their roads to the self-executing forfeiture provisions incorporated into said act and now found in the General Railroad Law and invoked against petitioner.

"But it is urged that after this amendment was made chapter 252, Laws of 1884, being 'An act to provide for the construction, extension, maintenance and operation of street surface railroads,' etc., was adopted, and that by this act for the first time a complete statutory scheme was provided for the construction, maintenance and operation of street surface railroads and that by a process of repeal or substitution or exclusion this act took exclusive jurisdiction of such roads and terminated any application to them of the Laws of 1850 and especially of the forfeiture provisions therein already referred to. Section 10 of this latter act contained provisions with reference to the forfeiture for non-action of rights, privileges and franchises acquired by a surface railroad incorporated under the act which have largely been re-enacted and reproduced in section 99 of the present Railroad Law.

"While the contention of the appellant in regard to the effect of this act of 1884, when originally passed, even if correct, might not be controlling in our construction of the statutes as they stood at the time it received its franchise in question here, we have given it such consideration as leads us to the conclusion that it is not well made.

"It is not claimed that the act of 1884 by express terms repealed or prevented the application of the act of 1850 to street surface railroads, and we are, therefore, thrown upon the doctrine of repeal, or exclusion by implication. The general principles are so well settled and familiar as not to require the support of extensive citations that such implied effect upon an earlier statute by a later one is not favored; that when some office or function can by fair construction be assigned to both acts and they confer different powers to be exercised for different purposes both must stand though they were designed to operate upon the same general subject; that the latter act will not be deemed to repeal the former one unless the two are manifestly inconsistent and a clear intention to repeal is disclosed on the face of the latter statute. (*Woods vs. Supervisors of Madison Co.*, 136 N. Y., 403; *People vs. Koenig*, 9 App. Div., 436.)

"A later statute will not be deemed to repeal or abrogate a former one unless it covers the entire subject and was plainly intended to furnish the only law upon the subject, and to be a substitute for the former enactment. (*People ex rel. Ross vs. City of Brooklyn*, 69 N. Y., 605; *Heckmann vs. Pinkney*, 81 N. Y., 211.)

"As we read the two statutes now under review it does not seem to us that, under the general principles above adverted to, the act of 1884 accomplished the purpose claimed by the appellant of withdrawing street surface railroads from the application of the act of 1850, and especially of the provision incorporated into said act by the amendment of 1867. Concededly there was no general repeal of the act of 1850, for its existence continued at least as applicable to steam railroads. Neither do we regard the provisions of the later act as so utterly repugnant to, and inconsistent with, various provisions of the former act, including the one especially under discussion, as to repeal their application to street surface railroads. We think that the Legislature quite conclusively evidenced its intent not to work the result now claimed for the later act when it inserted in section 1 thereof the provision that 'Such corporation (street surface railroad) incorporated under said act of 1884 shall also have all the powers and privileges granted, and be subject to all the liabilities imposed by this act or by the act entitled "An act to authorize the formation of railroad corporations, and to regulate the same," passed April 2, 1850, and the several acts amendatory thereof, except as the said acts are herein modified.' Clearly this preserved the continued application of the forfeiture provisions which have now become section 5 of the General Railroad Law, unless the same were plainly inconsistent with, and repugnant to, the provisions of section 10 of said act of 1884. As we shall hereafter attempt to demonstrate, we think this was not the case.

"Again, this court made a decision which has an important bearing upon appellant's contention as to the resulting effect of the various statutory enactments as they existed after 1884 and before 1890.

"In *Matter of W. S. A. and P. R. R. Co.* (115 N. Y., 442), it was held in substance that chapter 140 of the Laws of 1850 and its amendments authorized the formation and operation of street surface railroads. This decision was made in 1889 or several years after the passage of the act of 1884 which it is now argued assumed exclusive

jurisdiction of the incorporation and operation of said railroads, and it was passing upon an application at that date being made under said act for the appointment of commissioners. There was no suggestion that the act of 1884 had become a substitute for the act of 1850 as applied to street surface railroads, but, upon the other hand, the broad language used in the opinion quoted quite exclusively negatives any such idea.

"But now we proceed further to a consideration of the statutory enactments as they had been changed, consolidated and formulated prior to the date when appellant obtained its franchise. Therein we think will be found a refutation of the argument that so far as street surface railroads are concerned the statutory provisions originally adopted in 1884, including the substance of what is now the non-self-executing forfeiture provisions of section 99 of the Railroad Law, have been substituted for or have repealed what were once provisions of the act of 1850, including the substance of what is now section 5 of said Railroad Law.

"The Railroad Law adopted in 1890, chapter 565, covers the subject of both steam and street surface railroads. It supplants both the statutes of 1850 and 1884 as theretofore existing and embodies provisions drawn from each. Its interpretation really and finally measures appellant's rights here, and the other provisions heretofore discussed are mainly of interest as leading up to and aiding that interpretation.

"Some things are undisputed. The Legislature sought to combine into a single enactment, which is not always plain and harmonious in all of its details, provisions for the incorporation, operation and control of both steam and surface railroads. Articles I., II. and III. cover steam roads. Article IV. relates solely to street surface roads. But it will not be claimed that the latter article fully and exclusively provides for the organization, operation and control of such roads, for manifestly resort must be had to various provisions in the other articles for powers and privileges essential to their organization and operation. Some provisions in those other articles are plainly not applicable to them. Apparently, therefore, the Legislature, while specifically making street surface roads subject to the provisions of Article IV., intended that they should also be subject to the provisions of the other articles, so far as the latter were necessary and germane, and upon a survey of the entire statute we cannot arbitrarily say that a provision like section 5 is not applicable simply because not found in Article IV., but the question of its applicability must be determined by general rules governing this subject.

"We think it must be held thus applicable unless either it is clearly inconsistent with, or repugnant to, later provisions to be found in the act, or unless the legislature has made clear in some other way its intention that it should not apply to street surface roads. We do not find the existence of any of these obstacles. Leaving out of consideration for the moment the objections especially urged to the appropriateness of such section as governing extensions of a street surface road, we do not see any difficulty in applying to such roads the provision both of said section and of section 99, which is said to be inconsistent and repugnant. In fact we think that both sections are needed to protect the public from undue delay upon the part of a corporation in commencing and completing its road. Section 99 requires the corporation to commence and complete the construction of its road within a certain period after the consent of the local authorities and property owners or the substitute for the latter has been obtained. This protection is valuable so far as it goes, but it does not cover the entire subject. It does not specify any time in which such consents must be obtained and so far as its provisions are concerned, a railroad company after filing its certificate of incorporation, or, as we shall hereafter say and for the moment assume, its certificate of extension, might delay indefinitely before proceeding to a point where it would be compelled to commence and complete its road. Section 5 supplements these provisions of the later section by requiring a corporation to proceed within a certain time fixed by the date of filing its certificate of incorporation or of extension. This requirement may or may not be as valuable and necessary as that prescribed by section 99, but it secures the public benefit that a corporation taking advantage of a statute allowing it to become incorporated for the purpose of building a railroad or to file a certificate for the purpose of extending such road, must exercise the privileges thus conferred within a certain time or else forfeit them. Furthermore, and what is especially pertinent here, we are unable to see any inconsistency or repugnancy between such requirements and those provided by section 99. Each section commands that as a return for the privileges conferred upon it, a street surface railroad shall within a certain time take steps to utilize those privileges and make them a possible subject of use and benefit to the public. Neither section is hostile to the other but both supplement each other and provide for the exercise of not unreasonable diligence by a corporation in return for privileges which are granted in part at least that it may serve public convenience and utility. So far from finding proof of legislative intent that section 5 should not be applicable to a corporation like appellant, it seems to us that there is quite conclusive evidence of the belief upon the part of the legislature that it did apply unless specifically prevented.

"Section 106 of the Railroad Law provides that 'the corporate existence of and powers of every street surface railroad corporation, which has completed a railroad upon the greater portion of the route designated in its certificate of incorporation, within ten years from the date of filing said certificate in the office of the Secretary of State, and which has operated such completed portion of its railroad continuously for a period of five (originally ten) years last past, and is now operating the same, shall continue with like force and effect, as though it had in all respects complied with the provisions of law with reference to the time when it should have fully completed its road.' The terms employed in this provision so plainly correspond with the provisions of section 5 and so clearly relieve against such a forfeiture as is provided for in said section, that they leave little doubt that the legislature construed section 5 as applicable to a street surface railroad. By chapter 508 of the Laws of 1901, section 5 of the Railroad Law was amended by the following provision: 'This section shall not apply to any street surface railroad company incorporated prior to July 1, 1895, which has obtained or become the owner of the consents of the local authorities, of any city of the first or second class,' etc. While the passage of such amendment is not a conclusive argument upon this point, it does suggest with weight as bearing upon legislative intent, that there was no occasion for exempting certain surface railroads from the operation of said statute unless otherwise it was applicable to them. And this act, it will be noted, was passed long after the act of 1884 and the act of 1890 whereby it is contended that the application of said section to said roads was repealed or terminated.

"But upon the question of the application of this section it is strenuously urged that at most it only measures rights by reference to a certificate of incorporation; that, therefore, it can only relate to operations under such certificate of incorporation, and can have no reference to an extension of a railroad line which is not included in the certificate of incorporation but is covered merely by a certificate of extension, and various absurd results are pointed out which it is said would follow from an attempt to apply it to an extension. Again, we find ourselves unable to agree with the arguments addressed to us. If, as we have decided, this section is intended, and ought, to be applied in conserving public interests to street surface railroads, then, if it can reasonably be done, we ought not to limit its enforcement to the line of road provided for in the original certificate of incorporation, but equally should apply it to extensions, which are just as proper subjects for its application as the proposed original line of road. It may be conceded at once that the language is not so appropriate to extensions as it might be, but no one can study the Railroad Law as a whole without finding other provisions which are not in all respects connected and harmonious. We believe that the provisions under review may be so construed as to apply to the subject before us without undue straining or violation of any reasonable rules of interpretation.

"The certificate of extension which a corporation files is in effect, clearly and simply, an amendment of its original articles of incorporation. Those original articles prescribe the line and extent of its proposed route. The certificate of extension prescribes the line and route of an additional road and to that extent amends the original articles of incorporation. For the purposes of this provision, we think it may naturally and easily be treated as an amendment to the articles of incorporation made to include the proposed extension, and the date of filing of which will fix the periods within which a corporation must act as to said extension. The Legislature itself seems to have had some such idea of amendment in mind when it provided in section 106 of the Railroad Law relating to street surface railroads that 'every such corporation shall have the right to operate any extensions and branches of its railroad, now constructed and operated by it, which have been so constructed and operated by it, for a period of ten years last past, with like force and effect, as though the route of such extensions and branches were designated in its certificate of incorporation.'

"In like manner the provision for the expenditure of ten per cent. of the amount of capital manifestly should be construed with reference to the proposed extension, and

we see no particular difficulty in doing this. If there is an increase in the capital of a corporation expressly and explicitly devoted to the purpose of constructing said extension, that would readily suggest the measure of the amount to be expended upon the extension within the time prescribed. If there is no such specific increase but rather a proposition to construct the extension out of capital already possessed by the corporation, the 5 per cent. to be expended would still be measured by the entire amount of capital to be used in the construction of such extension considered by itself. Under this interpretation the limit of time for commencing and completing the extension and of the capital thereon to be expended, would have plain and just reference to such project considered by itself, and in like manner a failure to comply with the requirements of law thus construed would result in a forfeiture of the franchise to build such extension and would not, as suggested, affect other rights of a corporation not related to or connected with it.

"Finally it is urged that if section 5 did otherwise apply to appellant and its extension franchise and would otherwise have worked a forfeiture of its rights, such application and such result would have been prevented and obviated by the provisions of chapters 494 and 508 of the Laws of 1901.

"The first of said statutes amends section 93 of the Railroad Law, and amongst other things provides: 'Every consent by the local authorities of any city of the first class or of any city, town or village, now embraced within the corporate limits of any city of the first class heretofore given to or acquired or owned by any street surface railroad corporation, since January first, eighteen hundred and ninety, is hereby ratified and confirmed, and shall be deemed to be in full force and effect, and shall continue until and including December thirty-first, nineteen hundred and three, when it may be forfeited,' etc. The language of this provision properly describes appellant's franchise.

"The other act is the one already referred to exempting from the provisions of section 5 street surface railroads incorporated before a certain date of which appellant was one.

"If we assume that these enactments were intended to accomplish the purpose claimed for them, we still think that they were ineffectual so to do. At the time they were passed, appellant had absolutely forfeited and lost its franchise to construct the road in Saratoga avenue, and all of its rights thereunder. (Matter of Brooklyn, W. & N. Ry. Co., 72 N. Y., 245.) The municipality, upon the other hand, had regained by forfeiture all of the rights which it had once granted to the appellant. Both parties to the original franchise had been restored to precisely the same position which they occupied before it was granted. Section 18, article 3, of the Constitution, forbade the legislature to authorize the construction or operation of appellant's street railroad through Saratoga avenue, except upon the condition that the consent of the local authorities having the control of that portion of the street or highway upon which it was proposed to construct or operate such railroad should be first obtained. We fail to see how any statute which attempted to relieve appellant from its forfeiture, and thus indirectly to grant it anew rights which at the time had become absolutely lost to it and reinvested in the municipality, without the consent of the latter, could avoid the prohibition of said constitutional provision.

"In accordance with all these views, we think the order appealed from must be affirmed, with costs.

"(Cullen, Ch. J., Gray, Edward T. Bartlett, Werner and Chase, J. J., concur; O'Brien, J., absent.)

"Order affirmed."

This decision was sweeping and affected many, if not all, of the old franchises held by the railroad company. In view of the law as laid down therein and as previously laid down by Justice Kelly and the Appellate Division, it was the duty of the President of the Borough to be extremely careful in scrutinizing applications for permits to construct railroads under franchises claimed by the railroad corporations. For this reason I suspended a number of permits of this character which had been granted. I sought to compel the railroad company to make its application for franchises to the Board of Estimate and Apportionment. The Brooklyn Rapid Transit interests had purchased during the year 1905 the old Canarsie Steam Railroad and had obtained permission to make such changes in the equipment of this road as to allow of its operation by electricity. These permits were among those I suspended until I was informed by the Corporation Counsel that the privilege requested was not in the nature of a franchise. The company also extended its Ralph avenue line along East Ninety-eighth street, the Corporation Counsel holding that, as the City had never acquired the land within its street lines its consent to the construction of the railroad was not necessary. I refused to permit the company to cross Hunterfly road with this line until the officials of the railroad company promised to apply for a franchise for this small section of the route. During the year the Brooklyn Heights Railroad Company applied to me for a permit to extend its Nostrand avenue line under franchise grants from the old town authorities of Flatlands and Flatbush. I would have been glad to grant the permits requested as the territory to be traversed was populous and sorely in need of transportation service. The company offered as an excuse for its failure to build before this time the fact that it had been estopped by the failure of the authorities to legally open the streets. The matter was submitted by me to the Corporation Counsel, who wrote me an opinion dated July 13, 1906, which he confirmed on November 20, 1906, to the effect that the town authorities had not had the legal power to grant a franchise in a street not opened and that these franchises therefore were of no effect from the beginning. It is very important for the people of that section of the borough that the railroad company should either test in the courts the value of its alleged franchise or seek a new franchise from the Board of Estimate and Apportionment without delay. The Board has recently received from the Nassau Electric Railroad Company applications for franchises covering the following routes:

Route A—Beginning at the intersection of Atlantic avenue and Alabama avenue and extending thence southerly on Alabama avenue to Livonia, and on Livonia, from Vesta avenue to New Lots road.

Route B—Beginning at the intersection of Liberty avenue and Forbell, extending southerly on Forbell avenue to Spring creek.

Route C—Beginning at the intersection of Thirty-ninth street and Eighth avenue, extending on Eighth avenue to Seventh avenue, and on Seventh avenue to Seventy-ninth street, then on Seventy-ninth street to Stillwell avenue.

Route D—Beginning at the intersection of Thirty-ninth street and Thirteenth avenue, and extending along Thirteenth avenue to Bay Ridge avenue.

These applications are now under consideration by a Select Committee of the Board of Estimate and Apportionment, and, as they are designed to traverse sections of the borough in need of transportation, there should be no unnecessary delay in settling upon the terms of the grants with the railroad corporation. The railroad companies, however, should be directed to make proper use of the tracks they now have installed in certain of the streets of the borough and upon which no cars are operated. There are quite a number of these tracks. In endeavoring to remove some of them in Throop avenue this office encountered legal difficulties and discovered the existence of what is perhaps the most remarkable injunction ever issued by a court of law. The injunction was obtained in 1903 and directed the President of the Borough and the Commissioner of Public Works to serve five days' notice upon the Brooklyn Heights Railroad Company before attempting to remove any tracks of any line of the said Brooklyn Heights Railroad Company or any company operated thereby or in connection therewith. This injunction has tied the hands of the borough authorities and absolutely prevented the removal of tracks illegally maintained in the streets. Such tracks, for instance, exist in Fifty-second street, between the waterfront and Second avenue. The Corporation Counsel should be directed to take steps immediately to have the order of the court dissolved, so that each particular case may be tried on its merits. These matters, however important to the sections immediately affected, are secondary to the two cardinal transportation propositions:

First—Bridge Relief. Including the construction of the Centre street loop; the building of the so-called "McDonald plan" continuous underground and transpontine railroad under such conditions as will enable the City to use it in connection with all connecting independent operative systems; the immediate consideration of terminal improvements recommended by the Burr Commission; the rapid completion of the Manhattan Bridge and Flatbush avenue extension; the authorization of terminal facilities to allow the full use of the tracks of the Williamsburg Bridge; the construction of the Livingston street railroad, and the Tillary street bridge connection. (See Exhibit 3.)

Second—Subway Construction. Including the letting of the contracts (construction, equipment, and maintenance and operation separately and according to the suggestions contained in the attached communication addressed to the Board of Estimate and Apportionment) (see Exhibit 2) for the tri-borough subway system; the authorization and construction of the Broadway system, and its connection, by means of the "McDonald plan" loop, with one of the West Side north and south lines in Manhattan; the rapid completion of the Joralemon and Fulton street subways and their extension along Flatbush avenue to Flatbush.

These improvements can be accomplished within a comparatively short time. I have discussed in one of the letters submitted herewith the manner in which I believe the City should proceed. In forwarding to you all these communications and reports, most of them emanating from this office, and the others so related to Brooklyn as to belong naturally in anything like a complete record of the case, I have tried to lay before you and the public a fair statement of the transportation situation in this borough. In order that it may not be a unilateral presentation of the facts, I have asked representatives of the railroad companies to state the case as they see it (Exhibit 6), and you will find their views appended. Mr. H. Milton Kennedy, a member of the New York Railroad Club, of the American Association of General Passenger Agents, and formerly General Passenger Agent of the Brooklyn Rapid Transit Company, is one of my official subordinates, and at my request he assembled the material herewith presented.

There are some points not here touched upon, such as the City's financial condition, which are elsewhere discussed in the attached correspondence. With regard to the point mentioned, I have relied upon your financial message to the Board of Aldermen, dated May 29, 1906. My impression, in view of all the facts as I know them, is that the City can make a very fair start indeed toward solving the transportation problem, if it will brush aside the cobwebs and do the obvious thing to do. It is a big problem, undoubtedly, but we are a big City, big enough to handle it if we have the courage. We have the money, the plans and the legal right; plainly the thing to do is to build.

Respectfully submitted,

BIRD S. COLER,

President of the Borough of Brooklyn.

EXHIBIT No. 1.

POINTS OF CREUZBAUR'S BRIDGE PLAN.

(Sketch Appended.)

Quick plan for Manhattan Terminal of Brooklyn Bridge (Creuzbaur). (Being a modification of the "Poulson Plan.")

The "Creuzbaur" plan of terminal platforms at the Manhattan end of the Brooklyn Bridge increases the length of platforms so as to admit six car trains, instead of five, avoids confusion, emptying trains on one side and loading on the other, gives a larger assembly platform and provides a much better way station arrangement for the future, when cars will be run through. Also provides for but one train stop at terminal instead of three, as at present.

Increased capacity 33 per cent.

This will increase the bridge "L" terminal capacity about 33 per cent. (or carry 60,000 per hour instead of 45,000, which is the maximum allowance of operation, although only about 36,000 per hour are actually handled now).

Escalators.

The installation of huge escalators would materially assist in handling this traffic.

Side doors.

Also the remodeling of bridge cars to have three side doors on each side, and additional overhead straps.

Through trains.

Also provides for through "L" trains at all hours. Avoiding change of cars and step climbing at Brooklyn end.

Time.

About two months.

Cost.

About \$30,000.

October 16, 1906.

Hon. BIRD S. COLER, President, Borough of Brooklyn:

Sir—About June 1 you requested a study of several propositions which had been laid before you relating to the transportation problem on the Brooklyn Bridge, with special reference to the Manhattan terminal as the congested point responsible for the present serious difficulties in meeting the requirements of traffic.

During rush hours the five-car shuttle trains are at present dispatched from this terminal at the best on an average of no better than one minute headway. The full capacity of these bridge trains is about 750, or approximately the capacity of a six-car elevated road train, which the platforms should accommodate. This is theoretically 45,000 per hour, but the management is credited with but 36,000 per hour as the present maximum capacity of the bridge elevated service. It is stated that the bridge without reinforcement should not be subjected to stresses which would be due to a shorter interval than forty-five seconds in train dispatch, amounting to a capacity of 60,000 passengers per hour in five-car bridge shuttle trains or six-car elevated trains.

Without reviewing the very well-known faults of the present terminal, and dealing with the single proposition that the passenger crush at the car doors now necessitated by the system on which trains are dispatched from what is practically a way station must be done away with, the first essential then is to give more time for unloading, and by an orderly arrangement. The second is to shorten the headway of trains down to the forty-five-second time limit, determined by the strength of the present bridge, and thus add one-third to its capacity. The third feature of importance is to run through trains at all hours during the day from the Manhattan terminal to the several destinations of the elevated systems in Brooklyn.

You have fully considered the several plans prepared by Mr. Nels Poulson on this subject and recognize that he has devoted a great deal of valuable time in persistent attempts to secure recognition of the actual practicability and advantages of his plans. Mr. Poulson claims little novelty in his terminal arrangement. He has secured endorsement from a number of civic societies and from one of your predecessors in office. I do not agree fully with Mr. Poulson's projects for traffic relief, and as you stated it is not necessary to go beyond the single proposition and plan affecting the immediate change in the elevated track layout at the Manhattan end of the Bridge, other matters are not dependent upon this and are of less pressing importance.

I recommend a four-track stub end terminal generally, as proposed by Mr. Poulson in plan of February 19, 1904, utilizing a great part of the existing platforms with the station layout now existing, giving, however, in the adapted terminal three unloading platforms, one of about 15 feet at the centre and two of 12 feet at the outside, and two loading platforms, each of about 15 feet, with platform approach of about 85 feet by 100 feet, connecting directly with all the loading and unloading platforms over the area now used for switching.

The switching arrangements as modified from Mr. Poulson's plans give 40 feet further distance to the point of switch beyond the end of platforms, and the curves and crossovers are on an easier run, as suggested in the plan attached for adoption by the Bridge Department Engineers when considering this detail of operation.

This is the general plan to which you invited the special attention of the Comptroller about two months ago, illustrating its operation by the use of a model and examining with him the existing station and platform with relation to the methods to be used in making the necessary alterations there. This scheme obviates to a marked degree the first objection to the existing arrangement—instead of the crush at the car door, passengers by convenient stairways and by the broad end platform connections pass into the trains, of which three will always be lying in the station, giving an abundant time for proper distribution of passengers.

The platform length is about 300 feet, and the appropriate switching length is not necessarily over 250 feet, which at a practical rate of train movement gives the interval in train time from extreme outer switch to stoppage of train at the unloading platform of from 25 to 30 seconds.

Mr. Poulson proposes to operate his terminal by through six-car train service at all hours of the day, and the division of the Brooklyn Rapid Transit system and the irregular entrance and dispatch of trains from and to various destinations make it necessary to cross over irregularly from main incoming westbound track to tracks 3, 4 or 2 in the terminal, as the case may be. Opponents of the Poulson plan claim that this cross-over of trains is objectionable, and it does necessarily limit the possible minimum time of dispatch to the sum of first period of train time entering the block length plus a similar period from train dispatch, augmented by the few seconds required in loss of time in switch operation, and they claim that this will give an interval of train dispatch no less than that of the present service.

The great advantage of the Poulson plan, however, would make its adoption worth many millions to Brooklyn, if the time of train dispatch could equal only the present arrangement.

As shuttle cars are now operated in rush hours a continuance of this system for a part of such congested period during the night and morning, if found necessary, with the Poulson plan should not be a decisive argument against the plan when its other great advantages are considered and the adaptability of this Poulson plan for operation for continuous through train service, as explained below.

As a matter of fact, the present system multiplies the ineffective time lost in the terminal to a marked degree, there being three full stops and starts of every train in the station and four curves to pass with one cross-over and one junction point.

This four-track terminal which I advocate must be operated in what I would designate as sequence of train movement, to equal the full capacity of the bridge; that is, assuming the station to be fully occupied by four trains, pocket No. 1 empties and is filled by the incoming train, irrespective of its future destination; pocket No. 2 empties and is filled by the incoming train; and in the same way until pocket No. 4 is being filled by the incoming train, giving a first cross-over and lock against the dispatch of train No. 1 from the pocket which has been filled for about three minutes.

By six train dispatch in sequence it is evident that out of eight operations of filling and emptying pockets there is but one cross-over, each train having otherwise an independent track in and out. Allowing full interval for interruption, I fail to see any reason why this cross-over of train No. 1 can be held back by train entering into No. 4 for any considerable period, the fact being that the average interval of train entrance must quickly equalize the average of train dispatch.

I therefore claim that the Poulson plan will readily load the bridge to its fullest capacity and with perfect convenience to passengers.

For through train service with the same arrangement, passengers by semaphores or other abundant signals can be quickly educated to move from the existing mezzanine floor with its broad areas of entrance and to pass up stairways to the right or left, leading to the two main loading platforms. These signals would remain fixed for more than two minutes, and would change, say, twenty-seconds in advance of train dispatch. These stairways, of which there would be from eight to ten, would be only about 30 feet apart and would give quick access to all the Brooklyn trains, while the broad platform, 85 feet by 100 feet at west end, gives also very free access by the shorter route from Park row.

Such an arrangement would fulfill all conditions, give full time for loading, and allow train dispatch to the full bridge capacity; and I recommend to you with full confidence, the plan described as a certain and great improvement over the existing plan, whether or not it be capable of universal through train service. It increases the traffic facilities fully 33 per cent. and will fill the requirements in actual service up to the time when the Williamsburg Bridge is made actually serviceable, and abundant time has been given for the completion of Manhattan Bridge and operation of trains thereover. After this time it is possible that some improvement over the Poulson terminal may be designed.

As far as the time required for alterations is concerned, that depends largely upon the ingenuity of the Bridge Engineers in making the change, but it is believed that as four of the five platforms are already in place for five car lengths, but two requiring reductions in width, and as the platform extensions can immediately be arranged without inconvenience to traffic, the change would readily be made inside of two months' time. An estimate of cost has been made at \$30,000, but this cost is really immaterial.

This plan differs from the most recent plan advocated by Mr. Poulson and illustrated by his model, sent by you to the Department of Bridges, in the presence of a broad unloading platform at the centre of the station. This extensive platform area is advocated because it is urgently needed and would be essential for the bridge station so long as the terminal is not connected by a down town loop or extension.

The very great majority of passengers will arrive from down town and will load the bridge at the terminal. No upper deck should be put in here, except as a last resort, and with the comfort and convenience of the public provided for by the plan, and the full bridge carrying capacity reached, further stair-climbing to trains will be unnecessary.

While I have had little opportunity to avail myself of the courtesies extended by the officials of the Department of Bridges, where I could undoubtedly learn much more of the studies which they have made, I have carried out your instructions to the best of my ability, and submit these conclusions as to what can be quickly and economically accomplished on a simple plan.

Respectfully,

(Signed) R. W. CREUZBAUR, Consulting Engineer.

October 17, 1906.

Hon. JAMES W. STEVENSON, Commissioner of Bridges:

Dear Sir—I inclose for your consideration report made at my request by the Consulting Engineer of this office relating to the Manhattan elevated terminal of the Brooklyn Bridge and the improvements which it is believed can be made there by installing a plan modified from suggestions made by Mr. Poulson to your predecessor and indorsed by a considerable number of Brooklyn citizen societies and prominent men well qualified to judge of its merits.

For a long time I have been interested in the projects of Mr. Poulson, and I have repeatedly urged my Engineer to investigate and report on this one proposition of the elevated terminal, and I want to say to you at this time that I agree thoroughly with his deductions, and would urge you to make this improvement at the earliest possible time for the good of Brooklyn, irrespective of what may necessarily follow in extending the bridge tracks by elevated or subway loops, as I am convinced that the improved terminal as suggested will be required here in any event.

The sketch indicates the few controlling features considered essential in adapting the present lay-out of the terminal to the new plan, and can perhaps be improved upon by your Engineers, if you so direct.

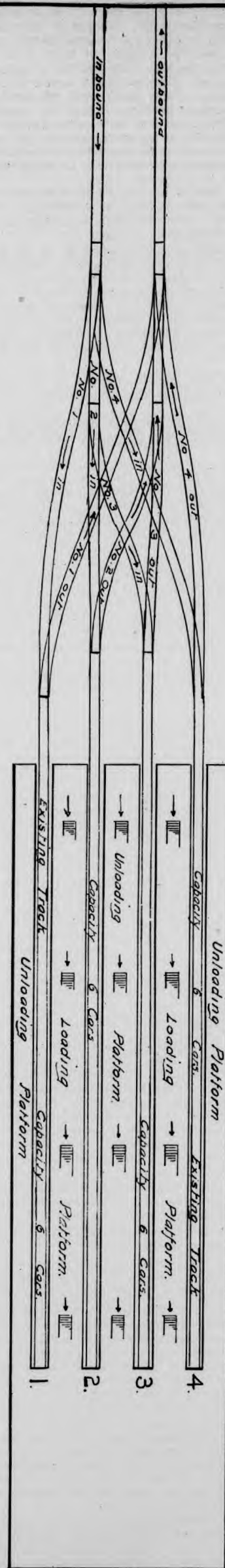
The Chief Engineer of the Brooklyn Rapid Transit Company has spent considerable time with my Engineer in going over this lay-out, and I understand is well satisfied of its complete success in operation with shuttle service, as you now operate; but I believe the proposition which my Engineer seems to have originated in operating through trains at all hours by what he designates "sequence of train movement" will, by a further study of Mr. Minden and your Engineers, be found to be entirely feasible.

In any event, the plan is a tremendous improvement on the present system, and is so adaptable that it may be operated in three ways, and there is not a doubt in my mind as to its complete success, and the wisdom of installing it at once. As I have stated, it does not interfere in any way with any other improvements, double-decking or extensions which you may contemplate there.

You will recognize the fact that while I hesitate to seem to encroach upon the high functions of your office, the matter is one of such extreme importance that I believe you will understand its presentment in this form to you.

Yours very truly,

(Signed) BIRD S. COLER,
President of the Borough of Brooklyn.



WITH REPORT OF OCT. 16, 06.
R. W. CREUZBAUR, CONSULTING ENGR.
— TO —
HON. BIRD S. COLER, PRESIDENT,
BOROUGH OF BROOKLYN.

— PARK ROW. —

2-A.

Tri-borough—Borough President Coler General Letter to Rapid Transit Commission.

May 31, 1906.

To the Honorable the Board of Estimate and Apportionment:

Gentlemen—The Borough of Brooklyn has waited more or less impatiently for many years for some improvement in transportation conditions, but because of engineering blunders and delays incident to vexing litigation, it seems almost as far as ever from any adequate system of relief. While subway routes are being extended into The Bronx and tunnels are being constructed under the North river, the very important borough of which I am President has to be satisfied with a miserable two-track tunnel under the East river, and even this has been so faultily constructed as to make it a matter of serious doubt as whether or not it will be of any real service. The cause of the condition which afflicts us in Brooklyn is undoubtedly the desire of the transportation corporations to confine their activities to the immensely profitable section of the City which lies within the Borough of Manhattan.

There is, of course, a radical difference between railroad conditions in Brooklyn and Manhattan. Brooklyn is what is known in the railroad business as a long-haul town, which means that the passengers on the railroads in that borough ride for long distances, and that the traffic is not, therefore, as profitable as it is in Manhattan, where most of the passengers are what is known as short riders. The very natural desire of the transportation interests is to invest their money where the profits are enormous, as they are in Manhattan Borough.

If, however, the City is to be developed properly, and if the convenience and comfort of the great population of the Borough of Brooklyn are to be given any consideration whatsoever, the Board of Rapid Transit Commissioners must put an end to its policy of laying out its subway routes in short sections, and thus providing tidbits for the transportation corporations. The Commission should in the future compel the corporations to take the fat with the lean, and to construct whole systems instead of short sections of systems, by including in the same contract, in every instance, tunnels in the highly profitable sections of the City and tunnels in the less profitable sections of the City, where the business is a long-haul business.

The statement recently presented to the Board of Aldermen by his Honor the Mayor, with regard to the financial condition of the City shows that there is no longer any basis for the fear that the City will be helpless to carry out its own transportation plans should the transportation corporations justify the expressed fear of the counsel to the Rapid Transit Commission by refusing to bid on contracts advertised by that Commission.

If no private corporation should bid on a tunnel contract hereafter the City is in a position to construct, and, if necessary, to operate, those transportation lines most urgently needed at the present time.

With this condition in view, I would respectfully request your Board, as the local authorities of The City of New York, under section 4 of the Rapid Transit Act, that the Board of Rapid Transit Commissioners proceed forthwith to consider a subway route to have for its point of beginning a location in the Borough of The Bronx, to be recommended by the President of that Borough, to proceed then through certain streets in the Borough of The Bronx, to be recommended by the President of that borough; to continue through certain streets in the Borough of Manhattan (preferably on the East Side), to be recommended by the President of the Borough of Manhattan; to cross the East river over the new Manhattan Bridge, to proceed thereafter through Flatbush avenue, as extended, and through Fourth avenue to Fort Hamilton, provision being made at some intervening point for a spur connection with Coney Island.

I have selected the Fourth avenue route in this borough because the promises of the Rapid Transit Commission have practically committed the City to the construction of this subway before any other subway in this borough, and also because of the fact that the Fourth avenue route is the natural highway to the Borough of Richmond, and that the construction indicated will necessarily be extended in time under the Narrows and into that borough. Therefore, it is desirable that if the City is to build and operate a subway it should be a trunk line connecting up as many of the boroughs as possible, and the route indicated will do that better than any other route suggested.

Yours very respectfully,
(Signed) BIRD S. COLER,
President of the Borough of Brooklyn.

2-B.

Detail of Tri-borough—With Copy of Resolution Proposed. With Extensions to Coney Island and to Jamaica Avenue.

Office of the President of the Borough of Brooklyn,
The City of New York,
Brooklyn, June 21, 1906.

Hon. BIRD S. COLER, President, Borough of Brooklyn:

Sir—In your communication to the Board of Estimate and Apportionment of May 31, you have requested the Board, under authority of section 4 of the Rapid Transit Act, to recommend that the Board of Rapid Transit Commissioners proceed immediately with the construction of an interborough subway route which shall be contracted for or constructed by the City in its entirety.

The route as presented extends from a location in the Borough of The Bronx, to be recommended by the President of that borough, and extending southerly through the Borough of Manhattan, preferably on the east side, as shall hereafter be determined on recommendation of the President of that borough, is to cross the East river over the new Manhattan Bridge; proceeding thereafter through Flatbush avenue, as extended, and through Fourth avenue to Fort Hamilton, provision being made at some intervening point for a spur connection with Coney Island.

Since this communication was forwarded to the Board, the construction of route No. 3, in the Borough of Manhattan, providing for a subway through Third avenue and the Bowery, appeals favorably to the President of the Borough of Manhattan as the route which will be of the greatest service to the largest number in affording transportation for the congested east side districts, and the connection with this Third avenue route, now adopted, is logically the provision already made by the Rapid Transit Board in the adoption of route No. 19, extending under the Harlem river; thence through One Hundred and Thirty-eighth street and by the Southern boulevard to a junction station on the existing route at Westchester avenue; thence proceeding by Westchester avenue and Westchester turnpike on said route No. 19 as adopted to the Williamsbridge road; and by the short extension of said route on the plan recently presented to the Board of Estimate and Apportionment for approval, connection is effected with Pelham Bay on Long Island Sound.

With this connection access from the thickly populated Manhattan sections will be afforded to a superb park system located directly on the Sound and Pelham Bay, embracing an area of 1,700 acres, and the development of one of the finest sections of the Borough of The Bronx will be provided for.

In considering means for the greatest possible service in the interborough route, a study has been made of the feasibility of grades, curvature, etc., in effecting a new connection with the Third avenue-Bowery route and the Williamsburg Bridge, as well as connection by the new Manhattan Bridge.

At the Delancey street approach to the Williamsburg Bridge, no provision has been made by the Rapid Transit Board for a connection, the present plans for route No. 9 extending through Centre street providing for four tracks running on the bridge approach. The suggestion has been made that two of these tracks extend from route No. 9 over the bridge and that two be connected from the Bowery line in a similar manner, and, in conference with the Engineers of the Rapid Transit Board, such connection plan is shown to be feasible.

At Manhattan Bridge a spur of route No. 9 and extending from Centre street running over Bowery route No. 3 precludes the possibility of direct connection from the Bowery route over Manhattan Bridge without a slight rearrangement of the Centre street connection. This modification is absolutely necessary in making effective the proposed interborough route in providing through local express service over the Manhattan Bridge to the Bowery subway, and while the location of the link in route No. 9, between the Bowery and Centre street, is not disturbed, I find the grades and distances to be such that only one line can make direct through connection with the Manhattan Bridge.

With turn-outs from the Bowery line to connecting link in route No. 9 and an additional turn-out to the south from the same link running into Centre street, convenient distribution of traffic will, I believe, be effected.

The Third avenue-Bowery route No. 3, as described, is not altered in any respect except by raising the grade at the intersection with the Manhattan Bridge approach and by carrying the two tracks over the Delancey street approach to the Williamsburg Bridge, as stated, which will not necessitate any further consents of property owners and will be within the powers of the Board for adjustment.

This route is, however, connected with the Brooklyn Bridge at Park row and is looped with route No. 9 by a turn-out into Centre street and no further connections contemplated in the plans of the Rapid Transit Commission are interfered with.

In considering the pressing needs of the Williamsburg district and outlying sections, it has been considered imperative to advise an extension over the Williamsburg Bridge by Broadway on the routes now planned and designated Nos. 9, 9-A-3 and 9-H as far as Jamaica avenue.

As already determined by you, the Fourth avenue route, extending over the new Manhattan Bridge and through Flatbush avenue as extended and Fourth avenue to Coney Island, is the line which should be first constructed in Brooklyn and is naturally the only feasible route to connect the Borough of Richmond by the extension of the tunnel under the Narrows.

The Chief Engineer of the Rapid Transit Board suggests that the Atlantic avenue-Court street connection with the Fourth avenue route should be provided, but as no connection with the existing Joralemon street tunnels could be made, I would recommend that the only immediate provision necessary for this diverging route, to relieve congestion at the Fourth avenue and Flatbush avenue intersection, can be provided for in the design of necessary cross-overs and turn-outs at such intersection in the plan of the Fourth avenue improvement.

Pending action of the Board of Estimate and Apportionment on the interborough route in its entirety, and, in the event of favorable reception of the proposition by the Board, it would appear advisable not to advertise disjointed sections of any part of the system herein recommended, as such action would interfere materially with the general scheme contemplated, serving as it does the pressing needs of four of the boroughs.

From the estimates of the Chief Engineer of the Rapid Transit Board, it appears that the complete interborough route can be fully constructed for less than fifty million dollars.

For the purpose of concentrating study of the Rapid Transit and borough engineers on your proposition, I beg to summarize the matter in the form of the following resolution:

Resolved, That under authority of section 4, of the Rapid Transit Act, as amended, the Board of Estimate and Apportionment, as the local authorities of The City of New York, hereby requests the Board of Rapid Transit Commissioners of said City to proceed forthwith to take all necessary steps in order to lay out and provide for the construction, as a single, comprehensive system, of a rapid transit route, as follows:

A three-track rapid transit line beginning at a point on the westerly side of Pelham Bay Park, in the Borough of The Bronx, as an elevated structure with a loop connection; thence proceeding through a new street, the extension of Westchester turnpike, and by Westchester turnpike and Westchester avenue to the Southern Boulevard; thence on the Southern Boulevard and as a subway through One Hundred and Thirty-eighth street (route No. 19) to Lincoln avenue; thence by a four-track subway extending through Lincoln avenue, diverging under the Harlem river and joining Third avenue at One Hundred and Twenty-eighth street; thence by Third avenue and the Bowery with a two-track connection at the approach of the Williamsburg Bridge, and a four-track connection at the approach of the Manhattan Bridge, continuing by the Bowery to Park Row (route No. 3); thence through Park Row to Centre street and providing at Centre street for future connection with the Brooklyn Bridge when reinforced; thence northerly on Centre street to Canal street with two lines extending to the Bowery, where a transfer station is to be located at the Manhattan Bridge approach; again continuing on Centre street at Canal street four tracks continuing northerly and extending into Delancey street, two of which tracks shall extend over the Williamsburg Bridge and two be connected at grade with the Bowery line (route No. 3, as described).

Continuing the four-track line connecting with the Bowery route over the Manhattan Bridge to the Borough of Brooklyn, and by the Flatbush avenue extension, and Flatbush avenue, and Fourth avenue to Fort Hamilton (routes Nos. 11-A and 11-B, as adopted) with a spur connection at Fortieth street for future extension to Coney Island.

From the Bowery line (route No. 3) in Manhattan, connecting with four tracks of which two connect with the Bowery line and two with the Centre street line; thence by Delancey street and the Williamsburg Bridge to the Borough of Brooklyn and through Broadway to Jamaica avenue (routes Nos. 9-A-3 and 9-H, as adopted) providing at Jamaica avenue spur connections for two lines to diverge at this point.

Respectfully submitted,
R. W. CRUEZBAUR, Consulting Engineer.

2-C.

Tri-borough—Reasons for Asking for Bids for Whole Route—"Take the Fat with the Lean."

Brooklyn, July 5, 1906.

Hon. ALEXANDER E. ORR, President, Rapid Transit Railroad Commission:

Dear Sir—In the resolution which was adopted by the Board of Estimate and Apportionment June 22, 1906, there were two divergent branches of the main line provided for in this borough, and one spur connection, the main branches to cross the river from Manhattan to Brooklyn over the Williamsburg and the new Manhattan Bridges. I would recommend, therefore, that the Williamsburg Bridge branch, after proceeding across the Williamsburg Bridge, proceed along and under the surface of Broadway from the Bridge Plaza to Jamaica avenue; that the Manhattan Bridge branch, after crossing from the Borough of Manhattan to the Borough of Brooklyn, over the Manhattan Bridge, proceed along and under the surface of Flatbush avenue extension, Flatbush avenue and Fourth avenue to Fort Hamilton; that the spur connection follow the route laid out by your Board for a spur connection between the Fourth avenue subway and Coney Island, namely: Beginning at or near the intersection of Fourth avenue and Thirty-sixth street, and running thence easterly and southeasterly, curving under Fourth avenue and private property, Thirty-ninth street and private property again to a point in Fortieth street, near the intersection of Fortieth street with the westerly side of Fifth avenue; thence easterly under Fortieth street to a point at or near the intersection of Fortieth street with the easterly side of Ninth avenue; under Fortieth street and private property to New Utrecht avenue and Forty-first street; thence under and along New Utrecht avenue southerly to a point south of Eighty-first street; thence curving southeasterly and easterly under private property, Eighty-fourth street, private property, again, Eighteenth avenue, Eighty-fifth street, private property to Eighty-sixth street, between Eighteenth and Nineteenth avenues; thence southeasterly under and along Eighty-sixth street to a point half way between Bay Thirty-fourth and Bay Thirty-fifth streets; thence over and upon a viaduct structure, southeasterly, and along Eighty-sixth street to a point at or near Eighty-sixth street and Bay Forty-first street; thence southeasterly over private property, Twenty-sixth avenue, private property to a point in Stillwell avenue, between Eighty-sixth street and Bay Forty-third street; thence southerly over and along Stillwell avenue, crossing the Gravesend Ship Canal on a bridge, and continuing on Stillwell avenue to a point in Coney Island, about half way between Neptune avenue and Mermaid avenue, where the tracks will diverge so as to form a loop, the route of which has already been laid out by your board.

In addition to making this recommendation, I wish to urge upon your Board, as strongly as I may, the desirability of having this entire system advertised in one contract. The City has suffered in the past because of the fact that it was compelled practically to beg capitalists to interest themselves in the transportation situation here. The fact that certain transportation corporations held exclusive franchises in the most important streets of New York City gave them a commanding position. No capitalist could, under these conditions, find it profitable to install small transportation lines when the control of the main avenues of travel was in hands likely to be hostile. When the subject of subway transportation was broached, and the opposition of the interests holding the surface franchises was finally overcome, the City

was again at a disadvantage, because it lacked power, in the event of the failure of capitalists to bid upon the contracts for the construction and operation of its lines, to build and operate such lines itself. It therefore had to assume an attitude of supplication before the capitalists of the country, and to offer terms as an inducement to those capitalists which everybody now admits to be extremely generous, to say the least.

In order to offer the most attractive proposition possible to prospective bidders your Board laid out a route with consideration rather for the possible profits of the contractor than for the proper development of the City. The exigencies of the then situation set up a tendency in this direction which the Board has found it hard to overcome.

The demand for rapid transit from all sections has been so insistent and the pressure upon the Board so great that it very naturally laid out a network of routes which your Board itself admitted in its communications to the Board of Estimate and Apportionment could not for the most part be regarded as anything except propositions from which capital would have to make its choice. In other words, the idea was to advertise a large number of contracts and let private capital determine as to which of them would be the most profitable, with the result that bids upon those only would be received by the City. This was a policy which seems to me to be extremely unwise. It means the resignation by the proper official boards to private hands of the direction of the City's development. It means that we who sit in the Board of Estimate and Apportionment, or in your Board, instead of wisely building up the entire City by a judicious distribution of the lines of communication, shall allow the transportation corporations to select for construction lines traversing only areas where the population is dense or the travel particularly heavy. This will mean, instead of the distribution of our population over a wide area and the consequent comfortable conditions of living, a continuous accumulation of our citizens in districts where the transportation conveniences are the most numerous and the cost of transportation cheapest. It will have another bad effect. By giving up the most important avenue of travel to corporations now in control of the transportation situation, it will cause a duplication underground of the conditions which prevail on the surface, and prevent the free investment of capital in the many needed transportation lines.

As matters now stand, unless some such line as that suggested in the resolution of the Board of Estimate and Apportionment is laid out, and the contract for its construction and operation advertised as a unit, the City will be at the mercy of the combined interests now in control of our transportation service. Naturally they will try to prevent the extension of transportation lines which cannot give them an immense and immediate profit, but which might threaten the monopoly they now enjoy. Carrying all the travel now in Manhattan and The Bronx, how can the Interborough Company be expected to reduce its income and add to its expenditures by the construction and operation of new lines unless compelled to do so? Is there any reason for wonder that the Brooklyn Rapid Transit Company, with its practical monopoly of the railroad service here, should seek to prevent the extension of the subway system into Brooklyn? None of these interests at present occupies the commanding position which they all held some years ago. The City does not need them to increase its transportation service. It can get along as well, and I think better, without them. It has the power, under the recent amendment of the Rapid Transit Act, to build and operate its own railroads, and the Mayor's recent investigation into its financial condition has revealed that it has power also to raise the money to pay the costs of construction and equipment. It cannot, of course, undertake the construction of every rapid transit route which your Board has adopted; it can, however, undertake the construction of, and, if need be, the operation of, the great connected system suggested in the resolution of the Board of Estimate and Apportionment of June 22.

It is obvious, therefore, that this contract should be so framed that the City may be able, should the railroad corporations fail to bid, to construct with its own money and for its own purposes a system of subway lines which shall serve the transportation needs of all the boroughs, and, at the same time, insure the profitable investment of the City's funds.

As to the engineering reasons why the system outlined in the Board of Estimate and Apportionment's resolution should be considered as a unit, this you will find given at length in a report addressed to me on June 21, 1906, by R. W. Creuzbaur, Consulting Engineer in this office.

Yours very respectfully,
(Signed) BIRD S. COLER,
President of the Borough of Brooklyn.

2-D.

Tri-Borough—President Orr to Board of Estimate and Apportionment—With Dissensions, Approvals and Date of Previous Plans—Estimated Cost, \$57,000,000.

Board of Rapid Transit Railroad Commissioners,
No. 320 Broadway, New York,
October 11, 1906.

To the Board of Estimate and Apportionment of The City of New York:

Gentlemen—On June 22, 1906, your Board adopted the following resolution:

"Resolved, That, in accordance with section 4 of the Rapid Transit Law, as amended, the Board of Estimate and Apportionment, as the local authorities of The City of New York, hereby requests the Board of Rapid Transit Commissioners of said City to proceed forthwith to the consideration of a rapid transit subway system, to serve the transportation needs of the City by a continuous system of connected routes in the Boroughs of The Bronx, Manhattan and Brooklyn, with provision for a future extension under the Narrows of the transportation line into the Borough of Richmond; said rapid transit line to begin at a point in the Borough of The Bronx to be recommended by the President of said Borough, to proceed thence to the Borough of Manhattan and along certain streets in said Borough to be recommended by the President of said Borough, to connect with the Williamsburg Bridge, and crossing said bridge to proceed in the Borough of Brooklyn through Broadway to Jamaica avenue, and to connect also with the Manhattan Bridge and crossing said bridge to proceed in the Borough of Brooklyn by way of Flatbush avenue as extended, and Flatbush avenue and Fourth avenue to Fort Hamilton, with a spur connection at Fortieth street for extension to Coney Island; and

"Resolved, That the Board of Estimate and Apportionment recommends to the Rapid Transit Commission that the said rapid transit system be provided for in a contract or contracts which shall insure the operation of the entire system as recommended by one corporation, whether said corporation be a private corporation or the corporation of The City of New York."

In accordance with the terms of this resolution, the Rapid Transit Board communicated with the Presidents of the Boroughs of The Bronx, Manhattan and Brooklyn. The President of the Borough of Brooklyn, under date of July 5, 1906, responded at considerable length making certain recommendations, to which reference will be made below. Under date of August 7, 1906, the President of the Borough of The Bronx transmitted a proposed rapid transit route in that Borough extending northward from a point near the Third avenue bridge through Willis avenue, Melrose avenue and the Boston road to the city limits at Mount Vernon. No communication has been received from the President of the Borough of Manhattan upon this subject.

Accompanying the communication from the President of the Borough of Brooklyn was sent a map indicating what, in his judgment, would be a suitable route to comply with the request contained in the resolution of your Board above quoted. This line begins in the Borough of The Bronx at Pelham Bay Park and follows the Westchester avenue line already laid out by this Board, and approved by your Board; then follows the Third avenue line heretofore laid out to the neighborhood of Delancey street and the Bowery, and at that point the line diverges. It is suggested that one branch shall cross the Williamsburg Bridge and follow the line of Broadway in the Borough of Brooklyn. The other branch will continue down the Bowery to Canal street, and then, crossing the Manhattan Bridge, will follow the Flatbush avenue extension and Fourth avenue to Fort Hamilton, with a branch diverging near Thirty-eighth street and continuing to Coney Island. The line over the Williamsburg Bridge and along Broadway is included in Route No. 9, already submitted to your Board. The routes over the Manhattan Bridge down Fourth avenue to Fort Hamilton, and to Coney Island, are also coincident with routes laid out by the Rapid Transit Board, and approved by your Board.

In the opinion of the Rapid Transit Board it would be inexpedient to include in the rapid transit subway system now under consideration a route to connect with the Williamsburg Bridge, and to proceed in the Borough of Brooklyn through Broadway to Jamaica avenue. Such a line, although serving a large population, and of very great importance, would more properly be connected with a system of loops serving either to unite the Williamsburg Bridge and Brooklyn Bridge, or the Williamsburg Bridge and the contemplated tunnels under the East river. As will be perceived by the map, it would diverge approximately at right angles from the general direction of the rapid transit system which is in contemplation, and for these reasons this Board would not recommend uniting in one contract, and as a part of one system, the Broadway-Williamsburg Bridge line with a system connecting the northern part of the Borough of The Bronx with Fort Hamilton and Coney Island, and, perhaps ultimately with the Borough of Richmond. A system as vast as that which is now in contemplation might easily be overloaded by adding to it divergent branches, however profitable these might ultimately prove to be.

With respect to the line proposed by the President of the Borough of The Bronx, it may be said that it parallels closely the White Plains Road Branch, already laid out by this Board, as well as the Port Chester and the New York, Westchester and Boston roads, for which franchises have already been granted to private corporations. Moreover, if it should be determined to build such a line as the Borough President suggests, the whole scheme would necessarily be delayed for some considerable period. It would be necessary to survey and lay out the route, to obtain the approval of your Board to it, and probably, to apply to the Supreme Court for its approval.

For these reasons the Rapid Transit Board would recommend as a continuous system of connected routes a rapid transit line following closely that suggested by the President of the Borough of Brooklyn in his communication to this Board of July 5, 1906. The line proposed would begin at Pelham Bay Park, in the Borough of The Bronx, following Westchester avenue to the Southern Boulevard as an elevated road; thence as a subway west on One Hundred and Thirty-eighth street to a point near the intersection of Lincoln avenue and East One Hundred and Thirty-eighth street; thence under the Harlem river and Third avenue and the Bowery to the Battery. At a point near the intersection of the Bowery and Canal street, a divergent branch is recommended to connect with the Manhattan Bridge, and then passing over the Manhattan Bridge and under Flatbush avenue extended to Fourth avenue; and thence southerly under Fourth avenue to Fort Hamilton. Near the intersection of Thirty-eighth street and Fourth avenue, there would be another divergent branch extending under Fortieth street, New Utrecht avenue, and other streets to a point in Eighty-sixth street near its intersection with Bay Thirty-fourth street, and from thence as an elevated railroad over Eighty-sixth street and Stillwell avenue to Coney Island.

The line thus recommended is shown on the accompanying sketch map. It will be observed that it constitutes a continuous system of connected routes in the Boroughs of The Bronx, Manhattan and Brooklyn, and affords the possibility of making provision for future extension under the Narrows from a point on Fourth avenue in Brooklyn. It complies also with the resolution of your Board by connecting with the Manhattan Bridge, Flatbush avenue and Fourth avenue to Fort Hamilton, "with a spur connection at Fortieth street for extension to Coney Island."

The whole of this line has already been laid out by this Board in the various routes heretofore submitted to your Board, and approved by you. The portion of the route from Pelham Bay Park to a point near the Harlem river was originally adopted by this Board in June, 1905, but did not extend as far as Pelham Bay Park, owing to the fact that the streets were not then laid out beyond Westchester Village. Subsequently, a new street was laid out and placed upon the map or plan of The City of New York by your Board, and thereupon a new and extended route was adopted by this Board on May 17, 1906, and approved by your Board June 8, 1906, and by the Mayor, June 14, 1906. Efforts have been made which it is thought will be successful to obtain the consent of the requisite number of property owners along this line.

From a point in the Borough of The Bronx, near the Harlem river, to the Battery, the entire route was adopted by this Board on May 12, 1905, being known as Route No. 3, was approved by your Board on July 14, 1905, by the Mayor on July 28, 1905. It was subsequently confirmed by the Appellate Division, First Judicial Department, although the formal order has not yet been entered.

For the portion running from the Bowery to the Manhattan Bridge, which is included in Route No. 9, known as the Brooklyn and Manhattan Loop line, Manhattan Section, Commissioners were appointed some time since by the Appellate Division of the Supreme Court, but have not yet presented their report, although they have taken a large mass of testimony. The delay is due entirely to the opposition of property owners along certain portions of this route. The Brooklyn and Manhattan loop line was adopted by this Board on May 25, 1905, and approved by your Board on July 14, 1905, and by the Mayor on July 28, 1905. It is impossible to predict how soon the Supreme Court Commissioners may make their report in regard to this line, or what the report will be, or what may be the action of the Appellate Division in respect to it.

With respect to the portion of the line over the Manhattan Bridge and Flatbush avenue, extended, there is a physical difficulty, namely, that the Bridge has not yet been constructed, and, as the Rapid Transit Board are advised, it will not be completed for two or three years to come. Under these circumstances, no efforts have been made to obtain the consents of property owners along the proposed line, or in lieu thereof the consent of the Appellate Division of the Supreme Court. It is thought that there will be no difficulty in obtaining the requisite consents long before the bridge can possibly be finished.

The connection between the Manhattan Bridge line and the northerly end of Fourth avenue is a portion of the Manhattan and Brooklyn loop lines, already referred to as Route No. 9, Brooklyn Section. In this case, Commissioners were appointed by the Appellate Division in the Second Judicial Department, and filed their report, but on motion of certain property owners the Appellate Division referred the matter back to the Commission to give an opportunity for the presentation of testimony, and that case is also still pending.

The route from the northerly end of Fourth avenue to Fort Hamilton, known as Route No. 11, was adopted by this Board on June 1, 1905, approved by your Board on July 14, 1905, by the Mayor on July 28, 1905, and by the Appellate Division in the Second Judicial Department by an order entered June 18, 1906.

The route diverging from a point near Fourth avenue and Thirty-eighth street (Brooklyn), was adopted by this Board on June 7, 1906, approved by your Board June 15, 1906, and by the Mayor, June 18, 1906. Subsequently, efforts were made through representatives of the property owners to obtain the consent of the requisite number to this route. On September 20, 1906, the Board received a large number of consents, said to amount to sixty-five per cent. of the value of the property along the route. Before the Board can determine whether these consents are legally sufficient it will be necessary to obtain certificates from a title company, and to examine as to the assessed valuation of the several parcels represented, a task which will occupy but a relatively short time.

From this review of the various links composing the proposed system, it will be perceived that all the legal preliminaries have been completed with respect to the greater portion of the line, and that they are in process of being completed with respect to all the remainder, except that part crossing over the Manhattan Bridge. As to this part, the necessary consents can no doubt be obtained long before the bridge itself is completed.

The resolution of your Board, to which this communication is a reply, contains a recommendation that the rapid transit system in question should be provided for in a contract which shall insure the operation of the entire system by one corporation, "whether said corporation be a private corporation or the corporation of The City of New York."

In a separate communication relative to the Lexington avenue and Seventh and Eighth avenue lines, the Rapid Transit Board has submitted to your Board some suggestions as to the best mode of dealing with the business problems that arise in connection with the effort to make a contract, or contracts, for construction, equipment, maintenance and operation of a rapid transit system. These suggestions so made apply with equal force to the comprehensive system now under discussion. If your Board thinks it desirable to do so, the Rapid Transit Board can (as soon as the remaining consents are obtained) prepare plans and specifications and advertise for bids for one contract to construct, equip, maintain and operate the entire system above described, or any part thereof; and at the same time invite bids for the construction of the separate sections composing it. The fact that the Manhattan Bridge is still under construction need not seriously embarrass the letting of the contract, because so far as that portion of the system is concerned, the contractor would only be called

upon at most to lay wires and electrical conduits over the bridge, the plans of which would, of course, be open to his inspection. The cost of this complete system from The Bronx to Fort Hamilton, including the Coney Island route, as suggested by the President of the Borough of Brooklyn (not including connection with the Williamsburg Bridge and the Broadway, Brooklyn, branch), would be, in accordance with the estimate of the Chief Engineer, \$57,000,000.

By a resolution of your Board adopted July 19, 1906, the Rapid Transit Board was requested to consider and determine whether an elevated railroad should not be established over Delancey street from the terminus of the Williamsburg Bridge to the Bowery, and thence along the Bowery to Park row, and along Park row to the entrance of the New York and Brooklyn Bridge; and the Rapid Transit Board was further requested to direct the immediate preparation of plans and a form of contract for the construction of a rapid transit railroad through a part of Route No. 9, already referred to, known as the Brooklyn and Manhattan Line.

These matters are receiving the attention of the Board, and a communication to your Board will shortly be sent to it, advising you of the action taken by us upon these subjects. In connection with them, this Board may be able to deal with the question of the proposed line under Broadway, Brooklyn, to the Williamsburg Bridge. As already stated, it is the judgment of this Board that the Broadway line ought to form a part of the system which it was originally planned to connect with, namely, the general and comprehensive Brooklyn and Manhattan Loop Line.

The Board of Rapid Transit Railroad Commissioners for

The City of New York,

(Signed) A. E. ORR, President.

(Signed) Bion L. Burrows, Secretary.

2-E.

Tri-borough—Comptroller Metz and Borough President Coler to Board of Estimate and Apportionment, Recommending Approval of Tri-borough Route, as Amended by Rapid Transit Railroad Commission.

December 4, 1906.

To the Committee of the Whole, Board of Estimate and Apportionment:

Gentlemen—At a meeting of your committee, held October 19, 1906, a communication from the Board of Rapid Transit Railroad Commissioners under date of October 11, 1906, was referred to the undersigned as a Select Committee. This communication of the Rapid Transit Commission was called for by resolution of the Board of Estimate on June 22, which, in effect, recommended that the Rapid Transit Commission provide a subway system in a contract or contracts which would insure independent operation and transportation from a point in the upper section of The Bronx, through the Borough of Manhattan and over the Manhattan Bridge, by Flatbush avenue and Fourth avenue to Fort Hamilton, with connection at Fortieth street for extension to Coney Island.

This resolution read in part as follows:

"Resolved, That the Board of Estimate and Apportionment recommends to the Rapid Transit Commission that the said rapid transit system be provided for in a contract or contracts which shall insure the operation of the entire system as recommended by one corporation, whether said corporation be a private corporation or the Corporation of The City of New York."

The Board of Estimate and Apportionment included in the plan recommended a connection from this route (located on the east side of Manhattan) with the Williamsburg Bridge, and through Broadway (Brooklyn) to Jamaica avenue. This last named route has not been agreed upon by the Rapid Transit Commission as an essential part of the system, and future provision will be made for the line named in connection with the so-called Brooklyn Bridge loop through Broadway, Bedford and Lafayette avenues to Flatbush avenue, by Flatbush avenue and other extensions to the Manhattan and Brooklyn bridges.

Your committee have carefully considered the various features of the Pelham Bay-Bowery-Fort Hamilton-Coney Island route, as recommended by the Rapid Transit Commission and the developments and extensions which will become possible in the future.

It is believed that progress in the construction of the Manhattan Bridge will be such that operation of subway trains from the Bowery over this bridge and through Flatbush avenue extension will be provided at the completion of the subway route planned, and that, while the system is independent and fully operative as a unit, future connections in Manhattan and The Bronx may be readily provided in developing the details of the construction plans. The Brooklyn connections with the Joralemon street tunnels and with the subway now under construction, and with the East river tunnels as now planned by the Rapid Transit Board through Cranberry street, Pineapple street and Montague street, may be fully provided for in the construction of the "Tri-Borough Route," as well as the connections with the Lafayette-Bedford avenue-Broadway route to the Williamsburg Bridge, and by another short spur to the Brooklyn Bridge, when reinforced.

In thus linking the construction and operation of the routes as before adopted in the several boroughs, the Board of Rapid Transit Commissioners have apparently made provision for the greatest possible amount of benefit to the City at large. The complete route, when operated, will develop a very desirable residential section in The Bronx, extending to the Sound at Pelham Bay Park. The line by Westchester avenue, Southern Boulevard and One Hundred and Thirty-eighth street, proceeding down through Third avenue and the Bowery, is apparently a commendable arrangement to serve the First avenue property interests and those along Lexington avenue, for which subway routes have been laid out, and the Third avenue-Bowery route is the only one which can be properly connected with the three bridges for Brooklyn service. The full utilization of these bridges by the subway tracks is, in the opinion of your committee, a very wise provision, effecting a saving of many millions in cost of tunnels. The plans of the Department of Bridges provide for four subway tracks over the Williamsburg Bridge and four tracks over the Manhattan Bridge, contemplating also all possible connections over the Brooklyn Bridge when this structure is reinforced, as provided for by his Honor the Mayor.

An inspection of the plan shows that on the Manhattan side provision is made for full connections without change for both the Bowery line (Route No. 3) and the Centre street line (Route No. 9) over the three bridges.

The extension of the Third avenue-Bowery route (No. 3), as confirmed by the Appellate Division, is not contemplated below the Brooklyn Bridge in the present scheme, and the legal conflicts on Nassau and William streets will not affect the present proceedings, the Rapid Transit Board having, it is believed, authority to immediately construct portions of the adopted routes and make separate provision for the full extensions thereafter.

At the time bids were taken for the short Brooklyn route now under construction by the Joralemon street, Fulton street, Flatbush avenue line, competition was such that the engineers' estimate of cost was reduced to the amount of about \$6,000,000, and it was generally understood that Brooklyn's requirements justified the promise that the next extension of the subway system should be through Fourth avenue. Such a proposed line, from the northerly end of Fourth avenue to Fort Hamilton, known as Route No. 11, was adopted by the Rapid Transit Board on June 1, 1905, and approved by the Board of Estimate and by the Mayor and by the Appellate Division of the Second Judicial Department by an order entered June 18, 1906.

The location of this route has peculiar physical advantages in the great width of the avenue, the character of the material encountered and the desirable gradients, as well as from the fact that the central parkways, extending southerly to Sixtieth street, will give admirable facilities for complete ventilation of the subway, which may be economically constructed by cut and cover work through an unobstructed section of the avenue.

The better development of this large area of the City is advisable, and it is also of importance to carry this route to Fort Hamilton, even if the tunnel under the Narrows is not completed at an early date, from the fact that a very desirable section of the Borough of Richmond on the southerly side would be brought into quick communication by a short ferry crossing the Narrows, and these transit facilities will, in the opinion of your committee, add greatly to the development of that section of the Borough of Richmond.

The Rapid Transit Commission, in report under consideration, have also advocated the immediate construction of the Coney Island extension, beginning at Fourth avenue

and extending through Fortieth street, New Utrecht avenue, Eighty-sixth street and Stillwell avenue to Surf avenue, Coney Island. While this route will especially serve the summer traffic and increase largely the facilities for enjoyment of the general public during the summer season, it is a fact that a very great part of the territory is much in need of transportation facilities, including the Bensonhurst section, and it is believed that this branch of the route will prove attractive to the bidders for operation at all times.

We are of the opinion that the City's interests will be best served, and independent bidders attracted to the opportunities afforded for investment of capital in the construction and operation of this route by the publication of full engineering data and construction costs accumulated by the Rapid Transit Board from the experience in subway work already finished and under construction, and it is recommended that the Rapid Transit Board be requested to take suitable action in this matter.

Your committee recommends the approval of the amended "Tri-Borough Route," as reported by the Rapid Transit Commission on October 11, 1906, and advise that, in accordance with the action of the Board of Estimate and Apportionment of June 22, 1906, immediate steps be taken for the preparation of full contract plans and specifications, and that bids be advertised for the construction, and for the construction, equipment and operation, of the entire "Tri-Borough Route" as named, so far as the legal status of the proceedings will permit, and that bids be taken on all remaining portions at the earliest subsequent date consistent with the legal procedure in the premises.

(Signed) HERMAN A. METZ,
Comptroller, City of New York.

(Signed) BIRD S. COLER,
President, Borough of Brooklyn.

2-F.

Tri-borough—President Coler to Board of Estimate and Apportionment—Re Specifications and Bids. Subdivision of Routes for Bidders. City to Purchase Equipment, etc. Train-mile and Car-mileage Plan of Operation.

The Honorable, the Board of Estimate and Apportionment:

Gentlemen—In the matter of resolution of the Board of December 7, 1906, recommending the manner in which contracts shall be advertised for certain needed subway routes in the Boroughs of Manhattan, Brooklyn and The Bronx, suggesting that the Board of Rapid Transit Railroad Commissioners invite proposals for construction and for the construction, equipment and operation of these routes, I present for the immediate consideration of the Board the proposition that proposals may be taken on other alternate forms, so that this Board may, without unnecessary delay, be in a position to "accept any of such proposals as will, in the judgment of such Board, best promote the public interests and award the contract accordingly." (Paragraph 36, Amended Rapid Transit Act.)

This definite provision is based on paragraph 34b of the Amended Rapid Transit Act, which says:

"If, in the opinion of the Board of Estimate and Apportionment—a contract for the equipment, maintenance and operation (of a rapid transit route) as provided for in the preceding section, shall be inexpedient, impracticable or prejudicial to the public interest, the Board of Rapid Transit Railroad Commissioners may, with the approval of the Board of Estimate and Apportionment, equip said road or roads in whole or in part for and at the public expense, by contract or contracts therefor, subject to the provisions of section 36 of this act, and enter into a contract with any person, firm or corporation who or which, in the opinion of the said Board of Rapid Transit Railroad Commissioners, shall be best qualified to fulfill and carry out said contract for the maintenance and operation of said road or roads for a term of years to be specified in said contract, and not to exceed ten years."

The interest that Brooklyn has in this matter of subway construction is extreme. As I pointed out in a previous communication to the Board, this borough has suffered from transportation evils that make its wonderful growth a matter to marvel at under the circumstances. Any method of advertising for proposals which shall have a tendency to limit the number of possible competitors for the contracts must be injurious to the interests of the people of Brooklyn, and unless a practical and reasonable method is devised to go ahead with the installation of these subways as the City would with any other public improvement, the City will remain at the mercy of the interests now in control of the transportation situation.

The propositions presented to these interests are attractive as they stand today. If, however, by refraining from an immediate acceptance of them these interests can coerce the City to so amend the Rapid Transit Act as to make them more profitable to bidders, it is only natural to suppose that they will do so. There has been an intimation that there is some such policy in the minds of the traction interests, and this should promptly be met by the City with a movement to undertake this great public improvement on its own responsibility and so advertise its proposals for construction and operation as to make the contract awards attainable to a number of individuals or combinations of individuals who occupy a secondary rank in financial affairs. Should the contract for construction, say of the entire Tri-Borough Route, be let complete and not in sections, the amount of capital required for the execution of that contract would exclude from competition all interests except those in absolute control of large capital. If, on the other hand, the contract be divided into sections and so advertised, it will be easy for contractors of moderate means to carry on sections of the work, and the number of bidders will be proportionately larger.

As to the separation of construction contracts from contracts for maintenance and operation, it has been stated that the City's financial condition will not allow making direct payment for construction of subways, but these statements are not supported by facts. The best and clearest expression with regard to the condition of the City's finances is contained in the financial message of the Mayor addressed to the Board of Aldermen on May 29, 1906. The entire subject of the City's debt and its relationship to the debt limit is here briefly, lucidly and comprehensively set forth. After giving the details of the City's debt, the Mayor said in that message: "This amount (referring to the amount of \$87,014,672.87 previously mentioned in his report) added to the margin of \$45,953,695.41 at the beginning of the year produces together \$132,968,368.28, which will be available for further indebtedness throughout the year 1906." The Mayor later says: "Assuming that the City's debt for ordinary purposes during the year 1906 will be \$50,000,000, the average incurred during the last four or five years, there will still remain a margin of about \$83,000,000 for commitments not yet developed into actual debt and for extraordinary purposes."

Certainly, in view of the facts as stated by the Mayor, and in view of the great increase in the value of taxable property in the City, and of the further increase that will follow the proper valuation of assessable property by the Tax Commissioners under the taxation expert who was recently appointed by the Mayor, there will be no difficulty in annually selling City bonds for subway purposes, and there will be no dangerous diminution of the margin between the City's debt and the debt limit. At the same time the work will be done more economically and with a view to the uniform development of the City and the preservation of these immensely valuable franchise rights rather than by adding unnecessarily to the holdings and profits of the traction interests for long terms, extending into the future generations.

There is no doubt that if the contracts to be awarded cover collectively construction, equipment and operation, the combination of financial interests which obtained the contracts would immediately do what it is here proposed that the City do; that is, subdivide the construction contracts. They would thus widen the field of competition and at the same time increase the facilities for obtaining expert service. What is here said of the construction contracts is also true of the equipment contracts. The City should deal directly with the responsible electrical and other large concerns who would really equip the proposed subways, and not with any intermediary corporation.

This is true of all the subways recently authorized, and is particularly applicable to the so-called McDonald route, which provides for a continued system crossing two of the bridges and affording service to a limited area in Brooklyn and Manhattan. This route is the most profitable section of the tri-borough route as originally presented by me to the Board in June, 1906. Mr. McDonald, however, omits from the tri-borough layout that portion of Route No. 3 on the Bowery and Park row from Delancey street to Nassau street (giving a subway loop to the three bridges in my proposal), and also omits the section of Route No. 3 below Water street connecting at the Battery with the terminal of the proposed Greenwich street subway. His pro-

posal adds in Brooklyn the Lafayette-Bedford avenue line, connecting the bridges by a portion of Route No. 9 not yet approved by the Appellate Division. To build this loop under the conditions which govern the present subways could not in any way assist in the solution of the transportation problem for the reason stated, and because it would necessitate a charge of two fares. If, on the other hand, the City built this loop directly by the expenditure of the comparatively small amount of \$10,000,000 said to be required, it could then by complete control over the operation of trains therein permit the use of the subway by the cars of independent operative systems extending out into the suburbs of the borough and give through service into and through Manhattan. In other words, the McDonald plan under the old scheme of construction and operation would be of little use to Brooklyn, but according to the scheme herein suggested would be of immense value.

With a view therefore to increasing the number of competitors and expediting the actual construction of the subways planned and now authorized and the McDonald loop now under consideration, and in order that these subways may be built and equipped economically and operated efficiently with full control by the City, I would request the Board to adopt the following method of advertising for proposals by uniting bids as follows:

First—Proposals for construction, including all stations and connections, to be called for in sections of work the estimated cost of which shall not exceed \$5,000,000 each.

Second—Proposals for the complete equipment of each operative system on contracts separated into the specialties required, such as roadbed and track—power houses—boilers and engines for same—electrical equipment—signal installation—and rolling stock.

Third—Proposals for contract for maintenance and train operation of each operative system as constructed and equipped by the City to be called for in the following unit rates or items, the contracting company to collect the fares and deposit the same in the City treasury, accounting therefor monthly to the Comptroller of the City:

- (a) Proposals per train mile run (four cars), express service.
- (b) Proposals per single car mile run, express service (additional to train rate).
- (c) Proposals per train mile run (three cars), local service.
- (d) Proposals per single car mile run, local service (additional to train rate).

By letting the contract for maintenance and operation in accordance with the above plan, the City would be dealing directly with practical railroad operators, who would compete in bids for these contracts on the basis of supplying at a fair and reasonable cost so much train service on the units of car mile and train mile run at definite local and express speeds, giving an elasticity to the contract which would enable the City to easily accommodate the transportation service to the needs of the traveling public, up to the full capacity of the lines built, and to allow operation over these lines by other routes or branch subways. The contractor would be furnishing labor and material for the transportation of the public just as contractors now furnish labor and material for the performance of any other public work, and as the payments to the contractor would increase in proportion to the increase in the labor and material and the resultant accommodation to the traveling public, the system here advocated would prevent in these subways the much-complained of over-crowding and unsatisfactory operation now prevailing in the subways.

The merits of this scheme of operation will, I believe, appeal strongly to the Board, and such separation of the operating contract is absolutely essential in preserving control by the City over its future subways and the service to be rendered in their traffic management for the public at large.

Immediate action should be taken in this matter because there has been so much delay. The City has the authorization, the money and the plans, and there is no material excuse to offer an impatient public for a failure to actually construct these much-needed subways.

Yours very truly,
(Signed) BIRD S. COLER,
President of the Borough of Brooklyn.

PROPOSED LIVINGSTON STREET FRANCHISE FOR DOUBLE TRACK SURFACE RAILWAY.

Synopsis.

Route.	Court street into Livingston to Flatbush avenue to Lafayette avenue to Fulton street. (Illustrated on general map accompanying.)
Franchise limit.	Ten years, privilege of ten years renewal.
Ownership at end of franchise.	Ownership of track and line shall revert to the City by payment to railway of an appraised valuation.
Price for franchise.	Three per cent. of gross earnings.
City reserves rights.	City reserves right to operate a municipal line over the route free, or to let privilege to other railway corporations upon proper recompense to B. R. T.
Indemnity Fund.	B. R. T. to deposit \$10,000 for faithful performance.

This contract, made this....day of....., 190., by and between The City of New York (hereinafter called the City), party of the first part, by the Mayor of said City acting for and in the name of said City, under and in pursuance of the authority of the Board of Estimate and Apportionment of said City (hereinafter called the Board); the Nassau Electric Railroad Company, incorporated for the purpose of building, maintaining and operating a railroad (hereinafter called the Nassau Company), party of the second part, witnesseth:

In consideration of the mutual covenants and agreements herein contained, the parties hereto do hereby covenant and agree as follows:

Section 1. The City hereby grants to the Nassau Company, subject to the conditions and provisions hereinafter set forth, the right and privilege to construct, maintain and operate a double track street railroad, with the necessary wires and equipment, for the purpose of conveying persons and property in the Borough of Brooklyn, City of New York, upon the following routes:

Route 1. Commencing and connecting with the tracks in and upon Court street, near Livingston street; thence curving southeasterly in and upon Court street to Livingston street; thence easterly in and upon and along Livingston street to Flatbush avenue, and thence curving southeasterly in and upon Flatbush avenue to and connecting with the tracks in and upon Flatbush avenue; together with curves connecting existing tracks with the tracks of the route hereby granted in Livingston street, as follows:

Commencing and connecting with the tracks in and upon Court street, near Livingston street; thence curving northeasterly in and upon Court street and Livingston street to and connecting with the tracks of the route hereby authorized in Livingston street.

Commencing and connecting with the tracks in and upon Boerum place near Livingston street; thence curving northeasterly in and upon Boerum place and Livingston street to and connecting with the tracks of the route hereby authorized in Livingston street.

Commencing and connecting with the tracks in and upon Boerum place near Livingston street; thence curving northwesterly in and upon Boerum place and Livingston street in and connecting with the tracks of the route hereby authorized in Livingston street.

Commencing and connecting with the tracks in and upon Smith street near Livingston street; thence curving southeasterly in and upon Smith and Livingston streets to and connecting with the tracks of the route hereby authorized in Livingston street.

Commencing and connecting with the tracks in and upon Smith street near Livingston street; thence curving southwesterly in and upon Smith street and Livingston street to and connecting with the tracks of the route hereby authorized in Livingston street.

Route 2. Commencing and connecting with the tracks in and upon Flatbush avenue; thence curving southeasterly in and upon Flatbush avenue to Lafayette avenue; thence easterly in and upon and along Lafayette avenue to Fulton street, and thence curving southeasterly in and upon Fulton street to and connecting with the tracks in and upon Fulton street.

Said routes are shown on a map entitled:

"Map showing the proposed extension in the routes of the Electric Railroad Company, in the Borough of Brooklyn, to accompany petition to the Board of Estimate and Apportionment, dated May 29, 1905."

(A new map to be submitted by the Nassau Company.)

Sec. 2. The grant of this privilege is subject to the following conditions, which shall be complied with by the Nassau Company:

First—The consent in writing of the owners of half in value of the property bounded on said streets and avenues to the construction and operation of said railroad shall be obtained by the Nassau Company within six months of the signing of this contract by the Mayor, and a copy of such consents shall be filed with the Board within such time, or in the event that such consents cannot be obtained the Nassau Company shall within two months thereafter make application to the Appellate Division of the Supreme Court for the appointment of Commissioners in the manner provided by the Railroad Law to determine if said railroad ought to be constructed; otherwise this grant shall cease and determine.

Second—The said right to construct, maintain and operate a double track street surface railroad and the connections as herein described, shall be held and enjoyed by the Nassau Company, its successors or assigns, for the term of ten (10) years from the date when this contract is signed by the Mayor, with the privilege of renewal of said contract for the further period of ten (10) years, upon a fair revaluation of such right and privilege. Such revaluation shall be of the right and privilege to maintain and operate the said railroad by itself, and not to include any valuation derived from the ownership, operation or control of any other railroad by the Nassau Company, its successors or assigns.

If the Nassau Company shall determine to exercise its privilege of renewal it shall make application to the Board, or any authority which shall be authorized by law to act for the City in place of the Board. Such application shall be made at any time not earlier than two years and not later than one year before the expiration of the original term of this contract. The determination of the revaluation shall be sufficient if agreed to in writing by the Nassau Company and the Board.

If the Nassau Company and the Board shall not reach such agreement on or before the day one year before the expiration of the original term of this contract, then the annual rate of compensation for such succeeding ten years shall be reasonable, and either the City (by the Board) or the Nassau Company shall be bound upon request of the other, to enter into a written agreement with each other fixing the rate of such compensation and such amount as shall be reasonable, and if the parties shall not forthwith agree upon what is reasonable, then the parties shall enter into a written agreement fixing such annual rate, and at such amount as shall be determined by three Commissioners to be appointed by a Justice of the Supreme Court sitting in Special Term in the County of Kings.

Third—Upon the termination of this original contract, or if the same is renewed, then at the termination of the said renewal term, or upon the termination of the rights hereby granted for any other cause, or upon the dissolution of the Nassau Company before such termination, the tracks and equipment of the Nassau Company constructed pursuant to this contract within the streets and highways of the City, shall become the property of the City upon the payment to the Nassau Company by the City of a sum equal to the fair and reasonable value of said tracks and equipment; said amount to be determined by an Appraiser to be appointed by a Justice of the Supreme Court sitting in a Special Term, County of Kings, upon motion of the Corporation Counsel of the City.

Fourth—The Nassau Company, its successors or assigns, shall pay to the City for the right to construct, maintain and operate tracks in Livingston street, from Court street to Flatbush avenue, and in Lafayette avenue, from Flatbush avenue to Fulton street, with connections between said tracks and existing tracks, as are herein described, the following sums of money:

An amount equal to 3 per centum of the gross earnings which the Nassau Company shall derive from the operation of the railroad herein described, said gross earnings to be computed for the purposes of this agreement in the following manner:

The rental which said Nassau Company shall charge to all corporations using said railroad under agreement with the said Nassau Company, which rental shall be not lower in rate than the highest rental for the use of tracks in the Borough of Brooklyn now charged by the Brooklyn Heights Railroad Company to any corporation not owned, leased, controlled or operated by the Brooklyn Rapid Transit Company. For the purpose of this agreement the term "all corporations" shall mean all railroad corporations operating railroads in the City of Brooklyn whether owned in whole or in part, leased, controlled or operated by the Brooklyn Rapid Transit Company, or not so owned, leased, controlled or operated. In addition to the rentals already enumerated in this section, the gross earnings shall include an amount which the Nassau Company shall charge against its operating expenses for the rental of the said railroad as herein described and which rental shall not be lower in rate than the highest rental now charged for the use of railroad tracks by the Brooklyn Heights Railroad Company to any corporation not owned, leased, controlled or operated by the Brooklyn Rapid Transit Company. The sums of money herein provided for shall be paid to the Comptroller of The City of New York in equal quarterly payments on the first days of January, April, July and October of each year.

Exceptions Taken by Brooklyn Rapid Transit, with Substitutional Clauses.

Fourth—And in addition to the said annual sum, computed as aforesaid, the Nassau Company shall have the right to charge such corporation or individual a portion of the original cost of said railroad, the amount so charged to be in proportion to the respective use of said railroad.

If at any time during the term of this contract the City shall operate a street surface railroad over the whole or any portion of the railroad which shall be constructed under this contract, the Nassau Company shall allow the City to use the whole, or any part of the track and track equipment, upon payment by the City of an annual sum which shall be no greater in proportion to the use than is provided above in the case of the use of said tracks and track equipment by other street railroad companies.

Any and all payments to be made by the terms of this contract to the City, by the Nassau Company, shall not be considered in any manner in the nature of a tax, but such payments shall be in addition to any and all taxes of whatsoever kind or description now or hereafter required to be paid by any ordinances of the City, or by any law of the State of New York.

Fifth—All compensation received by the Nassau Company from other railroad companies or from the City for the use of the tracks covered by this agreement, shall be included in the amount of gross receipts upon which the Nassau Company is required to pay to the City annually, a tax of three per cent., pursuant to the provisions of the contract dated June 26, 1896, between the Nassau Company and the City of Brooklyn.

Fifth—The charges or payments shall continue throughout the whole term of the contract hereby granted, whether original or renewal, notwithstanding any clause in any statute or in the charter of any other railroad company providing for payments for railroad rights or franchises at a different rate, and no assignment, lease or sublease of the rights or privileges hereby granted, whether original or renewal, or of any part thereof, or of any of the routes mentioned herein, or of any part thereof, shall be valid or effectual for any purpose unless the said assignment, lease or sublease shall contain a covenant on the part of the assignee or lessee that the same is subject to all the conditions of this contract; and that the assignee assumes and will be bound by all of said conditions, and especially said conditions as to payments, anything in any statute or in the charter of such assignee or lessee to the contrary notwithstanding, and that the said assignee or lessee waives any more favorable conditions created by such statute or its charter, and that it will not claim by reason thereof or otherwise exemption from liability to perform each and all of the conditions of this contract.

Sixth—The rights and privileges hereby granted shall not be assigned, either in whole or in part, or leased or sublet in any manner, nor shall title thereto, or right, interest or property therein, pass to or vest in any other person or corporation whatsoever, either by the act of the Nassau Company, its successors or assigns, or by opera-

tion of law, whether under the provisions of the statutes relating to the consolidation or merger of corporations, or otherwise, without the consent of the City, acting by the Board, or its successors in authority, evidenced by an instrument under seal, anything herein contained to the contrary thereof in anywise notwithstanding, and the granting, giving, or waiving of any one or more of such consents shall not render unnecessary any subsequent consent or consents.

Seventh—Nothing in this contract shall be deemed to affect in any way the right of the City to grant to any individual or other corporation a similar right or privilege upon the same or other terms and conditions, over the same streets, avenues or highways, and the right to make the requisite and necessary connections with the tracks of the Nassau Company, its successors or assigns, which shall be constructed under this contract.

The use of the railroad which shall be constructed and maintained in the streets, avenues and highways under this contract, including the tracks, wires and other equipment used in connection therewith, shall be permitted by the Nassau Company, its successors or assigns, to any individual to which the City may have granted, or may hereafter grant, the right or privilege to use streets, avenues or highways, for street railroad purposes, upon payment of an annual sum by the individual or corporation to the Nassau Company, which shall not exceed the legal interest on such proportion of the whole cost of the construction of such railroad, and of the cost of keeping the tracks and track equipment in repair, as the number of cars operated by such company or individual shall bear to the number of cars operated by the companies then using the same, together with the actual cost of the power necessary for the operation of the cars thereon of such individual or corporation and the cost of laying and repairing of pavement and removal of snow and ice, and all the other duties imposed upon the Nassau Company by the terms of this contract, in connection with the maintenance or the operation of the said railroad so used.

The Nassau Company shall not at any time oppose, but shall, upon the request of the Board, consent to the construction or operation of any street surface railroad which may necessitate the use of any portion of the railroad, which shall be constructed under this contract.

If at any time during the term of this contract the City shall operate a street surface railroad over the whole or any portion of the railroad which shall be constructed under this contract, the Nassau Company shall allow the City to use the whole or any part of the track and equipment, without cost to the City.

Eighth—The said railroad may be operated by overhead electrical power, substantially similar to the system of overhead electric traction now in use by street surface railroads in the Borough of Brooklyn, or by any other motive power, except locomotive steam power or horse power, which may be approved by the Board, and consented to by owners of property, in accordance with the provisions of the Railroad Law.

Ninth—The Nassau Company shall commence construction of the railroad herein authorized within three months from the date upon which the consents of the property owners are obtained, or upon the decision of the Appellate Division of the Supreme Court that such railroad ought to be constructed, and shall complete the construction of the same within six months from the same date, otherwise this grant shall cease and determine, and all sums paid, or which may be deposited with the Comptroller of the City, as hereinafter provided, shall thereupon be forfeited to the City; provided that such periods may be extended by the Board for a period or periods not exceeding in the aggregate six months each.

Tenth—The said railroad shall be constructed, maintained and operated subject to the supervision and control of all the authorities of the City who have jurisdiction in such matters, as provided in the Charter of the City.

Eleventh—The said railroad shall be constructed and operated in the latest improved manner of street railway construction and operation, and the railroad and property of the Nassau Company shall be maintained in good condition throughout the term of this contract.

Twelfth—The rate of fare for any passenger upon such railroad shall not exceed 5 cents.

Thirteenth—The cars of the lines of the Nassau Company on said railroad herein described shall be run both day and night as often as the reasonable convenience of the public may require, or as may be directed by the Board.

Fourteenth—The Nassau Company shall attach to each car run over the said railroad proper fenders and wheel guards in conformity with such laws and ordinances as are now in force, or may hereafter, during the term of this contract, be enacted or adopted by the State or City authorities.

Fifteenth—All cars which are operated on said railroad shall be heated during the cold weather in conformity with such laws and ordinances as are now in force, or may hereafter, during the term of this contract, be enacted or adopted by the State or City authorities.

Sixteenth—The Nassau Company, so long as it shall continue to use any of the tracks upon the streets and avenues in which the railroad shall be constructed under this contract, shall cause to be watered the entire roadway of such streets and avenues at least three times in every twenty-four hours, when the temperature is above 35 degrees Fahrenheit, and shall provide for such purpose at least one tank car, to be propelled by electric power, the capacity of which shall be sufficient to water such streets and avenues in a satisfactory manner.

Seventeenth—All cars operated on said railroad shall be well lighted by electricity, or by some lighting system equally efficient, or as may be required by the Board.

Eighteenth—The Nassau Company shall at all times keep the streets, avenues or highways upon which the said railroad is constructed, between its tracks, the rails of its tracks and for a distance of 2 feet beyond the rails, on either side thereof, free and clear from ice and snow; provided, that the Nassau Company shall, at the option of the Commissioner of Street Cleaning, enter into an agreement for each winter season, or part thereof, to clean an equivalent amount of street surface from house line to house line.

The Nassau Railroad Company shall pave that portion of all streets which shall lie between lines parallel and 2 feet distant from the outer rails of said railroad with such materials as may be determined proper by the President of the Borough of Brooklyn, and shall maintain such pavement and keep same in proper condition and repair, all work in connection therewith to be done in accordance with the specifications prescribed by the President of the Borough. And the City shall have the right to change the material or character of the pavement of any street, avenue and highway, and in that event the Nassau Company, its successors or assigns, shall be bound to replace such pavements in the manner directed by the proper City officer, at its own expense, and the provision as to repairs herein contained shall apply to such renewal or altered pavement.

Twentieth—In case of any violation or failure to comply with any of the provisions herein contained, this contract may be forfeited by a suit brought by the Corporation Counsel, on notice of ten days to the Nassau Company, or at the option of the Board by resolution of said Board, which said resolution may contain a provision to the effect that the railroad constructed and in use by virtue of this contract, shall thereupon become the property of the City without proceedings at law or equity.

Twenty-first—If the Nassau Company, its successors or assigns, shall fail to give efficient public service at the rates fixed, or fail to maintain its structures in good condition throughout the whole term of this contract, the Board may give notice to the Nassau Company specifying any default on the part of the Nassau Company, and requiring the Nassau Company to remedy the same within a reasonable time, and, upon failure of the Nassau Company to remedy such default within a reasonable time, the Nassau Company shall for each day thereafter which the default of defect remains, pay to the City the sum of two hundred and fifty dollars (\$250) as fixed or liquidated damages, or the Board, in case such structures which may affect the surface of the streets shall not be put in good condition within a reasonable time after notice by the Board as aforesaid, shall have the right to make all needed repairs at the expense of the Nassau Company, in which case the Nassau Company shall pay to the City the amount of the cost of such repairs, with legal interest thereon, all of which sums may be deducted from the fund hereinafter provided.

Twenty-second—The Nassau Company shall assume all liability to persons or property by reason of the construction or operation of the railroad authorized by this contract, and it is a condition of this contract that the City shall assume no liability whatsoever to either persons or property on account of the same, and the Nassau Company hereby agrees to repay the City any damage which the City shall be compelled to pay by reason of any acts or default of the company.

Twenty-third—This grant is upon the express condition that the Nassau Company within thirty (30) days after the signing of this contract by the Mayor, and before

anything is done in exercise of the rights conferred hereby, shall deposit with the Comptroller of The City of New York, the sum of ten thousand dollars (\$10,000), either in money or securities, to be approved by him, which fund shall be security for the performance by the Nassau Company of all of the terms and conditions of this contract, especially those which relate to the payment of the annual charges for the privilege hereby granted, the efficiency of the public service rendered, the repairs of the street pavement, the removal of snow and ice and the quality of construction of the railroad; and in case of default in the performance by the Nassau Company of such terms and conditions the City shall have the right to cause the work to be done and the materials to be furnished for the performance thereof after due notice, and shall collect the reasonable cost thereof from the said fund without legal proceedings; or after default in the payment of the annual charges, shall collect the same, with interest, from the said fund after ten days' notice in writing to the Nassau Company; or in case of failure to keep the said terms and conditions of this contract relating to the headway, heating and lighting of cars, fenders, wheel-guards and watering of street pavements, the Nassau Company shall pay a penalty of fifty dollars (\$50) per day for each day of violation, and the further sum of ten dollars (\$10) per day for each car that shall not be properly heated, lighted or supplied with fenders or wheel-guards, in case of the violation of the provisions relating to those matters.

The procedure for the imposition and collection of the penalties in this contract shall be as follows:

The Comptroller of the City, on complaint made, shall in writing, notify the Nassau Company, through its president, to appear before him on a certain day not less than ten (10) days after the date of such notice, to show cause why it should not be penalized in accordance with the foregoing provisions. If the Nassau Company fails to make an appearance or, after a hearing appears in the judgment of the Comptroller to be in fault, said Comptroller shall forthwith impose the prescribed penalty, or where the amount of the penalty is not prescribed herein, such amount as appears to him to be just, and without legal procedure withdraw the amount of such penalty from the security fund deposited with him. In case of any drafts made upon the security fund the Nassau Company shall, upon ten (10) days' notice in writing, pay to the Comptroller of the City a sum sufficient to restore said security fund to the original amount of ten thousand dollars (\$10,000), and in default thereof this contract shall be cancelled and annulled at the option of the Board, acting in behalf of the City. No action or proceeding or right under the provisions of this contract shall affect any other legal rights, remedies or causes of action belonging to the City.

Section 3—This contract is also upon the further and express condition that the provisions of Article IV. of the Railroad Law, applicable thereto, and all laws or ordinances now in force, or which may be adopted affecting the surface railroads operating in the City, not inconsistent with the terms and conditions hereinbefore fixed, shall be strictly complied with by the Nassau Company.

Section 4—The Nassau Company, the Transit Company and the Brooklyn Company each promises, covenants and agrees on its part and behalf, to conform to and abide by and perform all the terms and conditions and requirements in this contract fixed and contained.

EXHIBIT No. 4.

ATLANTIC AVENUE SURFACE RAILWAY.

Application of Long Island Railroad for Franchise.

Claim of Long Island Railroad.

The Long Island Railroad claims the rights of franchise for the centre of Atlantic avenue on the surface (notwithstanding the fact that the City has spent \$1,443,000 to remove steam railway tracks from said surface), and makes this application only for this privilege. "One track to be laid on each side of said Atlantic avenue in the portions thereof adjoining the places where the right of way of the Long Island Railroad Company is obstructed by the elevated and depressed tracks, etc."

City demurs.

The City takes the stand that the "Atlantic Avenue Improvement Act" forfeited to the Long Island Railroad all rights to the surface of said thoroughfare.

Proposition.

That if a franchise is to be considered at all, it must be a new transaction for a franchise for the whole route, and on such terms and conditions as now apply in the granting of new franchises.

Preferably, any new franchise on this thoroughfare should be granted to a street surface railway corporation and not to a steam railway company.

BUREAU OF FRANCHISES, BOARD OF ESTIMATE AND APPORTIONMENT.

Result of Investigation of the Application of the Long Island Railroad Company as Lessee of the Nassau Electric Railroad Company, and the Nassau Electric Railroad Company, for the Right to Construct a Street Surface Electric Railroad on Portions of Atlantic Avenue, Borough of Brooklyn, November 26, 1906.

Board of Estimate and Apportionment,
Bureau of Franchises, Room 79, No. 280 Broadway,
November 26, 1906.

Hon. GEORGE B. McCLELLAN, Mayor, and Chairman of the Board of Estimate and Apportionment:

Sir—The Long Island Railroad Company, as lessee of the Nassau Electric Railroad Company, and the Nassau Electric Railroad Company, under date of July 6, 1906, presented an application to the Board of Estimate and Apportionment for the right, franchise and consent of The City of New York to the construction and operation of a double-track electrical railroad on the surface of portions of Atlantic avenue, Borough of Brooklyn, "one track to be laid on each side of said avenue in the portions thereof adjoining the places where the right-of-way of the Long Island Railroad Company is obstructed by the elevated and depressed tracks," to wit, at the following places:

1. Between a point 40 feet westerly from the westerly side of Bedford avenue and a point about 150 feet easterly from the easterly line of Nostrand avenue, a distance of about 1,200 feet.
2. Between a point about opposite the easterly line of Columbus place and a point about opposite the easterly side of Cooper place, a distance of about 1,225 feet.
3. Between a point approximately in the centre of Stone avenue or Eastern Parkway Extension and a point about opposite the easterly line of Alabama avenue, "except the portion on the southerly side of Atlantic avenue between Snedeker and Alabama avenues occupied by the existing tracks of the Brooklyn and Rockaway Beach Railroad Company, over which the Long Island Railroad Company has the right to operate," a distance of about 2,300 feet.

The petition was presented to the Board on September 14, 1906, and referred to the Bureau of Franchises.

The proposed road is to extend from Flatbush avenue to Essex street, a distance of about five miles.

Surface trolley tracks have been laid along the former right of way in the centre of Atlantic avenue from a point about 100 feet west of Vanderbilt avenue to a point about 25 feet east of Essex street, with the exception of the portions as above described, and a single track has also been laid in both driveways of Atlantic avenue, outside of the former right-of-way across Nostrand avenue, a total length of about four miles. The only portion, besides the turnouts applied for, on which tracks have not been laid is that between Flatbush and Vanderbilt avenues, a distance of about 2,500 feet.

It is for the right to connect the portions of the tracks laid upon the former right-of-way by constructing turnouts outside of said right-of-way and in the north and south roadways of Atlantic avenue that the companies now make application.

It will thus be seen that they do not ask for a franchise to construct a continuous railroad, but simply three turnouts, unconnected with each other, and which, by themselves, cannot permit of the operation of a railroad. These turnouts are of value only in connection with the tracks as laid, and vice versa, the tracks as laid are valueless unless connected by the turnouts.

The Long Island Railroad formerly operated a steam surface railroad on the thirty (30) foot strip in the centre of Atlantic avenue until removed from the surface by the so-called Atlantic Avenue Improvement Act.

The Long Island Railroad Company now operates an electrical passenger railroad and steam freight railroad in Atlantic avenue, eastwardly from its intersection with Flatbush avenue. This road is partly tunnel and partly an elevated railroad, and is situated in the centre of Atlantic avenue in a right-of-way which varies from 30 to 66 feet in width.

Fully to understand the situation in Atlantic avenue, it is necessary to recite briefly the history of the various companies which have operated in said avenue, and more particularly from Flatbush avenue easterly, and the present rights therein.

SYNOPSIS OF RAILROAD RIGHTS IN ATLANTIC AVENUE.

The Brooklyn and Jamaica Railroad Company, chartered by chapter 256 of the Laws of 1832, was authorized to build a railroad from any point in Brooklyn to the Village of Jamaica, and constructed a steam surface railroad upon a private right-of-way, portions of which are now included within the limits of Atlantic avenue. Chapter 178 of the Laws of 1834 incorporated the Long Island Railroad Company and authorized it to construct a railroad eastwardly from Brooklyn throughout Long Island.

The Brooklyn and Jamaica Railroad Company was authorized by chapter 94 of the Laws of 1836 to lease its road to the Long Island Railroad Company, and on December 1, 1836, such a lease was made.

In 1844 the Long Island Railroad Company was permitted to construct a tunnel in Atlantic avenue, from Columbia street to Boerum street, on condition that all surface tracks between the streets named should be removed, and upon the further condition that certain other tracks in the vicinity of Atlantic avenue, maintained by the company, should also be removed from the surface of the street; the company was given by the same act permission to use steam power within the City of Brooklyn.

Chapter 220 of the Laws of 1853 granted to the railroads on Long Island the right to use their railroads in the same manner and to propel cars over the same through their entire length as that used by them at the time of the passage of the act. Section 2 of said act provided that it should take effect only on condition that certain land owned by the Brooklyn and Jamaica Railroad Company along Atlantic avenue should be ceded to the City as and for a public street. Pursuant to said act, on April 10, 1855, a tripartite agreement was made between the Brooklyn and Jamaica Railroad Company, the Long Island Railroad Company and the City of Brooklyn, wherein certain land was ceded to the City of Brooklyn, while Atlantic avenue was straightened and widened and a strip 30 feet in width in the centre thereof was granted to the Brooklyn and Jamaica Railroad Company for railroad purposes. This agreement was ratified by chapter 475 of the Laws of 1855, and the Common Council of the City of Brooklyn was authorized to extend Atlantic avenue to a width of 120 feet from Classon avenue to Schuyler street.

The agreement referred to was carried out and Atlantic avenue widened in conformity therewith.

Chapter 484 of the Laws of 1859 provided for the closing of the tunnel of the Long Island Railroad Company in Atlantic avenue and a restoration of said street to its proper grade, and for the relinquishment by said railroad company of its right to use steam power in the City of Brooklyn.

In further pursuance of said act, the railroad company received as compensation for the relinquishment of its rights the sum of \$125,000. Accordingly, the tunnel was closed and steam was removed from Atlantic avenue, as provided by said act.

Steam Abolished.

Chapter 460 of the Laws of 1860 repealed all laws authorizing the use of steam within the City.

In April, 1860, by an agreement between the Brooklyn and Jamaica Railroad Company and the Long Island Railroad Company, the \$125,000 referred to was paid to the former company and the lease of 1836 between the parties named was cancelled.

On January 18, 1867, the Brooklyn and Jamaica Railroad Company leased that portion of its railroad from the Village of Jamaica to the City of Brooklyn to the Long Island Railroad Company, and gave said Long Island Railroad Company permission to run its cars over the tracks of the Brooklyn and Jamaica Railroad Company between the City limits and the premises of the Long Island Railroad Company on the southerly side of Atlantic avenue, between Classon and Franklin avenues.

In 1867 the Brooklyn and Jamaica Railroad was leased to William Richardson for a term of forty years from November 15 of that year, subject to the above lease to the Long Island Railroad Company, which was assigned to said Richardson. In March, 1872, a mortgage made by the Brooklyn and Jamaica Railroad Company for \$100,000 was foreclosed and the property sold to William Richardson.

In May, 1872, the Atlantic Avenue Railroad Company was incorporated as a street surface railroad, and in 1874 Richardson conveyed all the property of the Brooklyn and Jamaica Railroad Company purchased by him at the foreclosure sale to the Atlantic Avenue Railroad Company.

Restoration of the Use of Steam.

Chapter 187 of the Laws of 1876 authorized the use of steam power on Atlantic avenue, between Flatbush avenue and the City Line, by the Atlantic Avenue Railroad Company, or the Long Island Railroad Company, as lessee, and April 10, 1876, the Common Council of the City of Brooklyn granted said companies the same permission.

Prior to 1861 the Brooklyn and Jamaica and the Long Island Railroad Companies operated by steam on Atlantic avenue. In the month of May of that year the use of steam ceased within the city limits, and until April, 1877, horse cars only were operated on said avenue. Since 1877 no street surface railroad has been operated on the 30-foot strip in the centre of Atlantic avenue.

In March, 1877, the Atlantic Avenue Railroad Company leased to the Long Island Railroad Company for a term of ninety-nine years from June 1, 1877, its railroad from Flatbush avenue easterly to the City line. This lease is still in force, and has about seventy years to run.

The Common Council, on December 20, 1880, granted permission to the Atlantic Avenue Railroad Company to lay tracks and operate horse cars on the southerly side of Atlantic avenue, between Fort Greene place and Washington avenue, to be operated in connection with the routes of said company in Atlantic avenue (west of Flatbush avenue), Washington avenue and Butler street. Such tracks were laid and operated and were temporarily removed upon request of the Atlantic Avenue Improvement Commission.

Upon advice of the Corporation Counsel a permit for the relaying of these tracks has recently been issued by the President of the Borough of Brooklyn.

In January, 1899, the Atlantic Avenue Railroad Company was merged with the Nassau Electric Railroad Company, which had acquired all the stock of this company by a readjustment of the securities of the Nassau Company.

In February, 1899, about 90 per cent. of the preferred stock and over 99 per cent. of the common stock of the Nassau Electric Railroad Company was acquired by the Brooklyn Rapid Transit Company, the holding company of all the elevated and surface lines except one in the Borough of Brooklyn.

Atlantic Avenue Improvement Act.

In the layout of Atlantic avenue it was designed to be 120 feet in width and to be one of the main arteries of communication from the East river through the City of Brooklyn to the suburban places on Long Island. The presence of the steam surface railroad of the Long Island Railroad Company through the centre of the avenue defeated and nullified this original intention to such an extent that chapter 394 of the Laws of 1896 was passed, authorizing the appointment by the Mayor of the City of Brooklyn of a commission to examine into and report a plan for the relief and improvement of Atlantic avenue. Said examination and report were accordingly made, and pursuant to chapter 499 of the Laws of 1897 the Board for the Atlantic Avenue Improvement was created to carry out the purposes of the said act by improving At-

lantic avenue between Flatbush and Atkins avenues, and removing therefrom the steam railroad of the Long Island Railroad Company, then operating on the surface of said avenue.

Said act provided, in part, as follows:

"Section 1. The grade of the railroad of the Atlantic Avenue Railroad Company of Brooklyn, now leased to and operated by the Long Island Railroad Company, should be changed by said companies by depressing the right of way from Flatbush avenue to near the easterly side of Bedford avenue to such depth as to allow the complete restoration of the surface of said Atlantic avenue free from steam railroad tracks, fences, gates, signal posts or other appurtenances of the railroad. From Bedford avenue to a point between Bedford and Nostrand avenues the right of way and railroad tracks should be used and operated in an open cut, with proper retaining walls. Between Nostrand and Ralph avenues the tracks should be raised and operated on an elevated structure. From Ralph avenue the tracks were to descend to the grade of Atlantic avenue at a point between Ralph and Howard avenues. From there the right of way and tracks were to be used and operated in an open cut with proper retaining walls to the west side of Cooper place. From said point the right of way was to be depressed so that said right of way and tracks should be used and operated below the grade of Atlantic avenue, so as to leave the surface of said avenue free from all railroad tracks and other appurtenances to a point near Stone avenue. Between Stone avenue and Jardine place, the right of way and tracks were to be used and operated in an open cut with proper retaining walls, coinciding at Jardine place with the grade of Atlantic avenue. From there to Snedeker avenue the right of way and tracks were to be used and operated on a surface grade. From Snedeker avenue easterly the tracks were to be operated on an elevated structure to a point near Linwood street, where they should descend to the grade of Atlantic avenue, near Atkins avenue, and from that point eastward the right of way and tracks should be operated as then located.

Sec. 5. That the cost of this work shall be equally divided between the companies and the City, provided, however, that the share to be paid by the City shall not exceed \$1,250,000.

Sec. 9. Passenger trains over the depressed right of way and tracks and the elevated portions of the railroad are to be operated by some power other than steam locomotives, but these may be used to move freight trains, and in cases of emergency, passenger trains.

It was plainly and clearly the purpose of this act to remove from the surface of Atlantic avenue the steam railroad and all of its appurtenances, and to leave the surface of said avenue free, clear and unobstructed, except at the points where walled-in open cuts were necessary. The intention was evidently to transfer the right of way of the railroad from the surface of the avenue to a similar position under or over said avenue, depending upon the grade; or, in other words, that the railroad should relinquish its right of way on the surface when removed to a depressed or elevated position.

The provisions of the act have been carried out and the railroad is now operating upon the new right of way. The whole of the amount of \$1,250,000 named in the law has been expended by the City, and, in addition thereto, the sum of \$170,000 for making alterations in the sewer system and \$23,000 for the relaying of water mains, which changes were necessitated by the relocation of the railroad.

The representatives of the companies applying claim that the right to construct a street surface railroad is under a grant previously made, and by the provisions of chapter 497 of the Laws of 1899, but no facts have been presented sufficient to convince me of such claim.

This act of 1899 provides:

"Whenever the right of way, grade or tracks of any steam railroad * * * in any city of the first class are required by law to be changed by elevating or depressing the same for the purpose of discontinuing the use of steam power, * * * such change of grade shall not be deemed to curtail or affect any right which such railroad company may have to maintain and operate a surface passenger railway within the limits of the right of way so depressed or elevated, and over or under the railroad tracks so depressed or elevated, with all turnouts, sidings and tracks necessary to secure the continuous connection and operation of such surface railroad."

"In the event that any such turnouts, sidings or tracks shall extend beyond the lines of the right of way of such railroad corporations so depressed or elevated, * * * such turnouts, sidings or tracks * * * shall only be constructed upon condition that the consent of the owners of one-half in value of the property bounded on, and the consent also of the local authorities having the control of that portion of such street or highway upon which it is proposed to construct such turnouts, sidings or tracks, shall be first obtained."

From such evidence as has been presented by the Railroad Companies, and from the searches made by the Bureau, the following seems to be the present status of the case:

At the time of the passage of the Atlantic Avenue Improvement Act, the Long Island Railroad was operating on Atlantic avenue by virtue of the lease from the Atlantic Avenue Railroad Company, made in 1877. This act, which was accepted by the railroad company, changed the location of the railroad from the surface, and work was commenced in accordance therewith. Chapter 497 of the Laws of 1899, as quoted above, was subsequently enacted, and, although a general law, it would seem to be particularly applicable to the railroad operating on Atlantic avenue and to be especially in its interest. It would appear to attempt to revive for such railroad a right which had never been exercised, except when steam was prohibited on Atlantic avenue, and cars were propelled thereon by horses. The only right of the Long Island Railroad on Atlantic avenue was by the above mentioned lease. So far as I can ascertain, the Atlantic Avenue Railroad Company has never operated a street surface railroad on Atlantic avenue, except between Flatbush and Washington avenues, under the provisions of an ordinance granted by the Common Council on December 20, 1880, and then not in the centre of said avenue, where the present right is claimed. In other words, two rights, one for a steam railroad and the other for a street surface railroad, have never been exercised in the centre of Atlantic avenue east of Flatbush avenue at the same time, and in what manner, by the legislation quoted, this dual right may now be exercised I am unable to determine. I believe that the situation has been so complicated by leases, foreclosure sales, mergers and legislative enactments that, before any action is taken by the Board, this question of the right as claimed by the company should be submitted to the Corporation Counsel for an opinion as to its legality.

In accordance with established custom, this Bureau forwarded copies of the application and accompanying plans to the President of the Borough of Brooklyn and the Commissioner of Water Supply, Gas and Electricity, with a request that these officials have the same examined by their various Bureaus, and notify this Bureau of any changes in location or construction which they would deem it advisable to make, and to suggest any terms or conditions which, in their judgment, should be inserted in the form of contract to be adopted by the Board.

In the reply received from the President of the Borough of Brooklyn he states:

"I do not believe this application should be considered in its present form. The public will be put to considerable inconvenience by the construction of this line. * * * The roadway between the abutments and the curb is only 19 feet in width at certain points, and the use of part of this space by any railroad company will certainly reduce the value of Atlantic avenue as a public highway."

"In view of the further fact that the consent of The City of New York to the construction of these sections of track upon the public highway is necessary to the operation of the surface railroad which it is proposed to operate in Atlantic avenue, and that the 30-foot strip claimed by the railroad company is of absolutely no value for this purpose unless such consent be given, I am of the opinion that this whole proposition should be considered by the Board of Estimate and Apportionment in its entirety, and that the railroad company, in view of the favors which it seeks, should acknowledge the jurisdiction of the Board of Estimate and Apportionment by making application for the consent of The City of New York to construct a surface railroad for the entire length of Atlantic avenue."

It is also suggested in this communication that if a franchise is granted, it should be a non-exclusive one, and that the City reserve to itself the right to use the tracks laid under the grant, and to consent to the use of the railroad by corporations other than those making application for the franchise.

In a communication dated October 17, 1906, Gen. George W. Wingate, general solicitor for the Company, advises me that its engineer stated that under the proposed construction of the tracks at the turnouts, it would be necessary to leave a clearance of a foot and one-half between the sides of the cars and the abutments, which would leave a roadway of a width of between 9 and 10 feet only, and that it would be much better to narrow the sidewalks 6 feet and thus increase the width of the roadway, than by trying to place the tracks nearer the abutments and incur the danger of injury to either passengers or pedestrians.

The President of the Borough of Brooklyn, in his communication, as before stated, was also of the opinion that the construction of the turnouts would put the public to considerable inconvenience and reduce the value of Atlantic avenue as a public highway.

The reply from the Commissioner of Water Supply, Gas and Electricity states that there are no technical objections to the construction of the railroad, and suggests certain conditions to be imposed which will be incorporated in any form of contract submitted to the Board for its approval.

Under date of November 22, 1906, General Wingate advises me that the consent of a majority of the owners of property abutting on the turnouts between Olive place and Alabama avenue, and between Columbus and Lewis places, has been obtained for the construction of the railroad at these points; but that the necessary consents have not been obtained for the turnout between Bedford and New York avenues. Application has been made to the Appellate Division of the Supreme Court for its consent in lieu thereof, but action thereon has been deferred until January, 1907, awaiting the action of the Board of Estimate and Apportionment.

Communications in favor of and protesting against the construction of the proposed railroad have been presented to the Board and received by the President of the Borough of Brooklyn and referred to this Bureau. A list of all such communications is appended to this report.

Some of these communications object to the construction of the railroad for the reason that the north and south roadways of Atlantic avenue are so narrow that congestion of traffic would be caused at the turnouts; and others on the ground that there is no public necessity for the proposed railroad, and point out the existing transit facilities.

As regards the matter of public necessity, the following will show the lines now operating which may affect this question:

On Fulton avenue on the north, which is in no place more than two blocks and for the greater part of the way only one block distant, an elevated road is operating between Flatbush avenue and Essex street, the limits of the proposed road, and from Sackman avenue westerly there is a surface line. On the south there is a trolley line on Bergen and Liberty avenues at distances varying from one to three blocks away. Between Flatbush and Georgia avenues, a distance of about four miles, and the most thickly settled portion of Atlantic avenue, there are twelve intersecting cross-town lines running north and south, nine of which cross Atlantic avenue; one runs from Atlantic avenue northerly and two run southerly. There is also an elevated railroad running north and south through Snedeker avenue, with a station at Atlantic avenue.

Conclusions and Suggestions.

It will be seen from the foregoing that the taxpayers of the former City of Brooklyn and of The City of New York have twice paid for the removal of steam from the surface of Atlantic avenue, and in consequence an electric passenger and steam freight railroad is now being operated under or over Atlantic avenue, with greater facilities than ever before; that the operation of a railroad by steam on Atlantic avenue up to the present time has acted as a very serious detriment to the development of the section through which it passes; that the purpose of the Atlantic Avenue Improvement Act was to give the public free and uninterrupted use of the surface of Atlantic avenue. It would appear to me that there was no intention, after virtually subsidizing the railroad to the extent of nearly two million dollars (\$2,000,000), to give to that railroad or any other an additional valuable right, when the terms of the City Charter so specifically provide the manner in which future rights shall be obtained. Further, it would seem, if such had been the intent of the Legislature, it would have amended the Atlantic Avenue Improvement Act rather than pass a general act, to wit: chapter 497 of the Laws of 1899, which, as has been shown, applies to the railroads in question.

I would suggest, therefore, that the present application be denied for the following reasons:

1. That it is possible that a grant of the application in its present form would be against public policy.

(a) The application presented is not one for the grant of a continuous street surface railroad, but is an application to connect tracks already laid in order to operate a continuous line of railroad.

(b) If this franchise is granted it should be to a street surface railroad, and not to a steam railroad as the lessee of a street surface railroad and a street surface railroad jointly. The operation of a street surface railroad should be governed solely by the laws applied to that class of railroads, and a joint ownership of such rights might, in a measure, defeat the effect of such laws.

(c) The City should have entire control over any railroad receiving a grant of this character, so that the stock and bond issues may be controlled, and that there may be no merger or consolidation with other railroads without the consent of the City, and in order that the operation of the proposed railroad may be considered as a whole, and terms and conditions imposed regulating the question of transfers to other roads, compensation to the City, rate of fare, etc., as in the present form of franchises for similar privileges which have been granted by the Board. It might subsequently be claimed that if the right should be granted as applied for the City would only have jurisdiction over three widely separated portions of railroad of a combined length of nine-tenths of a mile, or 18 per cent. only of the whole length of the railroad, which is approximately five miles.

(d) The Atlantic Avenue Improvement Act provides for the depression or elevation of the right of way of the Long Island Railroad and the Atlantic Avenue Railroad, and as this act has never been specifically amended there would appear to be no right of way left to the railroad companies upon the surface of Atlantic avenue on which to operate a street surface railroad, as claimed.

2. That the operation of the proposed railroad would be absolutely dangerous at one of the points asked for, viz.: at the third connection, where the proposed line will cross seven steam railroad tracks at grade.

From Havens place to Snedeker avenue, the tracks of the Long Island Railroad, in the centre of Atlantic avenue, are at grade and are unprotected by either retaining wall or fence. It is alongside of these unprotected tracks that the proposed trolley will run. Between Eastern parkway extension and Alabama avenue, the proposed east bound trolley track would enter the south roadway of Atlantic avenue, and would run on a descending grade to a point about 370 feet east of Sackman street, where it would cross a double track of the Long Island Railroad leading from Atlantic avenue to the Manhattan Beach Division. At Vesta avenue, 275 feet beyond the above described crossing, the trolley would cross at grade the double track steam railroad of the Manhattan Beach Division in said Vesta avenue; but this crossing will be eliminated when the tunnel is constructed in said avenue. At a point about 130 feet east of Vesta avenue, a single track steam turnout from the main line would be crossed at grade. At Snedeker avenue, about 100 feet east of the last crossing, the trolley would cross a double track steam connection from the main line to the Vesta avenue tracks, and unite with a double track steam turnout of the Canarsie Railroad.

In my opinion, the operation of the proposed trolley line over this network of steam railroad tracks would be attended with great danger. It will also be seen that between the point first above described as 370 feet east of Sackman street and Georgia avenue, the entire south roadway of Atlantic avenue would be given over to railroad purposes and all vehicular traffic forced into north roadway, which is approximately 19 feet in width and is to contain the west-bound track of the proposed line. Conditions at this point should be improved and rendered less dangerous before any application for a street surface line in this neighborhood be considered by the Board.

The above described grade crossings should either be abolished previous to any grant for the operation of a street surface railroad in this locality, or by reason of an imposed condition of such grant. If one or the other of these courses is not followed, it is extremely probable that within a short time the railroad will ask for and obtain the enactment of a law in relation to the removal of grade crossings, particularly

applicable to those under discussion, by the provisions of which a portion of the cost would be placed upon the City.

3. The compensation offered is inadequate.

In their application, the Companies state that in their opinion \$100 per year for each of the three connections asked for would be a reasonable rent to pay for the privileges, and offer to pay such sum to the City for its consent to the construction of the railroad. As before stated, if permission is to be granted at all for the construction and operation of this road, it should be for the entire length, and not for disconnected portions. A compensation could then be determined upon which would be both adequate to the City and just to the railroad companies.

Should, however, the Board decide that the granting of the application in its present form would not be against the interests of the public, I would suggest that the question of the Companies' right to operate a street surface railroad on the former right of way in the centre of Atlantic avenue and across the intervening streets, intersecting such right of way, be submitted to the Corporation Counsel.

At a meeting of the Board, held November 9, the Board, in pursuance of law, fixed Friday, December 7, as the date for a public hearing, and directed that due advertisement should be made in two daily newspapers to be designated by the Mayor and in the CITY RECORD.

The New York "World" and New York "Tribune" were designated, and affidavits of publication should be filed with the Board prior to the hearing.

Respectfully,

HARRY P. NICHOLS, Assistant Engineer.

A communication requesting that the application be granted has been received from:

E. F. Linton, Secretary of Board for the Atlantic Avenue Improvement.

Communications opposed to the granting of the application have been received from:

Frank Lefferman.

Ed. McGreal.

Benj. Falk.

Z. T. Trimble.

F. Fitzgerald.

Geo. Fredericks.

A. Armet.

J. DeWald.

V. Jowelli.

Trolley Franchise in Committee Hands—Atlantic Avenue Application of Long Island Railroad is Referred to Three City Officials.

December 8, 1906.

No action was taken by the Board of Estimate and Apportionment yesterday on the application of the Long Island Railroad for a franchise to complete and operate a trolley line in Atlantic avenue, and it was referred to a subcommittee consisting of Comptroller Metz, Borough President Coler and President of the Board of Aldermen McGowan.

The company is seeking a franchise that will permit the construction of turnouts at those places where the trains of the Long Island road enter and emerge from the tunnel and where abutments have been erected at the places where the trains go on the elevated structure. The company asserts its ownership to the land in the street in other places, so that on its theory it does not have to ask the City for a franchise.

Engineer Nichols, of the Bureau of Franchises, has reported against the granting of the franchise, and has raised the question of the right of the company to lay a track in the street. He calls attention to the fact that the City paid nearly \$2,000,000 toward the removal of the railroad tracks from the street and declares that it could not have been the intention of the Legislature to have their place taken by trolley tracks.

EXHIBIT No. 5.

GENERAL LETTER NOVEMBER 23, 1906, PRESIDENT COLER TO PRESIDENT WINTER, B. R. T.

Embodying Erroneous Assumption of Hostile Attitude, Franchise Matters, Nostrand Avenue Extension, Livingston Street, etc.; Coney Island Five-Cent Fare Litigation, Railway Street Paving, A. R. T. Company, Ash Contract, etc.

November 23, 1906.

Mr. E. W. WINTER, President, Brooklyn Rapid Transit Company, No. 168 Montague Street, Brooklyn:

Dear Sir—You wrote me on September 13, requesting me to resubmit to the Corporation Counsel the question as to the franchise rights of the Brooklyn Heights Railroad Company in Nostrand avenue, from Flatbush avenue to the old town line between Gravesend and Flatlands, which question had been the subject of an opinion from the Corporation Counsel dated July 13, 1906. In the opinion of July 13, it was held that the alleged franchise under which your company proposed to build a road between the points indicated was invalid, and that I would not be justified in granting the permit to open the street for the purpose of installing railroad tracks, etc., for which you had made application. As I was convinced that the extension of the Nostrand avenue line would be beneficial to property interests in the section of the Borough which it was proposed to have that extension traverse, and as the counsel for the property owners as well as your counsel had advised me that there were important decisions and arguments which could be cited and advanced before the Corporation Counsel, and which might alter his view of the matter under consideration, I complied with your request of September 13, and wrote to the Corporation Counsel on September 25, requesting him to again take up the matter and give consideration to the additional arguments which you and the counsel for the property owners proposed to present before him. In that letter I offered a suggestion which had been submitted to me by one of the counsel for the property owners, that an appeal be made to the courts on an agreed statement of facts, and that I, in the meanwhile, issue a revocable permit on the agreement of your company to make application for a franchise to the Board of Estimate and Apportionment should the courts finally determine that the franchise claimed by you was invalid. Regarding this suggestion I said: "This would appear to me, if you think it proper, a not unwise solution of the problem before us, and one which would be prejudicial to neither the rights of the railroad company nor the City."

I have just received an answer to my letter of September 25, which answer is dated November 20, 1906, and in which the Corporation Counsel reiterates his former opinion, and informs me that, in view of that opinion, he cannot advise me to issue a permit. I send you herewith a copy of the Corporation Counsel's opinion of November 20, 1906.

I am sorry he finds the law to be as it is in this particular case, as I think the interests of the public demand transportation facilities in the territory which it was proposed to serve by this extension. I hope, therefore, that your company will either test its right to the franchise in court, or make application for a new franchise without delay.

While on this subject it may not be amiss to say to you some things which I have in mind relative not only to these old franchise grants, but to various matters which have been under discussion by your subordinates and this office during the last eleven months.

When I assumed office there was very general complaint against the character of the service given by your company throughout Brooklyn, and, as poor transportation facilities must necessarily impede the development of any community, I regarded it as one of my most important duties to the public to do whatever might lie in my power as President of the Borough to compel a betterment of the service. My published statement to this effect was regarded seemingly by some of the officials of your corporation as a sort of declaration of war, and they assumed, without any ground whatsoever, that I would oppose every application for a franchise made by you without giving any consideration whatever to the merits of each case as it was presented. As a result of that assumption there was a manifest reluctance on the part of your company to appeal to the Board of Estimate and Apportionment for a franchise, and the reason that was publicly given for this reluctance was the apprehension that I might use my position in the Board of Estimate and Apportionment to cause either

a denial of your petitions or the infliction upon you of unjust, if not prohibitive, franchise conditions. I want to ask you now, as a matter of ordinary fairness, to say whether or not my position in the Board of Estimate and Apportionment and out of it has justified the statements made in this respect by officials of your company? There has been, as I remember it, only one important franchise application of yours considered by the Board of Estimate in the last few months, to wit: the Nassau Company's application for a franchise in Livingston street. While I believed it was possible for the City to lay the tracks in Livingston street and rent them to any railroad corporation, it is true that I opposed giving the franchise to the Nassau Company. When advised by the Corporation Counsel that under the present statutes the construction of a railroad by the City was not possible, I suggested to the Franchise Bureau a clause which was embodied in a report of that bureau and afterwards accepted by you. This clause I believed to be very important, and it is my impression that it should be made a part of every franchise of this character hereafter granted by the Board of Estimate and Apportionment. It provides, as you know, for the retention by the City of the right to either use the tracks laid down itself or permit, upon terms fair to the City and the original grantee, the use of the tracks for railroad purposes by other corporations that may in the future apply for the right to make such use of them. With the other conditions proposed in the report of the Franchise Bureau on this matter I had nothing to do. I have had no difficulty at all in coming to an agreement with your company as to what the terms of that franchise should be, to wit:

1. The acceptance of the non-exclusive clause mentioned above, to which you have already agreed.

2. The payment to the City by the Nassau Company of three per cent. of its gross receipts on the operation of a railroad in Livingston street, the company to make the same charge for the use of its tracks in Livingston street to the other corporations operated by the Brooklyn Heights Railroad Company as it would make to any corporation not controlled by the Brooklyn Rapid Transit Company, and to include the income received from such charges in its gross receipts. Mr. Yeomans, of your company, and Col. Williams have informed me that this condition is acceptable to your corporation.

3. The term of the franchise to be ten years. This I am informed is also acceptable to your company.

4. That the railroad company should install and keep in repair the pavement between its tracks and for a distance of two feet outside of the tracks on each side. This your company also accepted.

As to the question of the franchise grants formerly made to you and now held by the City authorities to be invalid, I have simply taken an attitude which my oath of office obliges me to take. You undoubtedly had a right to request from me permits under what you claimed to be franchises, but I had no right to grant these permits when I believed the franchises to be invalid. In each specific instance I was guided in these matters by the opinion of the Corporation Counsel. My own opinion was that the extension of the East Ninety-eighth street line was something for which you should obtain a franchise. When the Corporation Counsel advised me to the contrary, I readily gave you the permits for that extension. The permits across Hunterfly road and the Eastern parkway were denied by me because I believed you should go before the Board of Estimate and Apportionment for a franchise here, and when you agreed to go to that Board in the event that the Corporation Counsel should decide such privileges to be franchises, I gave you the permits needed for the construction of your railroad for the few feet across the Hunterfly road.

The question of repaving streets between the railroad tracks has, I think, been satisfactorily arranged. You have complied with my request, which was a just and reasonable request, to the extent of your ability this year, and I feel satisfied that you have carried out in good faith all the promises made in this connection.

There has been so much misrepresentation as to my attitude on the bridge loop, in which you are of course interested, that I might say here that I have always been in favor of the construction of a proper loop, and of every other possible means of relieving the intolerable conditions at the Manhattan terminals of the bridges, and have so voted in the Board of Estimate and Apportionment.

There has been and is a disagreement between this office and the Street Cleaning Department as to the contract for removing ashes, etc., entered into by The City of New York and the American Railway Traffic Company, some years ago. It seems to me so plain that the provisions of this contract have not been carried out by the contractor and that the public has suffered as a result of this condition, that I cannot see how your company could have expected me to take any other stand than the stand I did take. I am not the only one who has held that the ash disposal stations as maintained by the American Railway Traffic Company constituted a public nuisance. The decision of the Supreme Court to that effect stands, and one of these stations, and I might say the best of them, as has been closed by court order at the request of the owners of adjacent property.

Another matter in which you are interested is the grade crossing improvement. The proposition for a modification of the original plan so as to allow you to run four tracks instead of two to Coney Island over the Brighton Beach improvement, with a clearance of fourteen feet instead of sixteen feet at street intersections, has been favored by me in the Board of Estimate because I believed that the sixteen foot clearance insisted upon by some of the other members of the Board would result in unnecessarily burdening the railroad companies, and would not bring forth any compensating advantage to the City.

There is only one other subject about which we disagreed, and that is the matter which is commonly known as the "Five-Cent Fare Fight." I realize the importance of the contentions you make in this regard for your company, but that realization only adds to the weight of the obligation I owe to the City whose sworn officer I am, to protect its rights in the premises. The questions involved here are so many and so important: the right to exact a steam railroad fare for what is in fact, and I believe in law, a mere street surface railroad; the right to maintain heavy steam railroad tracks and obstructing rights of way through the heart of populous sections of the Borough, retarding as they do the development of those sections, etc., that any failure to use every means at his command to bring about an authoritative and final declaration of the law on these points would be, in my opinion, a serious dereliction of duty on the part of any responsible official. The idea all too prevalent that my attitude towards the Brooklyn Rapid Transit system is one of persistent hostility, is wrong, as those conversant with my purpose well know. The transportation evils for which I believe it to be responsible, are the things to which I am hostile, and to which I will continue to be hostile to the end of my term. Each case in which it is interested will be considered by me solely with a view as to just how that case will affect the public welfare, and this will be my attitude, regardless of personal attacks upon me such as have been instigated in the past by officials of your corporation. Should there be a resumption of this policy of personal abuse in the future, I will deal with it as I have done in the past, by taking the whole matter into a court of record, where lying is perjury, and perjury is punishable. Such attacks have no rightful place in the discussion of any subject which is legitimately before your office and mine. No one realizes more than I that if your company would adjust its demands of the Borough government to such things as are in accord with the law and are reasonable, and if the Borough government were thus enabled to comply promptly and fairly with such legal and reasonable demands, then indeed would the best interests of this community be subserved. It is because I realize this and feel that you and I, representing the railroad and municipal corporations involved, can do much by co-operation, by acting in the common purpose of developing and improving this Borough, to place it in the front rank in population, in industrial development and in material growth and prosperity, that I have addressed this rather long letter to you. There is no medium through which Brooklyn may advance more rapidly and more surely than through a sane and fair understanding between the great railroad system you represent and the Borough government.

Yours very truly,

BIRD S. COLER, President, Borough of Brooklyn.

EXHIBIT No. 7.

Transportation and Real Estate—Views of Brooklyn's Transportation System by T. S. Williams, Vice-President Brooklyn Rapid Transit Company.

(Paper read before the Brooklyn Young Men's Christian Association, Eastern District Branch, January 8, 1907, by T. S. Williams, Vice-President of Brooklyn Rapid Transit Company.)

The dependence of land values upon means of access is too axiomatic to require demonstration. Whether it be farms or city lots the primary factor in determining what they are worth is, as a general proposition, their relation to highways of travel. These may be good roads, navigable waters, steam or electric railroads—either or all of such means of transportation must exist before lands can be said to have value. An increase of values follows an increase of transportation facilities; reduction of transportation facilities means usually depreciation of values. Land being the basis of all wealth, this intimate relation between it and transportation, between the source of products and their distribution, is widespread in influence, affecting all kinds of properties and occupations, entering vitally into all the activities of life, and becoming, in the broad sense, the barometer of all material prosperity.

True as this elementary proposition is in abstract discussion, it is conspicuously applicable to considerations involving the growth of cities. Granted the location, either on waterways or on ironways, which attracts population and business, the internal development of a city, its expansion of bounds and people, its beautification, its increasing power to raise moneys by taxation, the enrichment and comfort of its citizens—all these are intimately related to the means of transit provided for the inhabitants. The intricacy of the relation is cumulative with the increase in population. As city limits expand and distances between home and work enlarge, means of transportation cease to be merely a convenience but become necessities—the arteries of municipal life, even the temporary interference with whose circulation paralyzes business and produces widespread discomfort.

Notwithstanding these more or less axiomatic statements it is a surprising fact that, dependent as our individual or collective prosperity and comfort are upon the transportation systems of country and city, the public attitude towards them is not, as might be expected, one of co-operation and helpfulness, but one of distrust, antagonism and attack.

The underlying reasons for this apparently very illogical condition of public mind are probably common to steam railroads and street railroads—they explain equally perhaps the public antipathy, or at least what is called public antipathy, to all aggregations of capital, and to the extent that they reflect revolt against dishonest practices, unfair discriminations, and corrupt alliances for governmental or official favors, they bespeak an awakening public conscience and an enlarging sense of justice which will work for eventual good—even though, as in all such movements, the immediate methods and victims may be unwisely and unjustly chosen.

My object to-night is not to enter that broad and somewhat hopeless field of discussion which involves the relations of the public towards the great transportation systems of the country, but to consider, as concretely as possible, the relations of the people of cities and their governments towards the public service corporations engaged in the transportation of passengers, and particularly in Greater New York.

Of all public services in Greater New York, save perhaps the furnishing of water, the people are most dependent upon the railroads. The supply of electric light or gas may be interrupted, the cleaning of streets may be neglected, the police control may be inefficient, the machinery of government may be incompetent or corrupt, and the immediate effect upon the people is not sharply felt. But let the wheels of transit stop for one hour and outcries pour forth from hundreds of thousands of throats; let them stop for a day and business halts; conceive them to be stopped for a week and there would be commercial and municipal paralysis, with its deadening effect felt in every part of the civilized world. The traction companies of Greater New York pay out every year, before their stockholders get a cent, half as much money as it costs to support the entire City government—to pave and clean its streets, to maintain its sewers, to protect its property from fire, to preserve its health, to provide schools and teachers, to maintain its police and the militia, to care for the dependent and criminal classes, to furnish water, gas and electricity, to administer its parks, to pay its officers and employees, to provide courts of justice, to maintain its public buildings, to pay the interest on its debt—in short to meet all the requirements of the annual budget. No other single industry gives occupation to so many persons or supports so many families. None other contributes so much directly to the support of government. No other public utility enters so closely into the daily life of every individual. None other exhibits to the public so constantly and so completely every detail of its business—its tracks, its equipment, its power facilities, the efficiency of its management and employees, the extent to which it meets the demands of service—all these are exposed daily to the inspection and criticism of over four millions of people. Figuring each cash fare or transfer as one passenger, over four million persons are transported every day, or twice as many each year as are carried by all the steam railroads of the United States. The lives and safety of these and hundreds of thousands more on the streets and public places are dependent upon the watchfulness and care exercised by the managers and employees of these great corporations—a direct and incessant human responsibility not borne by individuals, corporations or governments anywhere in the entire world.

When the first railroad franchise was granted in Brooklyn—that on lower Atlantic avenue to the Brooklyn and Jamaica Railroad Company—the village limits extended only to Red Hook lane, midway between Court and Smith streets, and the inhabitants numbered less than 25,000, although the community had then the ripe age of 200 years. The village became within 60 years a city of 77 square miles and is now a borough of 1,400,000 souls in a greater city of 326 square miles with over 4,000,000 inhabitants. Every mile of that growth and of the growth of the greater city has followed the development of means of transportation—stage lines, horse railroads, steam railroads, elevated steam railroads, electric and cable surface railroads, elevated electric railroads, subways and bridges—a panoramic succession of transit improvements always forerunning the building up of farm lands or waste areas and the establishment of a greater population. It has been my opportunity to know the history and fate of most of these railroad enterprises—and melancholy and long is the list of financial failures and disappointments, but there is only one bright continuous story of municipal progress and enhancement of real estate values accompanying these transportation efforts. Now and then a successful corporation has survived, but often its successes have finally had to carry the failures of poorer properties, to furnish credit for reconstruction and re-equipment and operating deficits of railroads whose own financial resources yielded nothing, and thus to be shared as much, or more, by the public as by stockholders of the corporation.

Out of this flotsam and jetsam of railroad enterprises has come, in the logical course of evolution, a concentration of control in one large group of stockholders. The original price of the corporation's shares was so low that the poorest could not complain of exclusion from participation. Into this combination have come, one after the other, substantially all the railroads of Brooklyn—the most varied collection of transit undertakings ever assembled under one corporate roof—horse railroads, cable railroads, electric railroads, elevated railroads, municipally owned and operated railroads, steam railroads, successful railroads, bankrupt railroads, railroads in public streets, railroads on private rights of way—a joint museum and hospital of corporate relics surely not inspiring to even the most optimistic investor.

Behind all this aggregation was confidence in the growth of Brooklyn, confidence that by the linking together of these varied utilities into one homogeneous transportation system, their reconstruction and development, the improved facilities of travel would bring to the territory a much greater population and yield to the companies profits from operation instead of losses. That combination process began fourteen years ago. During that time electric power has supplanted horse and steam power; through transit has been established from all parts of Brooklyn and from remote parts of Queens to Manhattan; fares have been reduced from 15, 18, 20 and 23 cents to 5 cents, and from 30 and 35 cents to 10 cents; substantially a universal transfer on a single fare of five cents has been granted over nearly 500 miles of track; large numbers of additional and more comfortable cars have been installed; tracks have been relaid with heavier rails; power facilities, shop and stable facilities have been many times multiplied; miles upon miles of improved paving have been placed in public streets; safety appliances have been introduced wherever possible to protect life and limb; wages have been materially increased; the number of men employed has been nearly doubled; at least \$10,000,000 have been paid in taxes direct or indirect; and not less than \$50,000,000 have been expended for permanent improvements in this process of rebuilding and expansion. I have personally been acquainted with this work of development during twelve of these fourteen years, and as a result of these farsighted plans and these liberal expenditures of effort and capital I have seen in those twelve years 400,000 persons added to the population of Brooklyn and \$500,000,000 added to the assessed value of its real estate, representing at the tax rate of 1894 an additional available city revenue of \$14,000,000 annually, but I have yet to see a single dollar paid to the stockholders of the company whose capital, credit and control have made these results possible.

Indeed, we are the victims of our own liberality. The municipal prosperity we have promoted is our great embarrassment. There are more people to be carried than we can carry safely, comfortably and expeditiously. We have rebuilt and extended our tracks, added to our cars, increased our power facilities, gone the full limit of our ability to discharge our public duty and thereby as well subserve our private interest. To render better and additional service we must have the co-operation of the City. Excepting the extension of railroads over the Brooklyn and Williamsburg bridges not a single important transit privilege or measure of public relief has been given by public authority in Brooklyn for more than twelve years. Instead, burden after burden has been laid upon the transportation companies; City officers have vied in attacking them; juries have mulcted them; legislatures have authorized new and heavier taxes upon their property and harsher restrictions upon their operations; courts have ruled rigidly against them; and the people, suffering from the discomforts which we perhaps might remove but have not, and from those which we would remove but cannot, and not discriminating as to the character of their discomfort or its real cause, naturally heap all of their opprobrium upon us, and too often encourage their municipal officials to withhold from us even those measures of relief which would make transit conditions more tolerable. And when all the blunders in the dictionary of railroad operations have been laid at our doors the learned critics and economists seek to imbue the people, the newspapers and the courts with the false notion that this combination of public utilities has yielded extortionate profits, concealed from popular view and removed from possibility of effective public correction by corporate schemes of capitalization and consolidation, and imposing unfair charges and inadequate facilities upon the community.

When men talk of burdens imposed upon the traveling public by the concentration and corporate financing of transit properties in Brooklyn they speak the veriest nonsense—whether such utterances come from politicians, magazine writers, editors, ministers of the Gospel or even Judges upon the Supreme Court Bench. No aggregation of individual or corporate capital has ever rendered so conspicuous a public benefit. All the impositions and limitations of law for three-quarters of a century upon transportation corporations have not yielded to the public of Brooklyn the measure of privilege and opportunity that has been voluntarily extended during the past fourteen years by the corporation—the monopoly, if you will, though such it is not and never has been—which has in that time revolutionized transportation conditions in this community. I say "voluntarily extended," not to claim for the corporation any motive other than self-interest—but voluntarily extended because only by the expansion of privileges, the improvement of facilities, the lowering of fares, the concentration of management, could these seventy-seven square miles of municipal area be built up into a populous community, and thereby make profitable the miles upon miles of previously unprofitable tracks. Not a single railroad acquisition, not a single scheme of consequent corporate financing, has yet imposed a dollar of additional burden upon the traveling public. Every step in those directions has been followed by relief from burdens upon the people. The creation of \$45,000,000 of corporate stock in the parent company has meant the retirement of at least \$60,000,000 of stock of other companies. Every important case of acquisition has been accompanied by a reduction of bonded indebtedness or a reduction of interest charges, except as fresh issues of securities, representing one hundred cents of actual property for every dollar of face value, have been made to furnish money for substantial improvements. Talk about fictitious capital—if every dollar of Brooklyn Rapid Transit stock represented, not even water, but the most nebulous gases, no dividends it might earn for a hundred years on double such capitalization could equal the dividends which the people of Brooklyn have received during the last fourteen years upon the capitalization of brains, money, energy and patience which has brought about these stupendous public benefit and this tremendous municipal enlargement.

These are strong words. I would be ashamed in this audience and upon such an occasion if I felt that their utterance was provoked or their expression colored by any excessive desire of advocacy of the interests of the corporation with which I am identified. I have approached this subject from the point of view of the student and observer, and not from that of the advocate. I do not believe that the facts have been overstated or can be successfully controverted. If the language is strong the necessity for the truth is imperative. The interests involved are only incidentally those of the corporation. They reach to every home, to every individual, to every undeveloped acre, not only in this borough, but in every borough of the Greater City. This is an era of transportation hopes. The price of every foot of land in Greater New York and beyond is nourished on them. Anticipation of realization has perhaps discounted much of the enhancement, but failure to realize these hopes will bring corresponding depression and widespread sacrifices. Who can measure the individual and public losses which a collapse in real estate values will produce in this imperial city, where no collapse could take place if transportation hopes were realized? The basis of these hopes must be largely upon the expansion of existing transportation systems. Their full realization will call for the expenditure of hundreds of millions and is dependent primarily upon the attitude of state and municipal government. Shall no consideration be shown for past achievements? Shall capital be deterred from repeating its creditable performances? Shall official and public antagonism obstruct the city's expansion and precipitate collapse of values? Shall imaginary fears and unfounded prejudices blind the people to their best and broadest interests? These are the questions, pressing harshly upon this community, which demand strong language, and the settlement of which is far beyond any consideration of individual or corporate interest.

I have called this an era of transportation hopes. All periods of our municipal growth have had transportation hopes, but nothing like the sanguine expectations and ambitious transit projects in our entire municipal history have equalled those of the last six years. During no previous period, I may also say, have earnest expectations and serious, farsighted projects been met with such stolid official indifference and such lilliputian official consideration.

That broad-minded and bold railroad genius who died the other day in Pennsylvania came to this city five years ago and offered to connect it directly by tunnel with one of the greatest transportation systems of the country—bringing to it without change of cars under the East and North rivers passengers from the East and from the boundless West and South—linking it by endless tracks with the entire hemisphere, and breaking down the barriers to quick and easy communication which the two rivers had always interposed—an inestimable benefaction to Greater New York—and it took him a year to get municipal consent, and then only upon condition of the payment to the city during the first twenty-five years of the franchise of a sum estimated at \$2,500,000. For what? For the privilege of a tunnel under the city and the closing of a few streets on the surface necessary for providing ample passenger stations!

That same great genius, as a part of the same comprehensive scheme, applied for permission, on behalf of the New York Connecting Railroad, to cross above or below grade a few public streets, mostly country highways, in the undeveloped portions of Queens, in order to permit through freight transportation on its own right of way between Long Island and New England and the West, requiring an investment of \$50,000,000 in an enterprise which lifted the hopes of every manufacturer, business man and landowner in both Brooklyn and Queens, and promised to make those boroughs great industrial centres, and although nearly three years have elapsed since the application, and the matter has been successively considered by the Rapid Transit Commission, Board of Aldermen and Board of Estimate, no franchise for this petty but essential privilege has yet been granted. It is reported in the newspapers, however, that the deadlock between company and City has at last been broken by an agreement on the part of the company to pay a compensation of about \$45,000 a year for the first twenty-five years, and this is heralded as a great municipal victory! It might better be called successful municipal blackmail! What consideration of the City's interests justified the imperilling of so great a public improvement for so paltry a sum to the City, but so burdensome a sum upon the corporation? Rather than risk the public loss which a withdrawal of the franchise application would have entailed—an action which the attitude of the City would have justified—the City could have afforded to contribute to the corporation instead of exacting tribute from it. Why, the very hope of these improvements planned by the Pennsylvania Railroad and of the Belmont tunnel between Long Island City and Manhattan, the construction of which the City is trying to prevent, has increased the assessed valuations in Queens during these five years over 50 per cent., and is yielding to the City treasury over \$800,000 of additional annual taxes. This is the result only of hope—what will be the result of realization?

As to our own Borough of Brooklyn the situation is not different. To relieve congestion of travel in the principal shopping district a few blocks of a parallel street were widened and the proceedings hastened so that relief to cars, pedestrians and vehicles might be quick. This was nearly two years ago. To-day the street is barely usable even by pedestrians, and the application for a franchise to operate cars thereon has been pending for a year and a half. It was made the subject of an official report of forty-four closely printed pages—a literary monument to painstaking but misguided official effort, covering in its scope the operation of 500 miles of existing track, as well as that of the construction and operation of the mile in question, and seeking by the conditions proposed to correct all the imagined mistakes of franchise givers through half a century, and to exact compensation that would stagger a Cæsar—all for a privilege of ten years' duration, of no value as a revenue producer, and of use only to enable people to go to and from their homes more quickly.

Again, taking advantage of franchises granted years ago concurrently by the then City of Brooklyn and the county towns, over streets not then physically or officially opened, but designated by State authority as consecutive thoroughfares through different townships, the location of which could not be changed except by the same legislative authority, and having complied with all the requirements of law, the companies of the Brooklyn Rapid Transit system, at the earnest solicitation of property owners, have sought, as such streets have been actually opened, to fulfill their franchise obligations by constructing tracks thereon, conscious from past experience that such construction would yield no revenue for many years, but would build up and populate undeveloped territory. Against this endeavor the City officers charged with the duty of issuing permits and the Corporation Counsel have exercised their authority, basing their action upon what they admit is a doubtful construction of law—namely, that the former city and towns had no power to grant franchises to become effective when streets should be opened—and imposing on the property owners and the corporation the uncertainties of at least three years' litigation. The effect of that attitude is not yet known or appreciated by the owners of suburban lands in Kings County. Millions of dollars have been invested therein on the faith of the existence and speedy construction of these franchises. Blocks upon blocks of dwellings have been erected and are being occupied on the hope of procuring adequate transportation. Not alone are involved the financial interests of land syndicates, but the homes and savings of thousands of the most useful class of citizens—the small householder. No new franchises, with their short terms and onerous conditions, will be sought, or, if sought and obtained, will ever be constructed, except as extensions of existing transportation lines. Failure to provide means of transit for these outlying territories will save much money in construction, and many losses in operation, to our railroad companies, but it will result in impoverishing thousands of citizens and give to Brooklyn real estate values a blow from which they will not soon recover.

For three years the Williamsburg Bridge has been opened for vehicle traffic and for over two years to trolley traffic. The franchise for its construction was acquired by the City from interests then identified with our elevated railroads. The contract of acquisition prescribed as one of its terms that two tracks should be provided for elevated railroads. As the proposition was submitted, these tracks were to be used only by Brooklyn elevated railroads, but lest this particularization should make the contract void, the provision was made general in terms, and the understanding and expectation were that Brooklyn elevated railroads would be the instrumentality for making the tracks available for public use. But whether there was any moral obligation arising out of that contract or not, for three years these tracks have been idle and 1,400,000 persons are daily suffering from their non-use. In the meanwhile, the Brooklyn Bridge is overtaxed, the most crowded railroad terminal in the world is daily and nightly the most scandalous scene of struggling humanity to be found anywhere, and none but the most patient people in creation would endure for six weeks the discomforts which have now continued for six years without abatement by official action. Plan after plan has been suggested, delegation after delegation of angry citizens has demanded relief, candidate after candidate, administration after administration, has promised it, but still relief comes not, and each week adds to the public grievance. What ails our City's officers? Oh, for a season of clear-headed, honest-minded and backboneed men in public office!

This is a time of popular upheaval and distrust. Every man's hand seems raised against another's, and the hands of all seem sometimes raised against public service corporations. For the grievances which are justly attributable to them I have no apologies to make. For that part of popular distrust which has come from their wrongdoing they may not be themselves wholly to blame, but they must suffer equally with others. For that part which has come from a short-sighted conception of public or corporate interest there is hope in education and experience. For that part which has come from prejudice created by the false and hysterical utterances of doctrinaires and demagogues there should be pity and contempt. Demolition is not construction. Unreasonable restriction is not protection. Out of confusion of the public thought will come clear views and common sense, but they should come quickly in this imperial City and in the nation if material disaster is to be averted.

Whether public utilities be owned and operated by the City or continue to be owned and operated by the created instrumentalities of the State, the underlying principle of their control and regulation should always be the best and broadest interests of the people. To project them all upon the government is an experiment which only the most thoughtless would try, at least until government has shown itself more capable of handling the responsibilities it now carries. If public utilities are to continue largely, as at present, in the possession of corporations, they require, both from the corporations and from the government, the most intelligent co-operation and the broadest conception of the welfare of both City and corporation. Such a conception involves large profits for the corporation and abundant conveniences for the people. You cannot expect the investment of the hundreds of millions required to properly transport the inhabitants of Greater New York without the assurance of more than ordinary interest. I think I have shown that, in Brooklyn, at least, no return on all the millions that have been invested can equal the reciprocal benefits already received by the people and by the City. The same results can probably be shown as to other boroughs. No more valuable privilege has been granted in a generation than that to construct and operate the New York subway, and the most liberal concessions of a generation were made to achieve it. But what are all the millions its promoters have made or may make compared with the benefits to the people and the enrichment of their government? It is a fact not known—or, if known, not appreciated—that in the Borough of The Bronx alone, during the six years following the letting of the subway contract, the assessed value of real estate has shown a greater increase than in the twenty-five years preceding that contract.

In the light of such results as have been described, how childish and short-sighted is it for the City to quibble over the money compensation it would exact from a corporation as the condition of a franchise, or to burden the applicant with impossible restrictions. We are dealing with great interests—not bartering marbles. We should have at heart the development of a great City and the comfort of its people—not the addition of a few thousands or even a few millions to its treasury. Given the opportunities of growth, the facilities of transportation, and the money will flow rapidly enough into the City treasury. Refuse, or limit, these opportunities by unreasonable burdens and restrictions, and not only the City treasury, but every individual will be a loser. Let it not be forgotten in these days of prejudice against what are called special privileges that the holders of franchises in public streets and places pay dearly to State and City for their privileges. Not only are they taxed on every item of their tangible property, not only are imposed upon them great indirect financial exactions which reduce the expense of government, not only do they pay the State for the opportunity of doing business as a corporation, not only do they pay the City for every new privilege they obtain, but, on top of all the varied and heavy impositions of law, they are compelled to pay an annual tax upon the value of their intangible franchises—no matter when or how granted—upon the right to serve the people in the people's streets and upon the worth which skill and energy give to that right—and the determination of that assessment is not based on any fixed method of computation, is not restricted by the ordinary safeguards established to prevent injustice in the assessment of other real estate, but is left to the arbitrary will of three appointed officers—a power more autocratic, considering its scope, than that possessed by other public officers in any free country—an opportunity for oppression that would cripple corporations in properly performing their obligations to the public, and for blackmail that, if exposed, would make every decent citizen hang his head in shame. So long as the principle of that tax is enforced, even though the

method of its determination be changed, as it should be, there need be no fear that public service corporations are not giving ample money compensation for all they get from State and City.

Can we not, at least in this community, come to a clearer view of the relations which, in the interest of all, should prevail between corporation and City? Let us forget mistakes and prejudices of the past except as their existence has taught lessons for the future. For the corporation I can say that we seek no favors which are not for the benefit of the people as of ourselves. We intend, to the full measure of our ability, to discharge our obligations to the City, and we have a right, I think, to expect that the City should discharge properly its obligations towards us. We ask nothing but the square deal. No good can come to either corporation or people if each is trying to gain an unfair advantage of the other. The interests at stake are too broad and too sacred to justify petty policies and sharp but short-sighted bargains. Let us present to the world the example here, in this metropolitan and cosmopolitan City, of co-operation and sympathy between people and their public service corporations which shall make common advantage the constant consideration, believing that only out of such an alliance can be most surely attained the broadest municipal development and the most substantial measure of popular comfort.

EXHIBIT No. 8.

Review of the Brooklyn Transportation Situation to Date, Being a Condensation of Discussions and Proposed Methods of Relief, Accompanied by Maps, Diagrams and Papers.

OUTLINE.		
BRIDGES.	SPECIALLY AMENDED MAP ILLUSTRATING.	EXISTING.
SURFACE RAILWAYS.		CONSTRUCTING.
ELEVATED LINES.		AUTHORIZED.
SUBWAYS.		PROPOSED.
IMMEDIATE.	METHODS OF RELIEF.	OPERATIVE.
NEAR FUTURE.		LEGISLATIVE.
FUTURE.		
DISTANT FUTURE.		

Respectfully submitted, by request, to the Hon. Bird S. Coler, President, Borough of Brooklyn, City of New York, by H. Milton Kennedy, Member New York Railroad Club, American Association General Passenger Agents, etc., etc.

This article will be confined to a concise statement of developments to date, giving a general synopsis, as briefly as possible.

The whole subject has been so thoroughly threshed out in the daily press, with reports of the proceedings of the various civic bodies representing the public, accompanied by editorials, that to dilate on the grievances of the Brooklyn traveling public against the transportation corporations would be repetition.

Sufficeth to say that the entire populace of Brooklyn seems now a harmonious whole in not only demanding their rights but in specifying how those rights shall be satisfied. They are but the culmination of wrongs patiently endured for an indefinite period.

Abuses of operation. That many of the existing evils are those of operation is generally conceded.

Many of the abuses suffered by the public are the result of improper railroad operation. Mostly financial retrenchment. The actual operators know about what the public wants and how to give it, but are handicapped by the requirements of the financial interests in control.

METHODS OF RELIEF.

"Immediate."

Increased car service. At times other than the "rush hours." Also at some points during "rush hours." For instance: On suburban lines carrying laborers to work in the early morning. Are now crowded to the "hanging-on" point like a Coney Island car on Sunday. Also at ferries.

More main arteries. Brooklyn, owing to its peculiar topography, is acknowledged a very difficult railroad operating town, principally because all lines converge to a single trunk line. While in future this condition will be greatly improved by new bridges, subways and tunnels, for immediate relief the Livingston street lines should be promptly laid, paralleling the congested lower Fulton street district. The four-tracking of the Fulton street "L" (a much overloaded and congested elevated trunk line) should also be considered.

There is also opportunity for improvement on the "L" structure on Adams street, into which converge three other main lines to reach the Brooklyn Bridge, namely, Fifth, Myrtle and Lexington.

Stop "All Out" and "Car Ahead" annoyance. The "car mileage" system is responsible for much unsatisfactory service and unnecessary crowding. The "all out" and "car ahead" annoyances are results of this system. The "cutting back" of cars should be stopped, especially when marked for a terminal destination.

Inspection. The Railroad Commission having jurisdiction should appoint inspectors to watch actual operating conditions with power to examine schedules, passenger "carrying" sheets, etc., etc.

Reasonable connections at transfer points. Motormen should be required to wait a reasonable time, depending on the headway on which his particular line was operating and on the time of day, at intersecting lines of transfer when a connecting car was approaching within so many blocks (to be determined).

Sanitary car cleaning. Rigid measures should be adopted to enforce the proper cleansing of all cars either by the vacuum process, compressed air or other scientific method now employed in best railway practice.

"Square deal" for the railroads. Notwithstanding their shortcomings and practised abuses, from a retroactive standpoint due moderation should temper any tendency for unreasonable demands. The details relating to extensions, additional facilities and better service throughout the "non-rush" hours should be carefully worked out by the authorities, in consultation with disinterested practical railroad men, according to the railroad operators due hearing. Otherwise an abortive demand for unnecessary service might result in financial hardships which would curtail all operations and arrest development, to the detriment of the community seeking expansion.

To adjust.

To properly adjust this Brooklyn transportation question in a safe and sane manner, there should be called a convention of representative bodies of the people, the transportation interests, the legislators and the proper City authorities.

This convention should accord public hearings as to the details of the inadequacy of the service and what improvements are requested, affording the railway officials opportunity of explanation, if incompatible with conditions, and when the whole subject is threshed out, get together on a line of procedure to properly execute the necessary reforms.

"Near Future."

Much has been written, but more has been said that could not be written about the bridge "crush."

Any comprehensive plan to alleviate these deplorable conditions must require considerable time to effect.

The Poulson plan, as amended by R. W. Creuzbaur, Consulting Engineer to President Coler, presents more merit for less expenditure and in quicker time than anything yet offered. It also embodies the very essential feature of contributing to a permanent terminal as proposed since by the Burr Commission.

(For synopsis and detail, see attached papers, Exhibit No. 1.)

Bridge relief, Poulson plan. Creuzbaur adaptation.

This proposition, as shown below, is a most thorough, comprehensive and practical plan for fairly prompt relief at the Manhattan end of the Brooklyn Bridge worked out strictly on a "terminal basis."

That is to say, if future development of transportation facilities embodies the retention of terminals, this plan offers the best solution according to present railroad practice.

But there is a growing tendency toward the abolition of terminals and against concentration in any one spot of an abnormal gathering of passengers. It seems preferable to so plan the various lines of communication between the boroughs that the greatest possible area is offered for the collection and disposition of traffic. It is freely advocated that the bridges should be treated as highways and simply link continuous lines of communication.

However, an imperative demand for immediate alleviation of present deplorable terminal conditions is so great that it is necessary to provide at once to effectively meet this condition irrespective of future plans.

(Diagram of Plan attached with Synopsis of its Advantages.)

EXHIBIT No. 6.

Burr Commission Plan for New Manhattan Terminal of the Brooklyn Bridge.

Summary of Commission's report.

In a letter dated January 2, 1907, Bridge Commissioner J. W. Stevenson submitted to the Board of Estimate and Apportionment the following plan of a Special Commission, composed of Professor William H. Burr, William Barclay Parsons and Ira A. McCormack, with C. M. Ingersoll, Chief Engineer of the Department of Bridges:

Following is in substance the report addressed to Bridge Commissioner Stevenson by the Special Commission of Engineers:

The plan submitted and recommended should provide for connection by elevated or subway, or both, with the Williamsburg and Manhattan bridges.

In the elevated stations are five platforms, two for unloading, and of the other three but one is available for loading during rush hours.

Average number of passengers handled each day—west-bound, 115,000; eastbound, 90,000; total, 205,000. Of these, 31,000, or 27 per cent., arrive in Manhattan between 7.30 and 8.30 a. m., while 51 per cent. arrive between 7 and 9 a. m., and 60 per cent. between the hours of 6.30 and 9.30 a. m.; of the outgoing, 47,000, or 52 per cent., depart in two hours, between 5 and 7 a. m. Seven different elevated roads lead from the bridge. The desirable purpose is to establish through service from the Manhattan terminus to all points of Brooklyn. Should it now be attempted to run through trains there would be inevitable waiting, and, therefore, congestion. To reduce this congestion, passengers are now carried over the bridge by cable trains and transferred at the Brooklyn end. Such trains, with maximum capacity, are run on one-minute intervals.

To fully develop the capacity of the elevated and trolley tracks, it is necessary to run the trolley cars into a subway loop under the present Zeitung Building and extending to Duane street.

Two-story Eight-pocket Elevated Terminals.

The elevated trains will be run on two levels, four tracks to each level, with platform arrangements substantially the same, the tracks at the two levels coming together at Pearl street.

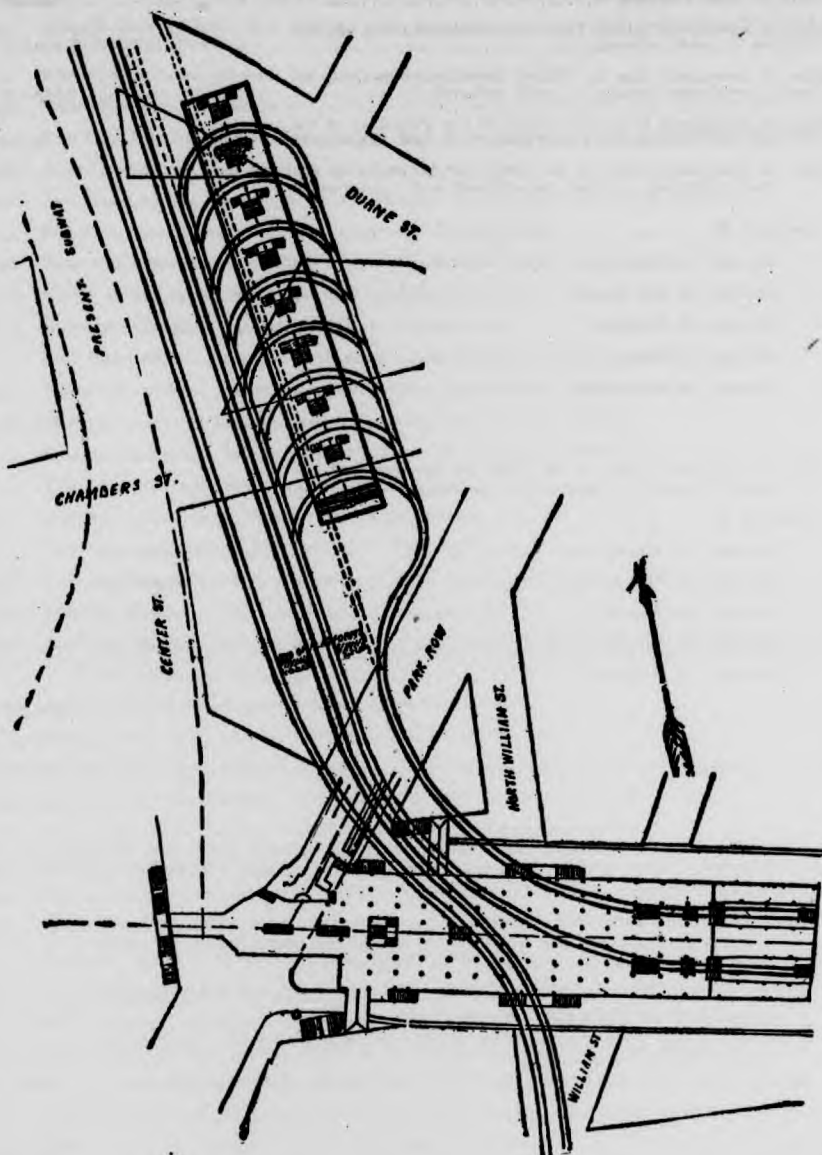
There are to be eight terminal tracks to move the seven elevated lines, and so arranged that a train entering either level can run into one of the four pockets, as desired. The lower level would occupy substantially the same space now taken by the mezzanine floor, slightly lowered to give sufficient headroom: the upper level the same as at present.

Detailed arrangement is explained for separation of outgoing and incoming passengers.

Under the new plan, six-car trains will pass over the bridge at a maximum speed of fifteen miles an hour, or under a headway of forty-five seconds, with 1,000 feet between train centers.

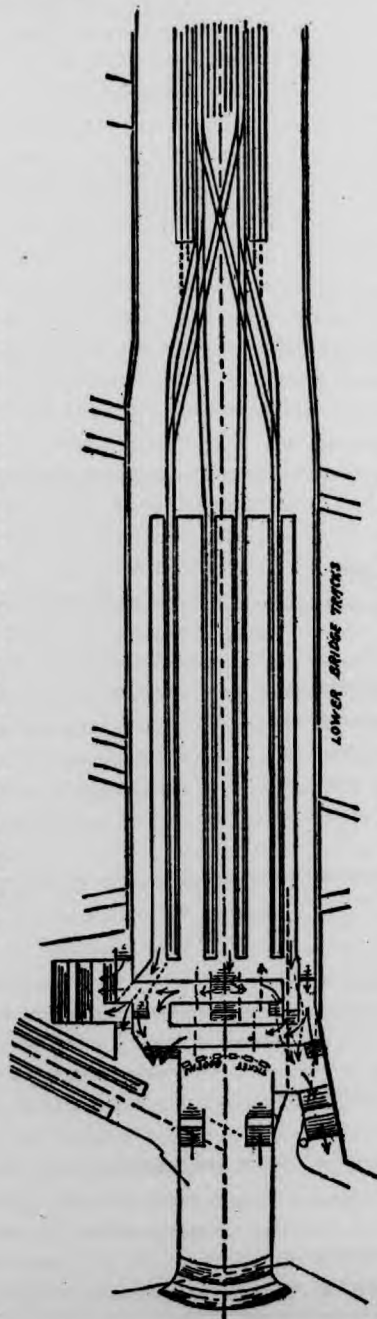
Pending the reconstruction of the station, immediate partial relief can be obtained by extending the present tail tracks 60 feet westerly over Park row, enabling six cars to be put in every train. This addition would not be expensive and would remain only during reconstruction, to be removed on the completion of the new station, as it would then serve no function.

PLAN FOR TROLLEY SUBWAY LOOP.



Plan for Subway Trolley Loop. Park Row, Duane and Centre Streets Triangle, Showing Separate Stairways from Mezzanine Platforms for Outgoing and Incoming Passengers.

ARRANGEMENT OF ELEVATED RAILROAD TRACKS.



Permanent Four-pocket Six-car Train Terminal on Mezzanine Floor; Arrows Indicate Movement of Passengers in Boarding or Leaving Trains. This Terminal will be Extended Over Park Row and Present Trolley Loop, the Latter Space to be Cleared for Bridge Promenade Approach. The Upper Terminal in Plan, Facilities and Area Covered, is a Duplicate of the Mezzanine, Except that it Provides for Elevated Loop Connection with the Williamsburg Bridge.

Bridges "L" loop.

A natural sequence, then, to this is the proposed elevated railroad loop connecting the Brooklyn and Williamsburg Bridges in Manhattan. This would put into active service the unused rails which have been idle since the completion of the Williamsburg Bridge, and estimated to increase the carrying capacity of East river bridge rails from 48,000 to 125,000 passengers per hour. It would also divert about one-third of the present Brooklyn Bridge patronage to the Williamsburg Bridge and provide a means for persons living in middle territory of selecting the least crowded route. There would be four or five intermediate stations between bridges, still further reducing congestion at the bridge terminals and being more accessible to many patrons.

As to a choice of routes, the proposed Centre street line, from a standpoint of more efficient railroad operation, greater convenience to the largest number of passengers and the least construction obstacles is decidedly commendable. If this could be a four or even three track line, with long platformed stations enabling express service from bridge terminal to bridge terminal as well as locals between, so much the better.

To relieve the congestion of surface cars which cross the Brooklyn Bridge at Sands street, a plan has recently been submitted to Borough President Coler by the B. R. T. Co. This embodies an elevated structure over Sands street by which most of the traffic is diverted by means of an incline, at a point where the surface and "L" tracks strike a level at the Brooklyn end of the bridge, to this "L" structure, and being carried around the station and through the bridge storage yard, descends to the surface again at Tillary street into Fulton street. It is claimed that this plan will render the proposed Livingston street route more efficacious and eliminate much "criss-crossing" in the Borough Hall section. This is debatable and will be thoroughly considered.

"Future."

This plan is a subway road, proposed to connect the existing Williamsburg bridge with the Manhattan Bridge "when finished." The route is in the form of a loop beginning at the Williamsburg Bridge plaza, Brooklyn, crossing that bridge and running under Delancey street to Centre street to the Manhattan Bridge to Flatbush avenue extension to Fulton street to Lafayette avenue to Bedford avenue (if extended) and back to point of starting. This is insufficient. It still leaves the Brooklyn Bridge out of consideration. Would only draw a limited patronage from a territory comprising less than one-third of the population of Brooklyn. Means an additional fare, which people will not pay.

Furthermore, it leaves untouched in Manhattan a downtown territory westward of Broadway, including the North river ferries, from which it is difficult to reach the Brooklyn bridges' connections or any lines tributary thereto. Such a connection is essential to any complete scheme of transit lines for the future.

Why not extend the proposed Nassau street subway into a loop to comprise this territory? Say via Pearl to State to Greenwich to College place to Warren and across City Hall Park to connect with the Brooklyn Bridge and in turn as proposed, with the Manhattan Bridge and the Williamsburg Bridge. Might use William street instead of Nassau.

This plan, originated and so vigorously advocated by Borough President Coler, the details of which were perfected in the engineering department of that office, is the first decisive step in the direction of through lines of communication between all boroughs for a single five-cent fare and under absolute control of the City.

This Pelham Bay-Bowery-Fort Hamilton-Coney Island route serves two widely divergent and important suburban sections as well as offering direct access to the business centres of the two principal boroughs. It embodies extensive branches in Brooklyn which also comprise important territory.

The plans as approved by the Board of Rapid Transit Commissioners and the Board of Estimate and Apportionment, call for a line from Pelham Bay Park in The Bronx, via Westchester avenue, Southern boulevard, One Hundred and Thirty-eighth street, Third avenue and the Bowery over the Manhattan Bridge into Flatbush avenue extension and down Fourth avenue to Fort Hamilton, with branch to Coney Island via Fortieth street, etc., and as part of the plan (though not authorized), spurs for the future up Broadway, Brooklyn, to Jamaica avenue and under the Narrows to the Borough of Richmond.

(For detail see Exhibits Nos. 2 and 2E.)

This proposition is the first that embodies treating the City as a whole, eliminating borough geographical lines, being independent of existing transportation systems and control.

"Distant Future."

The comprehensive system of subway routes already laid out will carry the transportation proposition far into the future, along with tunnels, bridges, new surface lines and elevated extensions which will steadily be projected, not to mention "air ships" and other "wireless" connections.

But all the subway routes as yet laid out terminate abruptly with a dead end. These should be planned with a view to continuance into loop or belt lines of wide dimension. That is, so as to encircle the entire outlying districts of the City from Bay Ridge on the south and west, all the way around to Greenpoint on the north and east, including in the circuit Bath Beach, Bensonhurst, Borough Park, Gravesend, Sheepshead Bay, Flatbush, Canarsie, Brownsville, East New York, Cypress Hills, Woodhaven, Richmond Hill, Jamaica, Flushing, Elmhurst, Corona, Newtown, Maspeth, Greenpoint and Williamsburg, connecting again with the chain of bridges and tunnels.

It is the outlying districts, so attractive for healthful home life, that need real rapid transit to be within a comfortable distance of the business centre and conversely to draw from the congested district people whose lives will be made more attractive therefrom.

H. MILTON KENNEDY.

January 11, 1907.

Additional relief on the Brooklyn side.

McDonald loop plan.

North river ferries should have direct connection with all Brooklyn bridges.

Brooklyn loop in Manhattan.

Tri-borough route.

Subways.

BOARD OF ASSESSORS.

REPORT FOR THE QUARTER ENDING DECEMBER 31, 1907.

Office of the Board of Assessors,
No. 320 Broadway,
New York, January 10, 1908.

Hon. GEORGE B. McCLELLAN, Mayor:

Sir—We have the honor to submit herewith the report of the Board of Assessors for the quarter ending December 31, 1907:

Summary.

Number of assessment lists in the office of the Board of Assessors October 1, 1907.....	88	\$2,714,104 56
Add amount awarded for damages by reason of change of grade, corrections, etc.....	..	20,255 80
		<u>\$2,734,360 36</u>
Number of assessment lists in the office of the Board of Revision of Assessments October 1, 1907.....	4	196,695 09
Number of assessment lists in the Law Department awaiting opinion October 1, 1907.....	6	252,660 06
Number of assessment lists in the office of the President of the Borough of Brooklyn for report October 1, 1907.....	1	33,242 62
Number of assessment lists in the Finance Department awaiting interest certificates (which were returned with interest added during quarter) October 1, 1907.....	57	5,004,428 67
Number of Assessment Lists Received During Quarter—		
Borough of Manhattan.....	72	\$290,680 12
Borough of The Bronx.....	64	1,378,453 54
Borough of Brooklyn.....	27	1,100,256 13
Borough of Queens.....	32	260,814 29
Borough of Richmond.....	6	16,298 89
	201	<u>3,046,502 97</u>
Total.....	357	<u>\$11,267,889 77</u>
Number of Assessment Lists Confirmed by the Board of Assessors During Quarter—		
Borough of Manhattan.....	8	\$241,203 85
Borough of The Bronx.....	8	206,162 39
Borough of Brooklyn.....	11	121,672 00
Borough of Queens.....	7	15,599 08
Borough of Richmond.....	2	20,210 07
	36	<u>\$604,847 39</u>
Number of Assessment Lists with Objections Considered by the Board of Assessors, Transmitted to the Board of Revision of Assessments and Confirmed by that Board During Quarter—		
Borough of Manhattan.....	4	\$47,726 41
Borough of The Bronx.....	15	376,188 77
Borough of Brooklyn.....	1	3,142 15
Borough of Queens.....	5	24,084 35
Borough of Richmond.....	..	..
	25	<u>451,141 68</u>

Number of assessment lists in the office of the Board of Revision of Assessments, awaiting action by that Board January 1, 1908, Schedule A.....	7	238,252 84
Number of assessment lists in Law Department awaiting opinion January 1, 1908, Schedule B.....	6	252,660 06
Number of assessment lists in Finance Department awaiting interest certificates January 1, 1908, Schedule C.....	163	2,053,125 92
Number of assessment lists in the office of the President of the Borough of Brooklyn for report January 1, 1908, Schedule D	1	33,242 62
Number of Assessment Lists in the Office of the Board of Assessors January 1, 1908, Apportioned and Advertised—		

Schedule E:

Borough of Manhattan.....	9	\$80,879 47
Borough of The Bronx.....	10	1,191,122 81
Borough of Brooklyn.....	5	3,479,481 13
Borough of Queens.....	3	51,607 24
Borough of Richmond.....	..	..
	27	<u>4,803,090 65</u>

Number of Assessment Lists in the Office of the Board of Assessors January 1, 1908, to be Apportioned—

Schedule F:

Borough of Manhattan.....	13	\$369,517 05
Borough of The Bronx.....	36	1,750,636 26
Borough of Brooklyn.....	3	21,871 56
Borough of Queens.....	36	627,362 63
Borough of Richmond.....	4	62,141 11
	92	<u>2,831,528 61</u>
Total.....	357	<u>\$11,267,889 77</u>

The following assessment lists under various special laws not included in the above statement were received during the quarter ending December 31, 1907, and acted upon as follows:

Number of installment assessment lists received from the Finance Department during the quarter, of which the installment for 1907 was apportioned by the Board of Assessors—

Eighth Ward improvement, under chapter 365, Laws of 1889, chapter 452, Laws of 1890, chapter 520, Laws of 1895.....	\$21,433 76
Prospect Park assessment (for lands taken), thirtieth installment under chapter 244, Laws of 1878.....	32,481 68
Long Island City improvement, under chapter 644, Laws of 1893.....	42,430 91
	<u>\$96,346 35</u>

Respectfully submitted,

ANTONIO ZUCCA,
PAUL WEIMANN,
JAMES H. KENNEDY,
Board of Assessors.

SCHEDULE A.

Lists in the office of the Board of Revision, January 1, 1908.

No.	Location.	Borough.	Nature of Work.	Amount.
9341.	Arrietta Brook watershed, Sewerage District No. 1a, etc.....	Richmond.....	Sewer and basins, etc.....	\$125,437 44
9360.	Vyse avenue, from One Hundred and Seventy-second to One Hundred and Eighty-second street	The Bronx.....	Regulating, grading, etc.....	40,102 02
9362.	Heath avenue, from Bailey avenue to Fort Independence street.....	The Bronx.....	Regulating, grading, etc.....	43,470 09
9397.	Gatling place, between Eighty-sixth and Ninety-second streets.....	Brooklyn.....	Regulating, grading, etc.....	8,266 34
9398.	Prospect place, between Eastern parkway extension and Ralph avenue.....	Brooklyn.....	Regulating, grading, etc.....	11,332 03
9400.	Forest avenue, from Brook avenue to Raymond's brook.....	Richmond.....	Temporary storm water sewer.....	2,654 66
9418.	Dean street, from Saratoga to Rockaway avenue.....	Brooklyn.....	Regulating, grading, etc.....	6,990 26

SCHEDULE B.

Lists in the Law Department waiting opinion January 1, 1908.

No.	Location.	Borough.	Nature of Work.	Amount.
8533.	Park avenue, from Pelham to Tremont avenue.....	The Bronx.....	Regulating, grading, etc.....	\$66,092 32
8741.	Cypress avenue, from Bronx Kills to East One Hundred and Forty-first street.....	The Bronx.....	Regulating, grading, etc.....	20,581 73
8758.	Norwood avenue, from Mosholu Parkway North to Woodlawn road, etc.....	The Bronx.....	Regulating, grading, etc.....	20,904 10
8818.	Concord avenue, from East One Hundred and Forty-first to Kelly street.....	The Bronx.....	Regulating, grading, etc.....	39,896 53
8824.	Park avenue, from East One Hundred and Seventy-seventh to East One Hundred and Eighty-third street.....	The Bronx.....	Paving	28,157 43
9279.	Webster avenue, from Gun Hill road to north boundary of City of New York.....	The Bronx.....	Paving, etc.....	77,027 95

SCHEDULE C.

Lists in the Finance Department awaiting interest certificates, January 1, 1908.

No.	Location.	Borough.	Nature of Work.	Amount.
9498.	Two Hundred and Sixth street, from Tenth avenue to bulkhead line of Harlem river.....	Manhattan.....	Regulating, grading, etc.....	\$10,103 14
9517.	Walcott avenue, from East river to Merchant street.....	Queens.....	Sewer	6,907 32
9518.	A new street on west of Hall of Records.....	Manhattan.....	Regulating, grading, curbing and flagging.....	594 96
9529.	First avenue, from Webster avenue to south of Prince avenue.....	Queens.....	Sewer	4,026 53
9533.	Sherman street, between Reeve place and Greenwood avenue.....	Brooklyn.....	Sewer	2,128 23
9535.	Ninth avenue, from Grand to Jamaica avenue.....	Queens.....	Regulating, grading, etc.....	7,889 85
9539.	Fifteenth avenue, from Broadway to Graham avenue.....	Queens.....	Regulating, grading, etc.....	7,483 62

No.	Location.	Borough.	Nature of Work.	Amount.
9541.	Seventh avenue, west side, between One Hundred and Forty-fourth and One Hundred and Forty-fifth streets.....	Manhattan.....	Sewer	5,902 74
9542.	Seventy-first street, between Broadway and Columbus avenue.....	Manhattan.....	Alterations and improvements to sewer.....	14,701 06
9543.	West One Hundred and Seventy-seventh street, between Sedgwick and Cedar avenues, etc....	The Bronx.....	Regulating, grading, etc.....	7,320 16
9544.	East One Hundred and Seventy-eighth street, from Crotona avenue to Southern boulevard....	The Bronx.....	Regulating, grading, etc.....	9,326 54
9545.	Sutter avenue, between Saratoga and Howard avenues.....	Brooklyn.....	Regulating, grading, etc.....	3,650 22
9546.	Two Hundred and Fourteenth street, between Harlem river and Tenth avenue.....	Manhattan.....	Sewer	9,221 17
9547.	Engert avenue, between Graham avenue and Leonard street.....	Brooklyn.....	Regulating, grading, etc.....	1,832 48
9548.	Engert avenue, between Graham avenue and Leonard street.....	Brooklyn.....	Paving	5,286 49
9549.	Eighth street, from Jackson to East avenue.....	Queens.....	Grading, etc.....	4,491 40
9550.	Ninth avenue, from Jackson to Pierce avenue.....	Queens.....	Regulating, grading, etc.....	7,844 00
9551.	One Hundred and Seventy-fourth street, from Jerome to Walton avenue.....	The Bronx.....	Regulating, grading, etc.....	4,225 05
9552.	Hopkinson avenue, between Eastern parkway and Atlantic avenue.....	Brooklyn.....	Paving	12,469 17
9553.	Hopkinson avenue, between Eastern parkway and Atlantic avenue.....	Brooklyn.....	Regulating, grading, etc.....	5,251 48
9554.	Seventy-third street, between New Utrecht and Eighteenth avenues.....	Brooklyn.....	Regulating, grading, etc.....	3,270 08
9555.	The Crescent, from Grand avenue to Broadway.....	Queens.....	Regulating, grading, etc.....	8,612 36
9556.	Hamilton street, from Webster to Vernon avenue.....	Queens.....	Paving	15,191 39
9557.	Van Alst avenue, from Ridge street to Hoyt avenue.....	Queens.....	Regulating, grading, etc.....	42,977 41
9558.	Forty-first street, between Seventh and New Utrecht avenues.....	Brooklyn.....	Sewer	7,298 41
9559.	Webster avenue and McLean avenue, Virio, etc., etc.....	The Bronx.....	Receiving basins.....	4,993 45
9560.	East One Hundred and Fortieth street, between existing sewer and Cypress avenue.....	The Bronx.....	Sewer	1,915 54
9561.	Clay avenue, between East One Hundred and Sixty-seventh and East One Hundred and Sixty-eighth streets.....	The Bronx.....	Sewer	2,782 70
9562.	Folsom place, between Linwood and Essex streets.....	Brooklyn.....	Curbing and paving.....	1,049 32
9563.	Kennelworth place, between Avenue G and Germania place.....	Brooklyn.....	Regulating, grading, etc.....	2,780 84
9564.	Kennelworth place, between Avenue G and Germania place.....	Brooklyn.....	Paving	4,137 45
9565.	East Fifth street, between Vanderbilt street and Greenwood avenue.....	Brooklyn.....	Paving	3,857 47
9566.	East Fifth street, between Vanderbilt street and Greenwood avenue.....	Brooklyn.....	Regulating, grading, etc.....	1,590 22
9567.	Hallett street, from Flushing to Hoyt avenue.....	Queens.....	Sewer	2,342 84
9568.	North Henry street, between Flushing and Newtown avenues.....	Queens.....	Sewer	1,536 90
9569.	Sixth avenue, from 464 feet north of Washington avenue to Webster avenue.....	Queens.....	Sewer	4,571 02
9570.	Academy street, from Broadway to Jamaica avenue.....	Queens.....	Sewer	2,124 08
9571.	One Hundred and Eighty-first street, from Tiebout to Jerome avenue.....	The Bronx.....	Regulating, grading, etc.....	14,346 27
9572.	One Hundred and Eighty-third street, from Jerome to Webster avenue.....	The Bronx.....	Regulating, grading, etc.....	12,140 36
9573.	Park place, between Eastern parkway extension and East New York avenue.....	Brooklyn.....	Regulating, grading, etc.....	2,024 56
9574.	Irving avenue, between Halsey street and Putnam avenue.....	Brooklyn.....	Sewer	7,559 22
9575.	One Hundred and Fifty-sixth street, from Beck street to Southern boulevard.....	The Bronx.....	Paving	4,972 71
9576.	Fox street, from Prospect avenue to Avenue St. John.....	The Bronx.....	Paving	6,213 99
9577.	One Hundred and Fifty-eighth street, from Morris to Park avenue.....	The Bronx.....	Regulating, grading, etc.....	1,989 72
9578.	Creston avenue, from Tremont to Burnside avenue.....	The Bronx.....	Regulating, grading, etc.....	4,432 09
9580.	Nos. 217 to 223 One Hundred and Twenty-fifth street.....	Manhattan.....	Repairing sidewalks.....	246 17
9581.	No. 221 Second avenue.....	Manhattan.....	Repairing sidewalks.....	42 73
9582.	Nos. 2030 to 2332 Second avenue.....	Manhattan.....	Repairing sidewalks.....	147 04
9583.	One Hundred and Fifty-third street, 125 feet west of Eighth avenue to Bradhurst avenue....	Manhattan.....	Repairing sidewalks.....	123 18
9584.	Nos. 733 and 735 Greenwich street.....	Manhattan.....	Repairing sidewalks.....	74 63
9585.	No. 133 Eighteenth street.....	Manhattan.....	Repairing sidewalks.....	40 41
9586.	No. 338 the Bowery.....	Manhattan.....	Repairing sidewalks.....	80 15
9587.	No. 1702 Lexington avenue.....	Manhattan.....	Repairing sidewalks.....	50 66
9588.	No. 226 East One Hundred and Seventeenth street.....	Manhattan.....	Repairing sidewalks.....	49 21
9589.	No. 181 Prince street.....	Manhattan.....	Repairing sidewalks.....	79 04
9590.	Nos. 155, 157 and 159 Prince street.....	Manhattan.....	Repairing sidewalks.....	78 49
9591.	Nos. 70 and 72 Ninth avenue.....	Manhattan.....	Repairing sidewalks.....	115 22
9592.	Northeast corner of Park avenue and One Hundred and Ninth street.....	Manhattan.....	Repairing sidewalks.....	202 95
9593.	Nos. 506 to 510 Seventy-sixth street.....	Manhattan.....	Repairing sidewalks.....	85 60
9594.	No. 91 East One Hundred and Sixteenth street.....	Manhattan.....	Repairing sidewalks.....	114 05
9595.	Nos. 503 and 505 East Twelfth street.....	Manhattan.....	Repairing sidewalks.....	121 42
9596.	Nos. 54 to 58 Attorney street.....	Manhattan.....	Repairing sidewalks.....	146 77
9597.	Northeast corner of Fourteenth street and Avenue B.....	Manhattan.....	Repairing sidewalks.....	436 64
9598.	No. 606 East Eleventh street.....	Manhattan.....	Repairing sidewalks.....	68 75
9599.	Nos. 454 and 456 East Tenth street.....	Manhattan.....	Repairing sidewalks.....	284 70
9600.	No. 535 East Twelfth street.....	Manhattan.....	Repairing sidewalks.....	82 30
9601.	No. 1588 Lexington avenue.....	Manhattan.....	Repairing sidewalks.....	312 55
9602.	Nos. 155 to 159 East Eighty-first street.....	Manhattan.....	Repairing sidewalks.....	143 34
9603.	Northeast corner of Dry Dock and Tenth street.....	Manhattan.....	Repairing sidewalks.....	260 02
9604.	No. 152 Attorney street.....	Manhattan.....	Repairing sidewalks.....	55 55
9605.	Nos. 210 and 212 West Twenty-eighth street.....	Manhattan.....	Repairing sidewalks.....	94 12
9606.	Nos. 2053 and 2055 Eighth avenue.....	Manhattan.....	Repairing sidewalks.....	252 60
9607.	No. 1674 Third avenue.....	Manhattan.....	Repairing sidewalks.....	43 92
9608.	No. 203 Avenue A.....	Manhattan.....	Repairing sidewalks.....	77 78
9609.	Opposite No. 501 East Eighty-sixth street.....	Manhattan.....	Repairing sidewalks.....	387 38
9610.	Opposite No. 425 West Thirty-seventh street.....	Manhattan.....	Repairing sidewalks.....	62 27
9611.	Opposite No. 53 Washington street.....	Manhattan.....	Repairing sidewalks.....	90 28
9612.	No. 63 Washington Square South.....	Manhattan.....	Repairing sidewalks.....	37 19
9613.	Nos. 6, 8 and 10 Wooster street.....	Manhattan.....	Repairing sidewalks.....	150 45
9614.	No. 521 East Fourteenth street.....	Manhattan.....	Repairing sidewalks.....	94 16
9615.	No. 214 East Fourteenth street.....	Manhattan.....	Repairing sidewalks.....	84 82
9616.	No. 169 East One Hundred and Eighteenth street.....	Manhattan.....	Repairing sidewalks.....	44 01
9617.	Nos. 124 and 126 Attorney street.....	Manhattan.....	Repairing sidewalks.....	119 24
9618.	Nos. 331 to 341 East Fourteenth street.....	Manhattan.....	Repairing sidewalks.....	45 75
9619.	Nos. 170 and 172 East One Hundred and Twenty-eighth street.....	Manhattan.....	Repairing sidewalks.....	124 21
9620.	Nos. 2081 and 2083 Second avenue.....	Manhattan.....	Repairing sidewalks.....	189 88
9621.	No. 61 West street.....	Manhattan.....	Repairing sidewalks.....	66 20
9622.	Nos. 6, 9, 11 and 13 Washington street.....	Manhattan.....	Repairing sidewalks.....	169 06

No.	Location.	Borough.	Nature of Work.	Amount.
9623.	No. 1875 Lexington avenue.....	Manhattan.....	Repairing sidewalks.....	49 84
9624.	Northwest corner of One Hundred and Twenty-sixth street and Lexington avenue.....	Manhattan.....	Repairing sidewalks.....	254 72
9625.	Nos. 251 to 257 East One Hundred and Twenty-fifth street.....	Manhattan.....	Repairing sidewalks.....	168 96
9626.	Nos. 166 to 178 East One Hundred and Twenty-fifth street.....	Manhattan.....	Repairing sidewalks.....	240 70
9627.	No. 213 East One Hundred and Twenty-fifth street.....	Manhattan.....	Repairing sidewalks.....	61 52
9628.	Northwest corner of One Hundred and Seventeenth street and Third avenue.....	Manhattan.....	Repairing sidewalks.....	209 46
9629.	No. 169 East One Hundred and Seventeenth street.....	Manhattan.....	Repairing sidewalks.....	53 90
9630.	South side of One Hundred and Forty-third street, 80 feet east of Amsterdam avenue to Convent avenue.....	Manhattan.....	Repairing sidewalks.....	271 12
9631.	Southeast corner of One Hundred and Twenty-seventh street and Park avenue.....	Manhattan.....	Repairing sidewalks.....	299 17
9632.	Nos. 526 to 530 West One Hundred and Eighty-second street.....	Manhattan.....	Repairing sidewalks.....	153 20
9633.	Two Hundred and Fourteenth street, between Tenth avenue and Broadway.....	Manhattan.....	Sewer	1,120 60
9634.	Fletcher street, between South and Front streets.....	Manhattan.....	Sewer	1,482 59
9635.	Forty-ninth street, between Tenth and Eleventh avenues.....	Manhattan.....	Alterations and improvements to sewer.....	16,591 34
9636.	Seaman avenue, from Academy street to Isham street.....	Manhattan.....	Regulating, grading, etc.....	18,584 76
9637.	West Two Hundred and Eleventh street, between Harlem river and Broadway, etc.....	Manhattan.....	Outlet sewer.....	53,242 87
9638.	East Thirty-first street, between Avenue F and Glenwood road.....	Brooklyn.....	Paving	4,020 87
9639.	East Thirty-first street, from Flatbush avenue to Glenwood road.....	Brooklyn.....	Paving	4,264 57
9640.	East Thirty-first street, from Flatbush avenue to Glenwood road.....	Brooklyn.....	Regulating, grading, etc.....	2,916 24
9641.	East One Hundred and Thirty-seventh street, from Third avenue to Rider avenue.....	The Bronx.....	Regulating, grading, etc.....	546 61
9642.	East side of Third avenue, 238 feet south of One Hundred and Seventy-fifth street.....	The Bronx.....	Guard rail, etc.....	132 06
9643.	Jamaica avenue, from Steinway to Thirteenth avenue.....	Queens.....	Sewer	1,521 39
9644.	Seventh avenue, from Jackson to Washington avenue.....	Queens.....	Sewer	3,896 58
9645.	Fifteenth avenue, between Broadway and Newtown road.....	Queens.....	Sewer	1,718 08
9646.	Marc place, between Grand and Newtown avenues.....	Queens.....	Sewer	783 01
9647.	Pomeroy street, from Broadway to Jamaica avenue.....	Queens.....	Sewer	2,247 86
9648.	One Hundred and Forty-third street, between Lenox avenue and east line of Fifth avenue..	Manhattan.....	Paving, etc.....	9,531 88
9649.	One Hundred and Forty-fourth street, between Lenox avenue and west line of Exterior street.	Manhattan.....	Paving, etc.....	8,385 90
9650.	Two Hundred and Fourth street, from Tenth avenue to bulkhead line of Harlem river.....	Manhattan.....	Regulating, grading, etc.....	6,489 33
9651.	Two Hundred and Fifth street, from Tenth avenue to bulkhead line of Harlem river.....	Manhattan.....	Regulating, grading, etc.....	7,935 91
9652.	East Seventy-fifth street, from west line of Exterior street 160 feet west.....	Manhattan.....	Reregulating and regrading.....	4,250 14
9653.	Bath avenue, between Bay Sixth street and Bay Twenty-seventh street, etc., etc.....	Brooklyn.....	Sewer and outlet sewer.....	988,038 55
9654.	Cleveland street, between Pitkin and Livonia avenues.....	Brooklyn.....	Regulating, grading, etc.....	9,573 85
9655.	Eleventh avenue, between Sixty-fifth and Sixty-ninth streets.....	Brooklyn.....	Regulating, grading, etc.....	4,754 50
9656.	Bryant avenue, from Boston road to East One Hundred and Eighty-second street.....	The Bronx.....	Regulating, grading, etc.....	33,269 42
9657.	Barretto street, between Simpson street and Southern boulevard.....	The Bronx.....	Regulating, grading, etc.....	2,196 66
9658.	Belmont street, from Clay to Topping avenue.....	The Bronx.....	Regulating, grading, etc.....	7,812 62
9659.	Bronx street, from Tremont avenue to East One Hundred and Eightieth street.....	The Bronx.....	Regulating, grading, etc.....	9,270 77
9660.	Bryant avenue, from Westchester avenue to Boston road.....	The Bronx.....	Regulating, grading, etc.....	38,638 52
9661.	Beck street, from Longwood to Intervale avenue.....	The Bronx.....	Regulating, grading, etc.....	3,498 78
9662.	Cypress avenue, from property of New York, New Haven and Hartford Railroad to East One Hundred and Thirty-eighth street.....	The Bronx.....	Regulating, grading, etc.....	19,760 07
9663.	Crotona Park South, from Fulton to Prospect avenue.....	The Bronx.....	Regulating, grading, etc.....	13,176 74
9664.	Crane street, from Robbins avenue to Timpson place.....	The Bronx.....	Regulating, grading, etc.....	14,173 08
9665.	Elsmere place, from Prospect to Marmion avenue.....	The Bronx.....	Paving, etc.....	4,664 58
9666.	Findlay avenue, from East One Hundred and Sixty-seventh to East One Hundred and Seventieth street.....	The Bronx.....	Regulating, grading, etc.....	39,884 04
9667.	Field place, from Morris to Ryer avenue.....	The Bronx.....	Regulating, grading, etc.....	3,615 85
9668.	Hoe avenue, from East One Hundred and Sixty-seventh street to Freeman avenue.....	The Bronx.....	Paving	10,967 19
9669.	Kelly street, from Longwood to Intervale avenue.....	The Bronx.....	Regulating, grading, etc.....	10,995 41
9670.	Loring place, from Burnside avenue to West One Hundred and Eightieth street.....	The Bronx.....	Regulating, grading, etc.....	5,146 51
9671.	Lorillard place, from Third to Pelham avenue.....	The Bronx.....	Regulating, grading, etc.....	10,907 04
9672.	Morris avenue, from Kingsbridge road to Jerome avenue.....	The Bronx.....	Paving, etc.....	15,214 79
9673.	Montgomery avenue, between West One Hundred and Seventy-sixth and West One Hundred and Seventy-seventh streets.....	The Bronx.....	Regulating, grading, etc.....	11,516 21
9674.	West One Hundred and Sixty-first street, between Summit and Sedgwick avenues.....	The Bronx.....	Regulating, grading, etc.....	7,552 18
9675.	West One Hundred and Sixty-sixth street, from Jerome avenue to Lind avenue.....	The Bronx.....	Regulating, grading, etc.....	20,226 55
9676.	East One Hundred and Seventy-fifth street, from Jerome avenue to Grand Boulevard and Concourse	The Bronx.....	Regulating, grading, etc.....	8,362 76
9677.	West One Hundred and Eighty-eighth street, from Sedgwick to Aqueduct avenue.....	The Bronx.....	Regulating, grading, etc.....	8,612 32
9678.	East Two Hundred and Ninth street, from Perry to Webster avenue.....	The Bronx.....	Regulating, grading, etc.....	3,262 98
9679.	West Two Hundred and Fifty-ninth street, from Broadway to Riverdale avenue.....	The Bronx.....	Regulating, grading, etc.....	43,350 56
9680.	Flushing avenue, from Willett street to Hillside avenue.....	Queens.....	Flagging	434 50
9681.	Anthony avenue, between Burnside avenue and East One Hundred and Seventy-ninth street, etc., etc.....	The Bronx.....	Sewers	18,914 96
9682.	Bathgate avenue, from East One Hundred and Eighty-eighth street to Pelham avenue, etc....	The Bronx.....	Sewers	6,497 59
9683.	Boston road, from Southern boulevard to East One Hundred and Seventy-seventh street....	The Bronx.....	Sewers	33,826 40
9684.	One Hundred and Eighty-ninth street, between Washington and Arthur avenues.....	The Bronx.....	Sewers	10,642 02
9685.	West One Hundred and Ninety-second street, between Exterior street and Bailey avenue, etc., etc.....	The Bronx.....	Sewers	104,259 24
9686.	Rodman place, between West Farms road and Longfellow avenue, etc.....	The Bronx.....	Sewers	7,791 39
9687.	Teller avenue, between East One Hundred and Seventieth street and summit south.....	The Bronx.....	Sewers	5,662 57
9688.	West Two Hundred and Sixty-first street, between Riverdale avenue, etc.....	The Bronx.....	Sewers	32,325 15
9689.	Bertha place, from Eddy street to Thressea place, etc.....	Richmond.....	Regulating, grading, etc.....	2,518 71
9690.	Indiana avenue, between Wooley avenue and Jewett avenue.....	Richmond.....	Regulating, grading, etc.....	5,433 50
9691.	Prospect avenue, from New York to Lafayette avenue.....	Richmond.....	Regulating, grading, etc.....	3,258 32
9692.	Richmond terrace, between John street and Morningstar road, etc.....	Richmond.....	Retaining wall, etc.....	3,306 50
9693.	Block bounded by Stuyvesant place, Jay street, Hamilton avenue, Wall street.....	Richmond.....	Fencing	1,041 67
9694.	West Fifth street, from Neptune avenue to Sheepshead Bay road.....	Brooklyn.....	Paving	3,780 91
9695.	West Fifth street, from Neptune avenue to Sheepshead Bay road.....	Brooklyn.....	Regulating, grading, etc.....	2,953 68
9696.	East Eighth street, between Avenue C and Avenue E.....	Brooklyn.....	Regulating, grading, etc.....	6,365 21
9697.	East Fifteenth street, between Cortelyou and Dorchester roads.....	Brooklyn.....	Paving	3,305 08

SCHEDULE D.

List in the office of the President of the Borough of Brooklyn, January 1, 1908.

No.	Location.	Borough.	Nature of Work.	Amount.
9095.	Steeplechase walk, from Bowery to a point 255 feet southerly therefrom, etc.....	Brooklyn.....	Sewers	\$33,242 62

SCHEDULE E.

Number of assessment lists in the office of the Board of Assessors, January 1, 1908, Apportioned and Advertised.

No.	Location.	Borough.	Nature of Work.	Apportioned and Advertised.	Amount.
9399.	West One Hundred and Sixty-ninth street, between Broadway and Fort Washington avenue..	Manhattan.....	Regulating, grading, etc.....	Nov. 21, 1907	\$22,649 98
9435.	Wicker place, from Jansen to Kingsbridge avenue.....	Manhattan.....	Paving	Dec. 12, 1907	3,479 18
9436.	Van Corlear place, from line 175 feet west of Kingsbridge avenue southerly around circle and north to Wicker place.....	Manhattan.....	Paving	Dec. 12, 1907	8,084 72
9456.	West One Hundred and Fifty-sixth street, from Audubon place to Riverside drive.....	Manhattan.....	Paving	Dec. 5, 1907	5,639 52
9457.	Terrace View avenue, from Broadway to Jansen avenue.....	Manhattan.....	Paving	Dec. 12, 1907	9,040 52
9458.	Terrace View avenue, from Jansen avenue to Kingsbridge avenue.....	Manhattan.....	Paving	Dec. 12, 1907	6,524 56
9459.	Amsterdam avenue, between One Hundred and Eighty-first and One Hundred and Eighty-sixth street.....	Manhattan.....	Sewer	Dec. 5, 1907	19,911 02
9466.	One Hundred and Twenty-fifth street, between Broadway and Claremont avenue.....	Manhattan.....	Sewer	Dec. 5, 1907	2,037 74
9467.	One Hundred and Fifty-seventh street, between Audubon place and Riverside drive.....	Manhattan.....	Paving	Dec. 5, 1907	3,512 23
9267.	Morris avenue, from St. James Park to Jerome avenue.....	The Bronx.....	Regulating, grading, etc.....	Nov. 7, 1907	15,195 20
9277.	East Two Hundred and Fifth street, east from Mosholu parkway to Jerome avenue.....	The Bronx.....	Regulating, grading, etc.....	Nov. 7, 1907	21,183 89
9333.	East One Hundred and Seventy-sixth street, from Arthur avenue to Southern boulevard.....	The Bronx.....	Regulating, grading, etc.....	Nov. 21, 1907	33,098 01
9335.	Southern boulevard, from Boston road to north line of St. Johns College, etc., etc.....	The Bronx.....	Regulating, grading, etc.....	Nov. 27, 1907	82,609 09
9379.	Broadway, from City line to Riverdale avenue, etc.....	The Bronx.....	Sewers	Dec. 26, 1907	979,647 41
9403.	Creston avenue, from East One Hundred and Eighty-fourth street to Minerva place.....	The Bronx.....	Regulating, grading, etc.....	Dec. 26, 1907	31,219 53
9417.	East One Hundred and Eightieth street, from Webster avenue to Grand Boulevard and Concourse	The Bronx.....	Regulating, grading, etc.....	Dec. 12, 1907	20,806 62
9446.	East One Hundred and Forty-fourth street, northeast and northwest corners of Austin place, etc.....	The Bronx.....	Receiving basins.....	Dec. 5, 1907	798 08
9447.	East One Hundred and Thirty-eighth street, between Gerard and Walton avenues.....	The Bronx.....	Sewer	Dec. 5, 1907	2,072 09
9448.	Summit place, between Heath and Boston avenues.....	The Bronx.....	Sewer	Dec. 5, 1907	4,492 89
8922.	Coney Island avenue, from plaza at Fort Hamilton avenue to Kings Highway.....	Brooklyn.....	Regulating, grading, etc.....	Nov. 27, 1907	41,440 15
9286.	Belmont avenue, between Elton and Chestnut streets.....	Brooklyn.....	Regulating, grading, etc.....	Nov. 13, 1907	11,027 20
9354.	Ninety-first street, between Fifth avenue and Shore road, etc.....	Brooklyn.....	Regulating, grading, etc.....	Nov. 13, 1907	10,795 94
9389.	Seventy-fourth street, between Second and Seventh avenues.....	Brooklyn.....	Regulating, grading, etc.....	Oct. 31, 1907	22,108 87
9465.	Sewerage District Map T.....	Brooklyn.....	Outlet sewers.....	Nov. 22, 1907	3,394,108 97
9343.	Hamilton street, from Webster to Vernon avenue.....	Queens.....	Sewer	July 19, 1907	21,405 75
9351.	Tottenville, etc., Fisher avenue, 180 feet, more or less, north.....	Richmond.....	Completing sewer system.....	Dec. 19, 1907	20,575 93
9442.	Bidwell avenue, from Watchogue road to Indiana avenue, etc., etc.....	Richmond.....	Regulating, grading, etc.....	Dec. 19, 1907	9,625 56

SCHEDULE F.

Number of assessment lists in the office of the Board of Assessors, January 1, 1908, to be Apportioned.

No.	Location.	Borough.	Nature of Work.	Amount.
8485.	Elm street, from City Hall place to Great Jones street, etc.....	Manhattan.....	Regulating, grading, etc.....	\$28,613 29
8486.	Elm street, from City Hall place to Great Jones street, etc.....	Manhattan.....	Paving	72,246 54
9426.	Thirty-ninth street, between Hudson river and Eleventh avenue.....	Manhattan.....	Sewer	32,806 11
9444.	West Two Hundred and Sixteenth street, from Broadway to Harlem river.....	Manhattan.....	Regulating, grading, etc.....	10,517 39
9468.	Broadway, west side, between One Hundred and Seventy-seventh and One Hundred and Eighty-first streets.....	Manhattan.....	Sewer	19,414 93
9469.	Two Hundred and Thirteenth street, from Tenth avenue to Harlem river.....	Manhattan.....	Regulating, grading, etc.....	5,700 69
9474.	Eleventh avenue, east side, between Thirty-fourth and Thirty-sixth streets, etc.....	Manhattan.....	Sewer	19,360 38
9475.	Tenth street, from East river to Avenue D.....	Manhattan.....	Sewer	9,711 00
9476.	Nagle avenue, from Broadway to Tenth avenue.....	Manhattan.....	Paving	55,942 38
9495.	Haven avenue, from One Hundred and Seventieth street 464.31 feet north.....	Manhattan.....	Regulating, grading, etc.....	12,792 23
9496.	One Hundred and Twentieth street, between Amsterdam and Morningside avenues.....	Manhattan.....	Paving	7,922 20
9497.	Post avenue, between Dyckman street and Tenth avenue.....	Manhattan.....	Regulating, grading, etc.....	66,454 67
9513.	One Hundred and Sixty-third street, between Broadway and Fort Washington avenue.....	Manhattan.....	Regulating, grading, etc.....	28,035 24
9378.	Tiebout avenue, from East One Hundred and Eightieth street to Fordham road.....	The Bronx.....	Regulating, grading, etc.....	38,307 76
9427.	Trinity avenue, from Westchester avenue to Dater street.....	The Bronx.....	Regulating, grading, etc.....	63,959 68
9437.	Southern boulevard, from East One Hundred and Thirty-eighth street to Boston road.....	The Bronx.....	Reregulating, regrading, etc.....	237,623 58
9449.	Kelly street, from Westchester to Intervale avenue.....	The Bronx.....	Regulating, grading, etc.....	11,561 71
9450.	Depot square, from Webster avenue to Depot Square East.....	The Bronx.....	Regulating, grading, etc.....	4,826 58
9451.	Townsend avenue, from East One Hundred and Seventieth to East One Hundred and Seventy-sixth street.....	The Bronx.....	Regulating, grading, etc.....	39,251 53
9452.	One Hundred and Sixty-second street, from Ogden to Woodycrest avenue.....	The Bronx.....	Regulating, grading, etc.....	3,864 99
9453.	One Hundred and Thirty-ninth street, from west of Cypress avenue to Locust avenue.....	The Bronx.....	Regulating, grading, etc.....	28,783 33
9470.	White Plains road, from Morris Park avenue to north boundary of The City of New York..	The Bronx.....	Regulating, grading, etc.....	511,097 87
9481.	At the northeast and southeast corners of One Hundred and Forty-ninth street and Walton avenue	The Bronx.....	Receiving basins.....	1,347 94
9482.	Southeast and northeast corners of One Hundred and Seventy-second street and West Farms road, etc.....	The Bronx.....	Receiving basins.....	4,308 39
9483.	One Hundred and Seventy-third street, between Southern boulevard and Hoe avenue, etc...	The Bronx.....	Sewer	13,325 66
9484.	One Hundred and Seventy-ninth street, between Arthur and Hewes avenues.....	The Bronx.....	Sewer	2,106 81
9485.	One Hundred and Eighty-second street, between Arthur and Belmont avenues.....	The Bronx.....	Sewer	5,593 49
9489.	One Hundred and Forty-ninth street, from Mott avenue to bridge over Harlem river.....	The Bronx.....	Paving	14,259 96
9490.	One Hundred and Sixty-third street, from Sherman avenue to Grand Boulevard and Concourse	The Bronx.....	Regulating, grading, etc.....	14,286 72
9491.	One Hundred and Seventy-second street, between Boston road and Southern boulevard.....	The Bronx.....	Regulating, grading, etc.....	4,258 56
9494.	Dawson street, between Longfellow and Intervale avenues.....	The Bronx.....	Paving	14,750 36
9500.	Third avenue, from Willis avenue to East One Hundred and Forty-ninth street.....	The Bronx.....	Regulating and paving.....	953 22
9501.	Westchester avenue, from Bronx river to Main street.....	The Bronx.....	Regulating, grading, etc.....	392,460 83
9502.	Featherbed lane, between Macombs road and Aqueduct avenue, etc.....	The Bronx.....	Sewer	19,690 36
9503.	One Hundred and Thirty-ninth street, between Walnut and Cypress avenues.....	The Bronx.....	Sewer	21,645 87
9504.	Parkside place, between East Two Hundred and Seventh street and summit north.....	The Bronx.....	Sewer	2,828 04
9505.	Perry avenue, between East Two Hundred and First and East Two Hundredth streets.....	The Bronx.....	Sewer	4,140 18
9510.	One Hundred and Sixty-fifth street, from Sedgwick to Ogden avenue.....	The Bronx.....	Regulating, grading, etc.....	11,826 09
9514.	Bronx terrace, between Fifth and Fourteenth streets, etc., etc.....	The Bronx.....	Temporary sewers.....	134,513 11
9519.	Sherman avenue, from One Hundred and Sixty-fourth to One Hundred and Sixty-eighth street	The Bronx.....	Regulating, grading, etc.....	32,140 36
9520.	Seabury place, from Charlotte street to Boston road.....	The Bronx.....	Regulating, grading, etc.....	5,495 76
9521.	Two Hundred and Eighth street, from Reservoir oval to Jerome avenue.....	The Bronx.....	Regulating, grading, etc.....	12,515 46
9522.	Grand avenue, from Fordham road to St. James street.....	The Bronx.....	Regulating, grading, etc.....	6,919 41
9523.	Crotona avenue, from East One Hundred and Eighty-ninth street to Southern boulevard.....	The Bronx.....	Sewer.....	8,782 73

No.	Location.	Borough.	Nature of Work.	Amount.
9524.	One Hundred and Fortieth street, between Walnut and Cypress avenues.....	The Bronx.....	Sewer.....	23,292 18
9525.	Albany road, between West Two Hundred and Thirty-third and Two Hundred and Thirty-first streets, etc.....	The Bronx.....	Sewer.....	8,326 71
9526.	One Hundred and Ninety-ninth street, between Jerome avenue and Grand Boulevard and Concourse.....	The Bronx.....	Sewer.....	1,167 91
9530.	Steuben avenue, from Mosholu parkway to Gun Hill road.....	The Bronx.....	Regulating, grading, etc.....	11,535 98
9531.	Longellow avenue, from Westchester avenue to Boston road.....	The Bronx.....	Regulating, grading, etc.....	38,887 14
9408.	Nostrand avenue, between Flatbush avenue and Avenue U.....	Brooklyn.....	Regulating, grading, etc.....	15,774 53
9515.	Thirty-first street, between Avenue F and Glenwood road.....	Brooklyn.....	Regulating, grading, etc.....	3,162 35
9516.	Sixty-fourth street, between Third and Fourth avenues.....	Brooklyn.....	Regulating, grading, etc.....	2,934 68
9284.	Pomeroy street, from Broadway to Jamaica avenue.....	Queens.....	Grading, paving, etc.....	18,012 93
9422.	Crescent street, from Payntar to Freeman avenue.....	Queens.....	Regulating, grading, etc.....	13,387 20
9423.	Vanderventer avenue, from Sixth to Tenth avenue.....	Queens.....	Regulating, grading, etc.....	5,738 57
9445.	Jamaica avenue, from Boulevard to Steinway avenue.....	Queens.....	Regulating, grading, etc.....	28,990 55
9454.	Broadway, from Vernon avenue to Newtown road.....	Queens.....	Flagging.....	21,591 72
9455.	Jamaica avenue, from Boulevard to Steinway avenue.....	Queens.....	Paving, etc.....	74,973 11
9460.	Greenpoint avenue, from Bradley avenue to Newtown Creek.....	Queens.....	Sewer.....	10,724 83
9461.	Second avenue, from Payntar avenue to south of Prince avenue, etc.....	Queens.....	Sewer.....	30,259 48
9462.	Third avenue, from Jackson avenue to north of Washington avenue.....	Queens.....	Sewer.....	19,609 74
9463.	Woolsey street, from Franklin street to Third avenue.....	Queens.....	Sewer.....	5,577 67
9464.	Flushing avenue, from Van Alst avenue to Cabinet street.....	Queens.....	Sewer.....	56,092 43
9471.	Tenth avenue, from Grand avenue to Vanderbilt avenue.....	Queens.....	Regulating, grading, etc.....	1,943 07
9472.	Jamaica avenue, from Steinway avenue to Newtown road.....	Queens.....	Regulating, grading, etc.....	5,762 41
9473.	Sixth avenue, from Jackson avenue to Graham avenue.....	Queens.....	Regulating, grading, etc.....	20,156 85
9477.	DeBevoise avenue, from Jackson to Flushing avenue.....	Queens.....	Regulating, grading, etc.....	63,545 72
9478.	Fourth avenue, from Washington to Graham avenue.....	Queens.....	Regulating, grading, etc.....	9,206 28
9479.	Radde street, from Payntar avenue to Jane street.....	Queens.....	Regulating, grading, etc.....	7,590 84
9480.	Second avenue, from Flushing avenue north of Potter avenue, etc.....	Queens.....	Regulating, grading, etc.....	39,213 69
9486.	Pomeroy street, between Broadway and Jamaica avenue.....	Queens.....	Flagging.....	2,890 18
9487.	Carver street, between Newtown avenue and Flushing avenue.....	Queens.....	Regulating, grading, etc.....	9,696 25
9488.	Nott avenue, between Van Alst and Vernon avenues.....	Queens.....	Regulating, grading, etc.....	23,063 71
9492.	Fifteenth avenue, from Vanderventer to Flushing avenue.....	Queens.....	Regulating, grading, etc.....	12,766 33
9493.	Ninth avenue, from Grand to Flushing avenue.....	Queens.....	Regulating, grading, etc.....	13,254 92
9506.	Dutch Kills street, between Jackson avenue and Long Island Railroad tracks.....	Queens.....	Sewer.....	1,735 99
9507.	Crescent street, from Jane street to Payntar avenue.....	Queens.....	Sewer.....	3,701 38
9508.	First avenue, between Broadway and Graham avenue.....	Queens.....	Sewer.....	3,293 38
9509.	Ditmas avenue, southeast corner of Eleventh avenue.....	Queens.....	Receiving basins.....	229 77
9511.	Thirteenth avenue, from Broadway to Jamaica avenue.....	Queens.....	Regulating, grading, etc.....	7,739 41
9512.	Seventh street, from Jackson avenue to East avenue.....	Queens.....	Regulating, grading, etc.....	3,313 89
9527.	Hamilton street and Washington avenue, northwest, southwest and northeast corners.....	Queens.....	Receiving basins.....	592 20
9528.	First avenue, from 250 feet south of Pierce avenue to Graham avenue.....	Queens.....	Sewer.....	4,363 37
9534.	Taylor street, from Van Alst to Hopkins avenue.....	Queens.....	Grading, etc.....	6,553 26
9536.	Hulst avenue, from Foster to Skillman avenue.....	Queens.....	Regulating, grading, etc.....	4,271 39
9537.	Hulst avenue, from Thompson to Greenpoint avenue.....	Queens.....	Regulating, grading, etc.....	12,067 90
9538.	Cooper avenue, between Grand and Newtown avenues.....	Queens.....	Regulating, grading, etc.....	3,874 87
9540.	Wolcott avenue, from Shore road to Steinway avenue.....	Queens.....	Regulating, grading, etc.....	82,477 34
9401.	Nicholas street, from Richmond terrace to St. Marks place.....	Richmond.....	Regulating, grading, etc.....	4,970 86
9428.	College avenue, from Jewett avenue to second proposed street east, etc.....	Richmond.....	Regulating, grading, etc.....	24,038 30
9443.	Maine avenue, from Jewett avenue to second proposed street east, etc.....	Richmond.....	Regulating, grading, etc.....	32,391 76
9499.	Ann street, from Heberton avenue to Avenue B, etc.....	Richmond.....	Temporary sewer.....	740 19

BOARD OF WATER SUPPLY.

New York, December 31, 1907.

The Board met pursuant to adjournment.
Present—Commissioners J. Edward Simmons (President), Charles N. Chadwick and Charles A. Shaw.
The minutes of December 11 and 17, 1907, were finally approved. The minutes of December 18 and 24, 1907, were read.

The following bills were presented and, on motion, were referred to Commissioner Shaw and the Secretary, with power to approve such bills as cannot be construed as "new or additional expense" within the language and meaning of the resolution of the Board of Estimate and Apportionment adopted December 6, 1907, and printed in the minutes of this Board of December 7, 1907:

Voucher No.	In Favor Of.	Amount.
5446.	W. C. Wilson.....	\$5 00
5554.	Ira C. Forbes.....	30 00
5555.	P. M. Barton.....	10 00
5556.	John N. Cordts.....	43 00
5557.	J. D. Schiels.....	20 00
5558.	Elmer Kreiger.....	10 00
5559.	Hudson River Telephone Company.....	63 27
5560.	New York Telephone Company.....	285 27
5561.	Yorktown Telephone Company.....	21 55
5562.	Helene Pagenstecher.....	50 00
5563.	George Speedling.....	12 50
5564.	Clemence R. Wilson.....	20 00
5565.	Mrs. Clemence R. Wilson.....	25 00
5566.	Poughkeepsie Trust Company.....	166 66
5567.	Jacob M. Hasbrouck.....	30 00
5568.	Herman D. Levino.....	30 00
5569.	Tracy Sherman.....	25 00
5570.	Catherine J. Evans.....	30 00
5571.	Granville Davis.....	4 00
5572.	Jules Breuchaud and B. F. Coleman.....	50 00
5573.	White Plains Realty Company.....	75 00
5574.	Frank M. Campbell.....	30 00
5575.	Frank T. Bailey.....	15 00
5576.	Theodore F. Tompkins.....	20 00
5577.	W. B. & E. G. Sutherland.....	100 00
5578.	Adams Bagnall Electric Company.....	3 65
5579.	Abendroth Bros.....	42 00

Voucher No.	In Favor Of.	Amount.
5580.	Abercrombie & Fitch Company.....	75 00
5581.	Alberene Stone Company.....	47 00
5582.	Arnold, Constable & Co.....	109 67
5583.	Burroughs Adding Machine Company.....	1 50
5584.	F. E. Brandis Sons Company.....	20 30
5585.	E. Beringer.....	55 00
5586.	Babylon Electric Light Company.....	3 75
5587.	E. C. Bridgman.....	54 00
5588.	F. A. Baker & Co.....	16 40
5589.	Buff & Buff Manufacturing Company.....	7 35
5590.	Clarke & Baker Company.....	150 40
5591.	Richard Clark.....	20 00
5592.	Columbia Towel Supply Company.....	7 00
5593.	Charles Cooper & Co.....	11 09
5594.	E. E. Dyer.....	13 15
5595.	Dubois & Gregory.....	6 53
5596.	E. Dietzgen & Co.....	731 69
5597.	The Fairbanks Company.....	3 00
5598.	Guylee & Deyo.....	2 50
5599.	Golding & Co.....	12 12
5600.	M. M. Govan.....	41 90
5601.	Hale Desk Company.....	107 07
5602.	C. E. Hasbrouck.....	103 10
5603.	J. J. Hasbrouck & Co.....	2 03
5604.	E. S. Hessels.....	35 60
5605.	Hindley & Pendleton Company.....	2,370 80
5606.	Charles Hart.....	204 96
5607.	Heffley Drug Company.....	1 54
5608.	John Henderson.....	7 00
5609.	Estate of John Harrison.....	16 12
5610.	Johnston Hardware and Iron Company.....	9 00
5611.	George E. Jonston.....	6 35
5612.	Kanouse Mountain Water Company.....	20 70
5613.	L. W. Lawrence.....	10 60
5614.	Library Bureau.....	124 00
5615.	William Lawson.....	30 00
5616.	James Millard & Son.....	5 50
5617.	McGraw Publishing Company.....	22 55
5618.	McMillan & Hale.....	2 00
5619.	Neostyle Company.....	15 00
5620.	New York Belting and Packing Company.....	100 00
5621.	Merritt & Co.....	87 00
5622.	New Bedford Cordage Company.....	105 03

Voucher No.	In Favor Of.	Amount.
5623.	Peekskill Lighting and Railroad Company.....	2 56
5624.	M. E. Parrott.....	20 00
5625.	H. W. Palen's Sons.....	5 56
5626.	Pittsburgh Plate Glass Company.....	14 60
5627.	F. Art Quinet.....	30 00
5628.	F. A. Ringler Company.....	5 52
5529.	Kelsey, Smith & Co.....	60 00
5630.	Standard Oil Company of New York.....	6 50
5631.	E. G. Soltmann.....	2 10
5632.	The "Signal".....	9 25
5633.	Tower Bros. Stationery Company.....	138 25
5634.	Teller & Tappen.....	150 94
5635.	Underwood Typewriter Company.....	21 50
5636.	United States Card Index Company.....	4 20
5637.	A. A. Weeks-Hoskins Company.....	40 60
5638.	L. S. Winne & Co.....	34 38
5639.	Western Electric Company.....	16 50
5640.	A. T. Wilson.....	11 14
5641.	W. C. Wilson.....	7 75
5642.	Charles Goodman.....	165 73
5643.	J. M. S. Millette.....	1,165 01
5644.	Walter E. Spear.....	343 07
5654.	South Side Lodge, No. 493.....	33 33
5655.	Elizabeth Bernhardt.....	75 00
5656.	S. R. Waldron.....	38 00
5657.	Arnold, Constable & Co.....	88 42
5658.	L. S. Winne & Co.....	10 19
5653.	D. H. Goldsmith.....	15 00
Expenses Incurred in Acquisition of Property.		
5645.	"New Paltz Times".....	401 80
5646.	Appeal Printing Company.....	242 45
5647.	"Tammany Times".....	1,940 40
5648.	"Democracy".....	1,836 80
5649.	"State Law Reporter" (Inc.).....	200 23
5650.	The Leader Company.....	5,845 00
5651.	"Kingston Freeman".....	2,072 00
5652.	Eliot S. Benedict.....	200 00
Agreements.		
5550.	Naughton Company.....	1,940 80
5551.	F. W. Miller.....	468 00
5552.	George M. Lyon.....	2,412 21
5553.	Sprague & Henwood.....	7,735 05
5659.	Madison Building Company.....	1,960 00
Payrolls.		
5545.	Laborers, week ending December 11.....	2,877 87
5546.	Commissioners, December, 1907.....	3,000 00
5547.	Administration Bureau, December, 1907.....	4,359 57
5548.	Engineering Bureau, December, 1907.....	65,206 57
		\$111,304 94

Financial Statement.

The following financial statement was read and filed:

1905.		
June 25.	Corporate Stock authorized....	\$100,000 00
Nov. 24.	Corporate Stock authorized....	500,000 00
Dec. 8.	Corporate Stock authorized....	1,002,000 00
1906.		
Nov. 23.	Corporate Stock authorized....	10,000,000 00
1907.		
June 14.	Corporate Stock authorized....	15,000,000 00
		\$26,602,000 00
Dec. 30.	Premium on sale of \$1,861,500 Water Bonds..	21,368 76
	Miscellaneous revenue.....	450 00
		\$26,623,818 76
Dec. 30.	Vouchers Nos. 1 to 5659, both inclusive, registered from June 9, 1905, to December 28, 1907.....	\$3,110,634 78
	Estimated liabilities on open orders.....	\$37,202 35
	Registered contract liabilities..	4,115,190 13
	Estimated liabilities under special agreements.....	456,450 93
		4,608,843 41
		7,719,478 19
Dec. 30.	Amount available.....	\$18,904,340 57

CIVIL SERVICE MATTERS.

Leaves of Absence.

Commissioner Shaw reported that on December 20, 1907, pursuant to the request of the Chief Engineer in his communication No. 2214, he had granted to William G. Closson, Topographical Draughtsman, a leave of absence, without pay, from December 22 to 31, 1907, inclusive.

On motion, this action of Commissioner Shaw was confirmed.

The following leaves of absence, without pay, were granted:

Gertrude E. Camp, Stenographer and Typewriter, one month, commencing December 16, 1907; Chief Engineer's number, 2228.
James F. Murphy, Topographical Draughtsman, one month, commencing January 1, 1908; Chief Engineer's number, 2227.

Amendment of Minutes.

The minutes of the following meetings were amended in the particulars set opposite each date, respectively:

November 29, 1907—Gilbert G. Nicoll, Topographical Draughtsman; name to read, Gilbert L. Nicoll; Chief Engineer's number, 2192.

November 29, 1907—Kenneth Hall, Clerk; name to read, Robert Kenneth Hall; Chief Engineer's number, 2202.

July 12, 1906—Robert C. Hubbard, Jr., Laborer; name to read, Robert C. Hubbard; Chief Engineer's number, 2230.

July 3, 1907—Nicholas A. Schanschiff, Laborer; name to read, Nicholas A. Schanschiff; Chief Engineer's number, 2230.

June 12, 1907—John M. Connelly, Stenographer and Typewriter; name to read, John M. Connolly; Chief Engineer's number, 2230.

April 3, 1907—Levi M. Crispin, Laborer; name to read, Levi M. Crispell.

January 16, 1907—Oswald W. Weeks, Gage Keeper; name to read, Oswald W. Weeks.

August 26, 1907—Newell Covert, Office Boy; name to read, Newell S. Covert.

On motion, it was

Resolved, That the Chief Engineer procure and submit to the Board an affidavit by Robert C. Hubbard, Jr., that he is the same person who was appointed Laborer to this Board July 12, 1906, after passing the Civil Service examination, and the same person who received the pay of such position and performed the services required thereof.

Separations.

The following resignations were accepted, to take effect on the dates set opposite the names, respectively:

Max C. Fero, Laborer; December 14, 1907.
George H. Windrum, Laborer; December 14, 1907.
Walter E. Bogart, Laborer; December 14, 1907.
Jacob W. Beesmer, Laborer; December 14, 1907.
William Cole, Laborer; December 14, 1907.
Ralph B. Moore, Laborer; December 17, 1907.
Sheridan Tompkins, Laborer; December 17, 1907.
George Sachs, Laborer; December 17, 1907.
Charles Snyder, Laborer; December 18, 1907.
James C. Smedes, Laborer; December 20, 1907.
Alonzo Barton, Laborer; December 20, 1907.
Franklyn P. Marquit, Laborer; December 20, 1907.
Martin C. Nilon, Laborer; December 21, 1907.
James Hughes, Laborer; December 21, 1907.
Neil R. Windrum, Laborer; December 21, 1907.
Clarence T. Frame, Laborer; December 24, 1907.
Arthur Trowbridge, Laborer; December 24, 1907.
Thomas W. Higgins, Laborer; December 24, 1907.
David H. Hill, Laborer; December 24, 1907.
George W. Hopper, Laborer; December 31, 1907.
James D. DeWitt, Laborer; December 31, 1907.
George Clearwater, Laborer; December 31, 1907.
William D. Vandermark, Laborer; December 31, 1907.
Thomas V. Joseph, Laborer; December 31, 1907.
Walter Conner, Laborer; December 31, 1907.
Benjamin B. Johnson, Laborer; December 31, 1907.
Michael M. Sullivan, Laborer; December 31, 1907.
Charles T. Dixon, Laborer; December 31, 1907.
William Zimmerman, Laborer; December 31, 1907.
Charles W. Donaldson, Laborer; December 31, 1907.
Harry Zimmerman, Laborer; December 31, 1907.
Nathan D. Williams, Laborer; December 31, 1907.
Van Cott Hewton, Laborer; December 31, 1907.
Charles F. Morris Laborer; December 31, 1907.
Hewitt Osborn, Foreman; December 20, 1907.
Homer C. Greene, Rodman; December 28, 1907.
Robert Christiana, Janitor; December 31, 1907.
Howard Benedict, Clerk; December 31, 1907.
Levi M. Crispell, Laborer; December 14, 1907.
Luther Holmes, Laborer; December 18, 1907.
Simon W. DuBois, Laborer; December 21, 1907.
James H. McEvoy, Laborer; December 27, 1907.
Henry Williams, Laborer; December 24, 1907.
Oswald W. Weeks, Gage Keeper, December 31, 1907.
Newell S. Covert, Office Boy, December 31, 1907.
Robert C. Hubbard, Laborer; December 14, 1907.
Nicholas A. Schanschiff, Laborer; December 24, 1907.
John M. Connolly, Stenographer and Typewriter; December 31, 1907.

Commissioner Shaw reported that on December 20, 1907, he had ordered that the services of William E. Smyth, Laborer, be dispensed with, to take effect December 21, 1907, on account of reduction of force, pursuant to the recommendation of the Chief Engineer in his communication No. 2215.

On motion, this action of Commissioner Shaw was confirmed, and the Chief Engineer was directed to furnish the Board with his reasons for dispensing with the services of said Laborer.

Communication No. 2229, December 30, 1907, was received from the Chief Engineer, recommending that the services of a number of employees be dispensed with on account of reduction of force, and, on motion, this matter was laid on the table.

Change of Title.

On motion, it was

Resolved, That the title of each Office Boy employed by this Board is hereby changed to Clerk (first grade), to conform to the reclassification of grades recently adopted by the Municipal Civil Service Commission, with the approval of the Mayor and the State Civil Service Commission.

COMMUNICATIONS FROM THE CHIEF ENGINEER.

Weekly Report.

No. 119, December 16, 1907, and No. 120, December 23, 1907, were filed.

Real Estate, Fences.

No. 2213, December 19, 1907, requested that the opinion of the Corporation Counsel be procured as to the necessity of side fences along those portions of the Aqueduct right of way under which the Aqueduct will take the form of a siphon or deep tunnel, and, on motion, the Secretary was directed to write the Corporation Counsel, requesting such opinion.

Leases.

Commissioner Shaw reported that, pursuant to the recommendation of the Chief Engineer in his communication, No. 2216, December 20, 1907, he had caused a letter to be sent to Mr. D. H. Goldsmith, Centre Moriches, L. I., under date of December 21, 1907, to the effect that this Board would vacate the property of said Goldsmith, held under lease, on January 23, 1908. On motion, this action of Commissioner Shaw was confirmed.

Contract No. 3.

No. 2217, December 20, 1907, reported that \$1,010 had been received for specifications and drawings of this contract and had been transmitted to the Auditor.

Contract No. 5.

No. 2218, December 20, 1907, reported that \$100 had been received for specifications and drawings of this contract and had been transmitted to the Auditor.

No. 2220, December 23, 1907, reported that the outfall portion of the Kingston Sewer through the property of Mr. S. D. Coykendall had been completed, and upon inspection by Mr. Codwise, City Engineer of the City of Kingston, the work had been pronounced satisfactory by him.

Contract No. 6.

No. 2219, December 20, 1907, reported that \$45 had been received for specifications and drawings of this contract under the first advertisement, and \$95 under the second advertisement, and that said sums had been transmitted to the Auditor.

Real Estate, Ashokan Reservoir, Sections 12, 13 and 14.

No. 2226, December 27, 1907, called attention to the number of buildings to be taken in these sections, including the Village of Olive and a portion of the old Village of Shokan, and also to the fact that these sections were at a considerable distance from the territory included in Contract No. 3.

No. 2222, December 24, 1907, transmitted for approval the following real estate maps of said sections, and, on motion, the approval of these maps was laid on the table:

"Board of Water Supply of The City of New York. Map of real estate situated in the Town of Olive, County of Ulster and State of New York, to be acquired by The City of New York under the provisions of chapter 724 of the Laws of 1905, as amended, for the construction of Ashokan Reservoir and appurtenances, in Shokan and vicinity." (Section 12, Reservoir Department, containing Parcels 543 to 607, inclusive, and a total area of 462.574 acres);

"Board of Water Supply of The City of New York. Map of real estate situated in the towns of Olive and Hurley, County of Ulster and State of New York, to be acquired by The City of New York under the provisions of chapter 724 of the Laws of 1905, as amended, for the construction of Ashokan Reservoir and appurtenances, from the vicinity of Olive to the vicinity of Glenford." (Section 13, Reservoir De-

partment, containing Parcels 608 to 660, both inclusive, and a total area of 1,332.664 acres);

"Board of Water Supply of The City of New York. Map of real estate situated in the Town of Olive, County of Ulster and State of New York, to be acquired by The City of New York under the provisions of chapter 724 of the Laws of 1905, as amended, for the construction of Ashokan Reservoir and appurtenances, from the vicinity of Shokan to the vicinity of Olive." (Section 14, Reservoir Department, containing Parcels 661 to 713, both inclusive, and a total area of 734.365 acres.)

Real Estate, Northern Aqueduct, Section 2, Parcels 57a and 58a.

No. 2224, December 26, 1907, recommended that the Corporation Counsel be requested to hasten the steps necessary to obtain possession of Parcel 57a, and, on motion, the Secretary was directed to write the Corporation Counsel, making such request, and forwarding a copy of said Communication No. 2224.

Real Estate, Kensico.

No. 2225, December 27, 1907, recommended that the Corporation Counsel be requested to investigate the rights of the New York, Housatonic and Northern Railroad where the old line of said railroad lies within the proposed taking for the Kensico Reservoir, and, on motion, the Secretary was directed to write the Corporation Counsel, requesting such advice.

COMMUNICATIONS FROM THE LAW DEPARTMENT.

Real Estate, Northern Aqueduct, Section 1, Parcels 25 and 26.

No. 186, December 18, 1907, requested that the Corporation Counsel be advised of the action of the Board, taken in accordance with opinion No. 177, dated November 25, 1907. The Secretary reported that the Board had taken such action on December 18, 1907, and that on December 19, 1907, the Corporation Counsel had been duly notified.

Real Estate, Northern Aqueduct, Sections 1 and 2; Hill View, Kensico.

No. 190, December 19, 1907, requested a list of buildings identified by parcel numbers which are not shown upon the taking maps of the above proceedings. The Secretary reported that under date of December 23, 1907, a letter had been sent to the Corporation Counsel in reply.

Agreement No. 37.

No. 192, December 21, 1907, gave certain advice in reference to the refusal of the Cranford Company to continue work under this agreement for sinking test shafts on the shores of the Hudson River. Commissioner Chadwick reported that under date of December 23, 1907, a letter had been written to the Corporation Counsel, requesting further advice, and, on motion, this action of Commissioner Chadwick was confirmed.

Real Estate, Taxes.

No. 193, December 24, 1907, forwarded contents of communication from Hon. John J. Linson to the Corporation Counsel, dated November 28, 1907, in reference to the school taxes of District No. 12, Marbletown; District No. 13, Olive, and Districts 1, 2 and 13, Hurley, and, on motion, was referred to the Examiner of Real Estate and Damages for report.

Real Estate, Schoharie Watershed.

No. 194, December 24, 1907, stated that by direction of the Corporation Counsel the amended petition for the approval of the map and profile of June 13, 1906, had not been prepared or forwarded to the State Water Supply Commission.

Real Estate, Timber.

No. 195, December 27, 1907, forwarded contents of a communication from Mr. H. T. Dykman, Special Counsel, dated December 18, 1907, approving the proposed sale of timber on the site of the Hill View Reservoir, and, on motion, was referred to Commissioner Chadwick for report.

Real Estate, Claims.

No. 196, December 30, 1907, acknowledged receipt of letter from this Board, dated December 9, 1907, advising the Corporation Counsel that the claim of Mrs. Fannie A. Bross, No. 30, for \$200, for damages to her property at Islip, L. I., had been adjusted at that amount.

Real Estate, Kensico, "Morris" Property.

A communication was received from Mr. H. T. Dykman, dated December 23, 1907, asking for any further information which this Board might receive in regard to this property, and also the approximate date when the maps showing the taking of this property would be filed. On motion, the Chief Engineer was requested to advise the Board as to said date.

Real Estate, Expense of Acquisition.

A voucher for the payment of \$200 to Elliot S. Benedict for services as Special Counsel in all proceedings pending December 20, 1907, was received from the Corporation Counsel, approved by him, and ordered forwarded to the Comptroller.

The following bills were received, approved by the Corporation Counsel and taxed by the Supreme Court, and vouchers therefor were ordered to be prepared and forwarded to the Comptroller:

Ashokan Reservoir, Sections 1 to 9—	
Ellis B. Long, Clerk to Commissions.....	\$272 84
Northern Aqueduct, Section 1—	
Port Chester Publishing Company, advertising.....	\$9 00
Welford H. Croft, automobile.....	20 00
Julian E. Ingle, Jr., printing.....	111 75
Pelham "Register," advertising.....	7 00
Northern Aqueduct, Section 2—	
Julian E. Ingle, Jr., printing.....	\$204 00
Northern Aqueduct, Section 3—	
New York "Herald," advertising.....	\$11,627 00
Hill View Reservoir, Section 2—	
Julian E. Ingle, Jr., printing.....	\$174 00
Hill View Reservoir, Section 1—	
State Law Reporters, stenographers.....	\$103 80
Ashokan Reservoir, Section 2—	
Kingston "Daily Express," advertising.....	\$1,650 20
Northern Aqueduct, Section 4—	
New York "Times," advertising.....	\$11,713 20

Real Estate, Abstracts of Title.

Abstracts of title of the following parcels were received and ordered to be kept temporarily by the Secretary:

Proceeding—

Kensico Reservoir, Section 5, Parcels 287, 304, 306, 318 and 358.
 Kensico Reservoir, Section 5, Parcel 288.
 Kensico Reservoir, Section 5, Parcel 289.
 Kensico Reservoir, Section 5, Parcel 290.
 Kensico Reservoir, Section 5, Parcel 291.
 Kensico Reservoir, Section 5, Parcel 292.
 Kensico Reservoir, Section 5, Parcel 294.
 Kensico Reservoir, Section 5, Parcel 295.
 Kensico Reservoir, Section 5, Parcel 296.
 Kensico Reservoir, Section 5, Parcel 298.
 Kensico Reservoir, Section 5, Parcel 299.
 Kensico Reservoir, Section 5, Parcel 300.
 Kensico Reservoir, Section 5, Parcel 302.
 Kensico Reservoir, Section 5, Parcel 305.

Kensico Reservoir, Section 5, Parcel 307.
 Kensico Reservoir, Section 5, Parcel 309.
 Kensico Reservoir, Section 5, Parcel 315.
 Kensico Reservoir, Section 5, Parcel 316.
 Kensico Reservoir, Section 5, Parcel 317.
 Kensico Reservoir, Section 5, Parcel 320.
 Kensico Reservoir, Section 5, Parcel 321.
 Kensico Reservoir, Section 5, Parcel 335.
 Kensico Reservoir, Section 5, Parcel 336.
 Kensico Reservoir, Section 5, Parcel 338.
 Kensico Reservoir, Section 5, Parcel 339.
 Kensico Reservoir, Section 5, Parcel 340.
 Kensico Reservoir, Section 5, Parcel 341.
 Kensico Reservoir, Section 5, Parcel 342.
 Kensico Reservoir, Section 5, Parcel 343.
 Kensico Reservoir, Section 5, Parcel 345.
 Kensico Reservoir, Section 5, Parcel 346.
 Kensico Reservoir, Section 5, Parcel 347.
 Kensico Reservoir, Section 5, Parcel 359.
 Kensico Reservoir, Section 6, Parcel 365.
 Kensico Reservoir, Section 6, Parcel 366.
 Kensico Reservoir, Section 6, Parcel 367.
 Kensico Reservoir, Section 6, Parcel 368.
 Kensico Reservoir, Section 6, Parcel 369.
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 Kensico Reservoir, Section 6, Parcel 385.
 Kensico Reservoir, Section 6, Parcel 386.
 Kensico Reservoir, Section 6, Parcel 387.
 Kensico Reservoir, Section 6, Parcel 389.
 Kensico Reservoir, Section 6, Parcel 391.
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 Kensico Reservoir, Section 6, Parcel 394.
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 Kensico Reservoir, Section 6, Parcel 398.
 Kensico Reservoir, Section 6, Parcel 399.
 Kensico Reservoir, Section 6, Parcel 400.
 Kensico Reservoir, Section 6, Parcel 402.
 Kensico Reservoir, Section 6, Parcel 403.
 Kensico Reservoir, Section 6, Parcel 404.
 Kensico Reservoir, Section 6, Parcel 406.
 Kensico Reservoir, Section 6, Parcel 407.
 Kensico Reservoir, Section 6, Parcel 408.
 Kensico Reservoir, Section 6, Parcel 409.
 Kensico Reservoir, Section 6, Parcel 411.
 Kensico Reservoir, Section 6, Parcel 413.
 Kensico Reservoir, Section 6, Parcel 414.
 Kensico Reservoir, Section 6, Parcel 415.
 Kensico Reservoir, Section 6, Parcel 416.
 Kensico Reservoir, Section 6, Parcel 417.
 Kensico Reservoir, Section 6, Parcel 419.
 Kensico Reservoir, Section 6, Parcel 420.
 Kensico Reservoir, Section 6, Parcel 421.
 Kensico Reservoir, Section 6, Parcel 422.
 Kensico Reservoir, Section 6, Parcel 424.
 Kensico Reservoir, Section 6, Parcel 426.
 Kensico Reservoir, Section 6, Parcel 427.
 Kensico Reservoir, Section 6, Parcel 428.
 Kensico Reservoir, Section 6, Parcel 429.
 Kensico Reservoir, Section 6, Parcel 430.
 Kensico Reservoir, Section 6, Parcel 433.
 Kensico Reservoir, Section 6, Parcel 434.
 Kensico Reservoir, Section 6, Parcel 435.
 Kensico Reservoir, Section 6, Parcel 437.
 Kensico Reservoir, Section 6, Parcel 440.
 Kensico Reservoir, Section 6, Parcel 443.
 Kensico Reservoir, Section 6, Parcel 444.
 Kensico Reservoir, Section 6, Parcel 446.
 Kensico Reservoir, Section 6, Parcel 447.
 Kensico Reservoir, Section 6, Parcel 448.
 Ashokan Reservoir, Section 12, Parcel 543.
 Ashokan Reservoir, Section 12, Parcel 544.
 Ashokan Reservoir, Section 12, Parcel 545.
 Ashokan Reservoir, Section 12, Parcel 547.
 Ashokan Reservoir, Section 12, Parcel 549.
 Ashokan Reservoir, Section 12, Parcel 550.
 Ashokan Reservoir, Section 12, Parcel 551.
 Ashokan Reservoir, Section 12, Parcel 554.
 Ashokan Reservoir, Section 12, Parcel 556.
 Ashokan Reservoir, Section 12, Parcel 560.
 Ashokan Reservoir, Section 12, Parcel 561.
 Ashokan Reservoir, Section 12, Parcel 563.
 Ashokan Reservoir, Section 12, Parcel 564.
 Ashokan Reservoir, Section 12, Parcel 565.
 Ashokan Reservoir, Section 12, Parcel 567.
 Ashokan Reservoir, Section 12, Parcel 569.
 Ashokan Reservoir, Section 12, Parcel 570.
 Ashokan Reservoir, Section 12, Parcel 571.
 Ashokan Reservoir, Section 12, Parcel 572.
 Ashokan Reservoir, Section 12, Parcel 573.
 Ashokan Reservoir, Section 12, Parcel 580.
 Ashokan Reservoir, Section 12, Parcel 582.
 Ashokan Reservoir, Section 12, Parcel 584.
 Ashokan Reservoir, Section 12, Parcel 590.

OTHER COMMUNICATIONS.

Agreement No. 37.

A communication was received from the Finance Department, dated December 19, 1907, forwarding copy of claim No. 54340, filed in said Department by the Cranford Company for \$224,449.94, for work done under this agreement for test shafts on the shores of the Hudson River, and for damages. On motion, the Secretary was directed to write to the Comptroller, sending copies of the communications sent by this Board to the Corporation Counsel in reference to this matter, and the Chief Engineer was directed to procure and submit to the Board further information in regard to this claim.

A further communication was received from the Finance Department, dated December 23, 1907, stating that a warrant for \$11,593.80 was ready for payment to the Cranford Company, and, on motion, the Secretary was directed to write to the Corporation Counsel, transmitting a copy of the above-mentioned claim and of the letter of December 23, 1907, and requesting at the earliest possible moment the opinion asked for in the letter of this Board dated December 23, 1907.

Contract No. 3.

A communication was received from the Commissioners of Accounts, dated December 24, 1907, forwarding, with their approval, bill of Clarence Bonyne, Stenographer, \$1,298, for eight copies of Stenographer's minutes of the public hearings before said Commissioners in the matter of the investigation of Contract No. 3. On motion, this bill was approved and a voucher therefor was ordered to be prepared and forwarded to the Comptroller.

Agreement No. 45.

A communication was received from the Germantown Artesian Well Company, dated December 17, 1907, requesting an extension to April 1, 1908, of the time for the completion of the work under this agreement. On motion, this matter was referred to the Chief Engineer for report.

Contract No. 5.

A communication was received from the Auditor, dated December 28, 1907, calling attention to the fact that the first estimate under this contract, amounting to \$5,175.23, had been received from the Engineering Bureau, and that a voucher could not be prepared and forwarded to the Comptroller on account of the fact that no formal notice to begin work had been given to the contractor. On motion, the Secretary was directed to write the Corporation Counsel, requesting at the earliest possible moment the advice requested in the letter of this Board, dated October 31, 1907.

Advertising.

A communication was received from the Finance Department, dated December 26, 1907, asking information in regard to the following bills for advertising:

"Newburg Daily News," notice of hearing before State Water Supply Commission, September 6, 1907.....	\$75 40
"Kingston Freeman," notice of hearing before State Water Supply Commission, September 6, 1907.....	85 80
"Engineering News," advance information as to contracts.....	64 80
"Engineering Record," advance information as to contracts.....	67 20
"Engineering Record," Contract No. 6.....	52 80
"Kingston Freeman," Contract No. 5.....	75 40
"Kingston Leader," Contract No. 5.....	57 20
"Engineering News," Contract No. 3.....	24 60
"Engineering Record," Contract No. 3.....	122 00
"Engineering News," Contract No. 3.....	121 20
"Poughkeepsie Eagle," notice of hearing before the State Water Supply Commission, September 6, 1907.....	97 24
"Westchester Reporter," notice of hearing before State Water Supply Commission, September 6, 1907.....	85 80
"Yonkers Gazette," notice to property owners.....	60 00
"Westchester News," of White Plains, notice to property owners.....	60 00
"Cold Spring Recorder," notice of hearing before State Water Supply Commission, September 6, 1907.....	6 89

On motion, this matter was referred to Commissioners Chadwick and Shaw, to report to the Board a form of letter to be sent to the Comptroller.

Surveys.

Two communications were received from the Public Service Commission for the First District, dated respectively December 28 and 30, 1907, to the effect that the request of this Board for information as to levels had been referred to the Chief Engineer of said Commission.

Minutes.

The Secretary submitted for printing indices of the minutes of the Board for 1905 and 1906, and, on motion, the printing of said indices was referred to Commissioner Shaw, with power to take such action in behalf of the Board as he might deem advisable.

Agreements 66 and 67.

Commissioner Shaw reported that on December 19, 1907, he had written the Corporation Counsel, requesting advice as to whether these agreements could be signed and entered into by the Board. On motion, this action of Commissioner Shaw was confirmed.

Real Estate Claims.

Commissioner Chadwick reported that on December 28, 1907, he had caused to be forwarded to the Corporation Counsel copies of the following claims for consequential damages, and that there was nothing further to be done by this Board in regard to the same at this time:

Standard Oil Company of New York, No. 93.....	\$1,970 83
William H. Hicks, No. 71.....	750 00
	to 1,000 00
Louis Nelson, No. 90.....	37,797 00

On motion, this action of Commissioner Chadwick was confirmed.

In regard to the claim of James R. Gastell, No. 50, Commissioner Chadwick reported that the tender of \$115 had been accepted by Mr. Castell, and a release in full had been received, dated December 15, 1907.

On motion, the Board adjourned.

THOS. HASSETT, Secretary.

PROCEEDINGS OF THE PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT.

FRIDAY, JANUARY 24, 1908.

TRIBUNE BUILDING, 154 NASSAU STREET,
BOROUGH OF MANHATTAN, CITY OF NEW YORK.

Present—John E. Eustis, Acting Chairman, Commissioners William McCarroll, Milo R. Maltbie.

(1) Chairman Willcox was excused because of illness, and, on motion, duly seconded, Commissioner Eustis was elected Acting Chairman.

(2) The Secretary presented a communication from the State Civil Service Commission transmitting a resolution permitting the employment of John Schroder as Janitor for the Second Division Engineer's office at No. 2630 Broadway, at a compensation not to exceed \$15 per month. The letter was ordered filed.

(3) The Secretary presented a communication from the Art Commission of The City of New York transmitting the following resolution and returning the exhibits mentioned therein, with the exception of Exhibit 304-C:

CERTIFICATE No. 659.

Resolved, That the Art Commission hereby *disapproves* the designs for the tablets to be placed in the Borough Hall subway station, Brooklyn, represented by Exhibits "304-A," "304-B," "304-C," "304-D," "304-E" and "304-F" of record in this matter; and that the action of the Commission be certified, with return of duplicates of Exhibits herein noted, to Hon. William R. Willcox, Chairman, Public Service Commission for the First District.

The communication was ordered filed.

(4) The Secretary presented the following communication from Hon. Louis F. Haffen, President of the Borough of The Bronx, which was ordered filed:

NEW YORK, January 21, 1908.

Hon. JOHN E. EUSTIS, Commissioner, Public Service Commission, No. 154 Nassau Street, City:

DEAR SIR—While the subject of proceeding at once with the letting of contract for the Broadway and Lafayette avenue sections of the Brooklyn loop route, so-called,

is receiving the consideration of the Public Service Commission, I think that new construction of subways for The Bronx should have full consideration. As I have previously shown in communications addressed to the Public Service Commission, a comparatively small amount of money can be expended by the City in the Borough of The Bronx which would result in the extension of existing lines in sections of our Borough where additional transit is absolutely necessary. During the last year I made suggestions to the Public Service Commission to extend existing elevated over Westchester avenue to Pelham Park, over White Plains road to Wakefield and on Jerome avenue to Woodlawn Heights. It seems to me that these extensions, which would cost probably not more than twelve millions of dollars, ought to be provided before any other rapid transit work is undertaken. I understand that the so-called Tri-Borough route, the portion thereof in the Borough of Brooklyn being called the Fourth avenue subway, has been practically authorized and it seems to me under the circumstances that The Bronx ought to be provided for in advance of any further extension in Brooklyn, and if the practice followed in the case of large contracts for public improvements each as obtained at least in this Borough, namely, the spreading of the entire cost over the several years required for the construction, instead of charging it against the year in which the entire contract was authorized, the objection of debt limit might be avoided.

As the representative on the Commission living in The Bronx, I address this communication to you, and would request that you urge these views on your colleagues in the Public Service Commission.

Yours truly,

LOUIS F. HAFEN,

President of the Borough of The Bronx.

(5) The Secretary presented an opinion of Counsel in answer to an inquiry addressed to him as to whether The City of New York is at liberty now to use, without first obtaining the consent of any other person, the two tracks now in course of construction, extending along Flatbush avenue, from Flatbush avenue extension to Lafayette avenue, and similarly the two tracks now in course of construction extending along Flatbush avenue, from Fourth avenue to Flatbush avenue extension.

In his opinion the Counsel said:

"On January 24, 1901, the Board of Rapid Transit Railroad Commissioners adopted certain routes and general plan for a rapid transit railroad in The City of New York. These routes and general plan having been subsequently duly approved and consented to, as required by the Rapid Transit Act, the Board, on July 21, 1902, entered into a contract with the Rapid Transit Subway Construction Company for the construction and operation of the railroad. On April 13, 1905, a resolution was adopted by the Board to modify the routes and general plan. So far as material to the question now under discussion, this modification was substantially as follows: That beginning at a point in the Borough of Brooklyn in Joralemon street, opposite the Kings County Court House, near the junction of Joralemon street with Fulton street, and running thence along Fulton street to the end of the route, at or near the intersection of Flatbush avenue with Atlantic avenue, there should be four (4) tracks (instead of two, as provided in the original contract); that these four tracks should be parallel and placed on the same level, except at the following points, where provision was to be made for connections with certain subways or tunnels which were expected to be thereafter constructed and to run as follows: (First) northwesterly under Fulton street to its junction with Joralemon street; (second) northwesterly from Flatbush avenue under the proposed extension of Flatbush avenue towards Manhattan Bridge; (third) northeasterly from Flatbush avenue under Lafayette avenue; and (fourth) southerly from Flatbush avenue under Fourth avenue; that at or near these points one or more additional tracks might be constructed as a part of the railway therein described, and that these tracks might be depressed below the remaining tracks as far as might be necessary to avoid grade crossings; and that along that portion of the route lying under Flatbush avenue there might be an additional or fifth track for use as a siding.

Subsequently, on June 9, 1905, the necessary consents and approvals to the modification of the contract having been obtained, the City, acting through the Board, entered into a contract with the Construction Company modifying the original contract substantially as provided in the resolution. This contract of modification provided, among other things, that

In all other respects the provisions of the route and of the general plan of construction set forth in the said contract for construction and operation shall be applicable to the portion of the route hereby substituted.

Thus, not only on principle, but by express terms, all the legal incidents of the original contract attached to the modified contract.

The contract of modification further provided that the amounts of the payments occasioned by the additional work and materials should be determined as provided in chapter 2 of the original contract, so far as such work and materials should be supplied in or about providing connections with subways which might be thereafter built under Fulton street, the proposed extension of Flatbush avenue, Lafayette avenue or Fourth avenue, including in the cost of such connections the cost of constructing the approaches thereto, but that so far as such work and materials should be supplied in or about any other thing, in the contract of modification provided, then the amounts of the additional payments to be made to the contractor should only be one-half of the amounts determined, as provided under chapter 2 of the original contract.

I do not think that the fact that the construction company undertook to pay a part of the additional cost required by the modification of the original contract has any material bearing on the question presented, except possibly to enlarge the rights of the construction company. That the contract price for the construction of the Brooklyn extension was much less than the actual cost does not change the legal relations of the parties. The City's property rights in the subway are certainly no greater below the Brooklyn Bridge than above it.

The original contract contained this provision:

"The City hereby lets the railroad to the contractor for the term hereinafter mentioned. The railroad hereby leased includes the railway constructed under the routes and general plan thereby prescribed by the resolutions of the Board adopted on the 24th day of January, 1901, together with the terminals, stations and other appurtenances whatsoever of the said railroad, but not including the equipment thereof. The railroad shall from time to time include any extension or addition required by the Board and constructed by the contractor, as provided in chapter 1."

I am of the opinion that the question propounded by the Commission should be answered in the negative, and that the City is not at liberty to use, during the term of the lease to the construction company, without its consent, the tracks referred to in the resolution."

(6) The Secretary presented an opinion of Counsel in the matter of the claim for damages of Franklin L. Partridge because of the location by the Commission of a column for the elevated portion of the Rapid Transit Railroad on his premises on Broadway at or near the proposed extension of Two Hundred and Thirty-eighth street, stating that there has been a trespass, and that if the City would buy the property for street opening purposes it would relieve this situation. On motion, the letter was referred to Commissioner Eustis.

(7) On motion, duly seconded, it was Resolved, That the following appointments be made from the Civil Service lists:

Name.	Position.	Salary, Per Annum.	To Take Effect.
Isaac A. Hourwich.....	Statistician	\$2,100 00	Feb. 1, 1908
Burdette G. Lewis.....	Statistician	1,800 00	Jan. 25, 1908
Edward F. Hayes.....	Junior Statistician.....	1,200 00	Feb. 1, 1908
Mills E. Case.....	Junior Statistician.....	1,500 00	Jan. 26, 1908
Frank A. Larkin.....	Transit Inspector.....	1,200 00	When he reports
Irving C. Pardee.....	Transit Inspector.....	1,200 00	When he reports
Geo. P. Hammond, Jr.....	Transit Inspector.....	1,200 00	When he reports

Name.	Position.	Salary. Per Annum.	To Take Effect.
John W. Cavanaugh.....	Transit Inspector.....	1,200 00	Jan. 13, 1908
Felix D. Unger.....	Transit Inspector.....	1,200 00	Jan. 9, 1908

Ayes—Commissioners McCarroll, Maltbie, Eustis.
Nays—None.
Carried.

The Secretary presented the following:

(8)

COMPLAINT ORDER (No. 215).

O-215

Frederick Erbe, Henry Saul, Theodore Blau, Gus. Wernau, Siegfried Frankel, William S. Waters,

Complainants,

against

The Brooklyn, Queens County and Suburban Railroad Company,

Defendant.

The order of the Commission, being Order No. 215, for satisfaction or answer within ten (10) days, as to fares charged to and from North Beach, was approved, confirmed and ordered filed in the office of the Commission.

(9)

O-216

Commissioner McCarroll presented the following memorandum and final order after rehearing:

Staten Island Railway.

Memorandum in Regard to Order After Rehearing.

The railway company, by its attorney, objected to the clause in the order requiring two automatic bells to be installed at each double track crossing. It also called attention to the misnaming of one street and to the fact that protection was ordered at some crossings which were practically impassable to teams.

In a conference with the counsel for the railway, it appeared that the provision as to placing two automatic bells at every double track crossing had been misunderstood by him. It seems that he had understood the order to require two complete sets of track instruments, whereas the order plainly called for two bells only, to be rung by one set of track instruments. After conferring with Mr. McLimont, electrical engineer, it was decided to change the form of the order, No. 174, section 1, subdivision A, so that instead of calling for two bells at every double track crossing, a provision should be made for two bells at certain named crossings, to be specified after a further complete examination by Mr. McLimont. Six such crossings were named by Mr. McLimont after his further examination of the premises. A further paragraph was inserted in the same subdivision calling for at least one bell at all grade crossings of macadamized roads not guarded by gates or watchmen, and also at certain specified roads that were not macadamized. Seven of these country roads were specified by Mr. McLimont. The object of the changes in this section was to avoid the direction in general terms of certain precautions at "all grade crossings," as it appeared that in that part of Staten Island through which the railway runs there has been a recent real estate development that has resulted in the laying out upon the map of a very great number of roads that are shown in the new 1907 Atlas of Staten Island as opened roads, but which, as a matter of fact, are never used and hardly recognizable as roads. By restricting the order to roads which were macadamized, and to certain additional country roads, the order is made more definite and is restricted to roads actually used.

Subdivision C of the same section has been slightly modified, the result being that on eleven specified crossings the planking is to extend the full width of the driveway and the full distance between the rails. A paragraph is added directing that at all grade crossings of macadamized roads, and at six specified grade crossings of country roads, the planking is to extend the full distance between the rails, but need not extend the full width of the driveway, provided that in all cases it shall be wide enough for two vehicles to pass each other on it with ease. The present order also requires that at all crossings not covered by the two previous subdivisions there shall be at least a guard plank outside of each outer rail, the intervening space to be well packed with macadam, stone, gravel or cinders.

In the recitals of the new order the expression "has been and is unsafe, unreasonable, improper and inadequate" has been changed to read "is in certain particulars unsafe," etc.

Except for unimportant changes in dates upon which the order is to take effect, and certain small changes in the form of the recitals, which are recommended by Counsel, there is no further change in the order.

Submitted with order.

WM. MCCARROLL, Commissioner.

FINAL ORDER AFTER REHEARING (No. 216).

In the Matter
of

The hearing on the motion of the Commission on the question of improvement in and additions to the service and equipment of the Staten Island Railway Company.

Under Order for Rehearing No. 194, made January 10, 1908.

This matter coming on upon the report of the rehearing of Order No. 174, had herein on the 16th day of January, 1908, and it appearing that the said rehearing was held by and pursuant to an order of this Commission, dated January 10, 1908, and numbered 194, and returnable on the 16th day of January, 1908, and that the said order was duly served upon the Staten Island Railway Company, and that the said service was by it duly acknowledged, and that the said rehearing was held by and before the Commission on the matters in said order for rehearing specified, on January 16, 1908, and by adjournment duly had on January 20, 1908, before Commissioner McCarroll, presiding, Joseph P. Cotton, Esq., appearing for the Staten Island Railway Company, and Arthur DuBois, Esq., for the Commission, and the said Staten Island Railway Company having been afforded reasonable opportunity for presenting evidence and examining and cross-examining witnesses, and having waived its right so to do, and having announced that it had no evidence to offer,

Now, after the proceedings upon said rehearing, and after consideration of the facts, including those arising since the making of the order, the Commission being of opinion that the original order, No. 174, for the improvement in and addition to the equipment and service of the Staten Island Railway Company should be changed and modified in certain particulars,

Therefore, on motion of George S. Coleman, Esq., Counsel to the Commission, it is

Ordered, That the order, No. 174, issued December 27, 1907, and directed to the improvement in and additions to the equipment and service of the Staten Island Railway Company, be and the same is changed and modified to read as follows:

In the Matter
of

The hearing on the motion of the Commission on the question of improvement in and additions to the service and equipment of the Staten Island Railway Company.

Under order for hearing made November 8, 1907, and order for rehearing made January 10, 1908.

This matter coming on upon the report of the hearing had herein on the 22d day of November, 1907, and it appearing that the said hearing was held by and pursuant to an order of this Commission made November 8, 1907, and returnable on the 22d day of November, 1907, and that the said order was duly served upon the Staten Island Railway Company, and that the said service was by it duly acknowledged, and that the

said hearing was held by and before the Commission on the matters in said order specified, on November 22, 1907, before Commissioner McCarroll presiding; Abel E. Blackmar, Esq., appearing for the Commission, Joseph P. Cotton, Esq., appearing for the Staten Island Railway Company, and by adjournment duly had on November 26, 1907, and by adjournment duly had on December 3, 1907, and by adjournment duly had on December 10, 1907, at all of which adjourned sessions Arthur DuBois, Esq., appearing for the Commission, and Joseph P. Cotton, Esq., appearing for the Staten Island Railway Company, Mr. Commissioner Eustis presiding at the hearing of December 3, 1907, and Mr. Commissioner McCarroll presiding at all other adjourned sessions, and proof having been taken at all of said sessions,

Now, the Commission being of the opinion, after the proceedings upon said hearing, that the regulations, practices, equipment, appliances and service of the Staten Island Railway Company in respect to transportation of persons in the First District have been and are in certain particulars unsafe, unreasonable, improper and inadequate, and in the judgment of the Commission certain changes, improvements and additions thereto being such as ought reasonably to be made in the manner below set forth, in order to promote the security or convenience of the public, or of its employees, or in order to secure adequate service and facilities for the transportation of passengers, and it being the judgment of the Commission that the changes, additions and improvements in regulations, equipment, appliances and service of the said company, as below set forth, are such as are just, reasonable, safe, adequate and proper, and ought reasonably to be made to promote the security and convenience of the public and employees,

Therefore, on motion of Abel E. Blackmar, Esq., Counsel to the Commission, it is

I.

Ordered, That the Staten Island Railway Company adopt the following precautions and install, at or near grade crossings, and maintain the following appliances for the better protection of its employees and the public:

(A) BELLS AND SIGNALS.

At the following crossings the company shall provide and maintain two automatic, electrically operated warning bells, one on each side of the track and diagonally opposite to each other, so that both bells at each crossing shall be rung by every train passing that crossing.

Tompkins avenue, Clifton.
Amboy road, near Huguenot.
Church street, Tottenville.

Amboy road, near Great Kills.
Amboy road, near Pleasant Plains.
East Broadway, Tottenville.

At all other grade crossings of macadamized roads not guarded by gates or watchmen, and also at all the grade crossings named below, the company shall maintain at least one electrically operated warning bell so arranged that it shall be rung by every train passing that crossing.

Burgher avenue.
Liberty avenue.
Jefferson avenue.
Franklin avenue.

Colfax avenue.
Tysons lane.
Bridge avenue.

Nothing in this order shall be construed to authorize the removal of any warning bells now in use, and no such warning bells shall be removed unless other bells of equal efficiency be substituted. The company shall test all bells at least once daily, in the morning, reports of such tests to be regularly made and promptly filed at the principal operating office of the company.

The provisions of this subdivision A to be completed not later than March 15, 1908.

(B) WARNING SIGNS.

At every grade crossing where double tracks occur, warning signs shall be properly located and maintained, one on either side of the track and diagonally opposite each other, and where one track only occurs, one such sign shall be properly located and maintained.

The provisions of this subdivision to be completed not later than February 20, 1908.

(C) PLANKING.

Each of the following crossings shall be planked for the full width between the rails and have one 12-inch guard plank outside of each outer rail. Such planking to extend across the full width of the driveway.

Tompkins avenue.
Clive avenue.
Old Town road.
Colfax avenue.
Amboy road.
Church street, Tottenville.

Amboy road, Great Kills.
Annadale road.
Amboy road, Huguenot.
Amboy road, Pleasant Plains.
Richmond Valley road.

All other grade crossings of macadamized roads and also all the grade crossings named below shall be planked for the full width between the rails and have one 12-inch guard plank outside of each outer rail. Such planking is to extend across the driveway far enough to allow two vehicles to pass each other on it with ease. The crossing at all times to be maintained in first class condition.

Burgher avenue, Concord.
Liberty avenue.
Colfax avenue.

Bridge avenue.
Jefferson avenue.
Tysons lane.

All other crossings of public highways not planked for the full distance between the rails shall have at least one 12-inch guard plank on each side of all rails for the full width of the driveway, and the space between the guard plank shall be kept evenly graded to the top of the rails and solidly packed with macadam stone or gravel or cinders. The crossing at all times to be maintained in first class condition.

The provisions of this subdivision to be completed not later than April 1, 1908.

(D) GATES.

At the Lincoln avenue crossing in Grant City, a single arm gate or bar shall be installed and a flagman shall be kept on duty at this point to operate it during the months from May 1 to October 1.

The provisions of this subdivision to be completed not later than May 1, 1908.

(E) FLAGMAN.

That a flagman shall be stationed at the grade crossing on Tyrell street, Tottenville, to remain on duty during all hours in which trains are scheduled to cross these streets.

The provisions of this subdivision to be complied with not later than May 1, 1908.

II.

That all trains be so run as to connect with the Municipal ferryboats at St. George.

The provisions of this section to take effect immediately.

III.

SMOKE AND NOISE.

That the Staten Island Railway Company prohibit and take all necessary steps to prevent all unnecessary and unreasonable noises and smoke nuisances from engines or shops which it owns or controls at Clifton, St. George or Tottenville, or at any other point or points where engines run or are allowed to stand.

That all labor on Sunday, by or for the company, be prohibited, excepting the works of necessity and charity. In works of necessity or charity is included whatever is needful during the day for the good order, health or comfort of the community.

The provisions of this section to take effect immediately.

IV.

LAMPS AND LIGHTING.

That the Staten Island Railway Company install, use and keep in good condition a sufficient number of new lamps of the so-called "Belgian" station lamp type, or other suitable lamps of at least equal candle power, similar to the lamp exhibited to the Commission at the hearing, adequately to light the stations and platforms at the following places:

Tottenville.
Richmond Valley.
Huguenot.
Annadale.
Pleasant Plains.

Great Kills.
New Dorp.
Grant City.
Dongan Hills.
Grasmere.

The provisions of this section to be complied with as soon as possible and not later than April 1, 1908.

V.

That the following additions, changes and readjustment of service and time schedules be put in effect without unnecessary delay, but not later than February 15, 1908:

(A) By running a train of not less than three cars to leave Tottenville daily, except on Sundays and holidays, between trains shown as No. 3 and No. 5 on official time table, dated October 14, 1907, such train to run to St. George, making all stops between Tottenville and Grasmere, except that the stop at Whitlock may be on flag signal, the train to reach St. George in time to connect with the 7.30 boat from Manhattan.

(B) By running an additional train to leave St. George daily, except Sundays and holidays, between trains No. 34 and No. 36, shown on official time table dated October 14, 1907, said train to leave after arrival of Municipal ferryboat leaving Manhattan at 7 p. m. and to make all stops to Tottenville.

(C) By running an additional train to leave St. George after the arrival of the Municipal ferryboat which leaves Manhattan at 12 o'clock midnight and to make all stops, regular or on signal, to Tottenville; and it is further

Ordered, That this order shall continue in force for a period of two years from and after taking effect of the same, but without prejudice to an order for further or additional hearings and action thereon by the Commission, in respect of anything herein prescribed or in respect of anything covered by the order for hearing herein, prior to the expiration of said period of two years; and it is further

Ordered, That before January 28, 1908, the said Staten Island Railway Company notify the Public Service Commission for the First District whether the terms of this order are accepted and will be obeyed.

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(10) Commissioner McCarroll presented the following memorandum and final order after rehearing:

Staten Island Rapid Transit Railway Company.

Memorandum in Regard to Order After Rehearing.

The application for rehearing was made in form exactly similar to that in the Staten Island Railway matter. The principal changes made after the rehearing in this matter have been a modification of the terms of the order in regard to bells and signals on the North Shore Division. Mr. McLimont, Electrical Engineer to the Commission, personally examined every crossing on this division and found, I think, that each crossing, with two exceptions, was completely planked and guarded by a flagman. Upon his advice, it appears that owing to the nature of the villages crossed by this railroad, the protection by the flagman was sufficient, and that warning bells would probably be a useless annoyance to the neighboring residents. All the principal crossings were guarded by gates, as well as by a flagman, and for this reason the new order simply specifies additional bells for two crossings, additional signs for nine crossings and double-arm gates for one crossing. The same changes in the recitals and dates of the order have been made as reported in the order on the Staten Island Railway.

Submitted with order.

WM. MCCARROLL, Commissioner.

FINAL ORDER AFTER REHEARING, No. 217.

*In the Matter
of*

The hearing on the motion of the Commission on the question of improvement in and additions to the service and equipment of the Staten Island Rapid Transit Railway Company.

Under Order for Rehearing No. 195, made January 10, 1908.

This matter coming on upon the report of the rehearing of Order No. 175, had herein on the 16th day of January, 1908, and it appearing that the said rehearing was held by and pursuant to an order of this Commission, dated January 10, 1908, and numbered 195, and returnable on the 16th day of January, 1908, and that the said order was duly served upon the Staten Island Rapid Transit Railway Company, and that the said service was by it duly acknowledged, and that the said rehearing was held by and before the Commission on the matters in said order for rehearing specified on January 16, 1908, and by adjournment duly had on January 20, 1908, before Commissioner McCarroll, presiding; Joseph P. Cotton, Esq., appearing for the Staten Island Rapid Transit Railway Company, and Arthur DuBois, Esq., for the Commission, and the said Staten Island Rapid Transit Railway Company having been afforded reasonable opportunity for presenting evidence and examining and cross-examining witnesses, and having waived its right so to do, and having announced that it had no evidence to offer,

Now, after the proceedings upon said rehearing, and after consideration of the facts, including those arising since the making of the order, the Commission being of opinion that the original order, No. 175, for the improvement in and addition to the equipment and service of the Staten Island Rapid Transit Railway Company should be changed and modified in certain particulars,

Therefore, on motion of George S. Coleman, Esq., Counsel to the Commission, it is Ordered, That the order, No. 175, issued December 27, 1907, and directed to the improvement in and additions to the equipment and service of the Staten Island Rapid Transit Railway Company, be and the same is changed and modified to read as follows:

*In the Matter
of*

The hearing on the motion of the Commission on the question of improvement in and additions to the service and equipment of the Staten Island Rapid Transit Railway Company.

Under order for hearing made November 8, 1907, and order for rehearing made January 10, 1908.

This matter coming on upon the report of the hearing had herein on the 22d day of November, 1907, and it appearing that the said hearing was held by and pursuant to an order of this Commission, made November 8, 1907, and returnable on the 22d day of November, 1907, and that the said order was duly served upon the Staten Island Rapid Transit Railway Company, and that the said service was by it duly acknowledged, and that the said hearing was held by and before the Commission on the matters in said order specified on November 22, 1907, before Commissioner McCarroll, presiding; Abel E. Blackmar, Esq., appearing for the Commission; Joseph P. Cotton, Esq., appearing for the Staten Island Rapid Transit Railway Company, and by adjournment duly had on November 26, 1907, and by adjournment duly had on December 3, 1907, and by adjournment duly had on December 10, 1907, at all of which adjourned sessions Arthur DuBois, Esq., appearing for the Commission, and Joseph P. Cotton, Esq., appearing for the railways, Mr. Commissioner Eustis presiding at the session of December 3, 1907, and Mr. Commissioner McCarroll presiding at all other adjourned sessions, and proof having been taken at all of said sessions,

Now, the Commission being of the opinion, after the proceedings upon said hearing, that the regulations, practices, equipment, appliances and service of the Staten Island Rapid Transit Railway Company in respect to transportation of persons in the First District have been and are in certain particulars unsafe, unreasonable, improper and inadequate, and in the judgment of the Commission certain changes, improvements and additions thereto being such as ought reasonably to be made, in the manner below set forth, in order to promote the security or convenience of the public, or of its employees, or in order to secure adequate service and facilities for the transportation of passengers, and it being the judgment of the Commission that the changes, additions and improvements in regulations, equipment, appliances and service of the said company, as below set forth, are such as are just, reasonable, safe, adequate and proper, and ought reasonably to be made to promote the security and convenience of the public and employees,

Therefore, on motion of Abel E. Blackmar, Esq., Counsel to the Commission, it is Ordered (1), That the Staten Island Rapid Transit Railway Company adopt the following precautions and install and maintain the following appliances for the better protection of its employees and the public:

(A) BELLS AND SIGNALS.

That the company provide and maintain at least one electrically operated warning bell at the grade crossing on the North Shore Division, at Morning Star road and at Central avenue.

The provisions of this subdivision to be complied with not later than March 15, 1908.

(B) WARNING SIGNS.

At Snug Harbor, a suitable sign to be installed, warning the engineer of trains approaching in either direction of the crossing to the coal dock and freight platform of Sailors' Snug Harbor, at

Broadway,	Sharpe avenue,
Maple avenue,	John street,
Elm street,	

—suitable street crossing signs.

At Nicholas street, signs for both sides of the track, the sign now in place to be repaired.

Maple avenue,	St. Marys avenue,
—suitable street crossing signs.	

Chestnut avenue, sign to be put in good repair.

The provisions of this subdivision to be complied with not later than February 20, 1908.

(C) GATES.

That the Staten Island Rapid Transit Railway Company install, maintain and operate at all regular hours of traffic over the company's tracks, suitable double arm gates at the Broadway crossing, Port Richmond.

The provisions of this subdivision to be complied with not later than March 15, 1908.

(D) LAMPS AND LIGHTING.

That the Staten Island Rapid Transit Railway Company install, maintain and use new lamps of the so-called "Belgian" station lamp type or other suitable lamp of at least equal candle power to the lamp produced by the Staten Island Rapid Transit Railway Company at the hearing before the Commission, in sufficient numbers adequately to light the stations and platforms at

New Brighton,	Port Richmond,
Snug Harbor,	Elm Park,
Livingston,	Tompkinsville,
West New Brighton,	Stapleton.

The provisions of this subdivision to be complied with not later than February 15, 1908.

2. That all passenger cars used by the Staten Island Rapid Transit Railway Company be adequately lighted.

The provisions of this subdivision to take effect at once.

3. TRAIN SCHEDULES.

That all trains operated by the Staten Island Rapid Transit Railway Company, either on the North Shore or South Shore divisions, connect at St. George with boats of the Municipal Ferry.

The provisions of this section to take effect not later than January 25, 1908.

4. SMOKE AND NOISE.

That the Staten Island Rapid Transit Railway Company prohibit and take all necessary steps to prevent all unnecessary and unreasonable noises and smoke nuisances from engines or shops which it owns or controls at Clifton and St. George, or at any other point or points where engines run or are allowed to stand.

That all labor on Sunday, by or for the company, be prohibited, excepting the works of necessity and charity. In works of necessity or charity is included whatever is needed during the day for the good order, health or comfort of the community.

The provisions of this section to take effect immediately.

And it is further

Ordered, That this order shall continue in force for a period of two years from and after taking effect of the same, but without prejudice to an order for further or additional hearings and action thereon by the Commission, in respect of anything herein prescribed or in respect of anything covered by the order for hearing herein, prior to expiration of said period of two years. And it is further

Ordered, That before January 28, 1908, the said Staten Island Rapid Transit Railway Company notify the Public Service Commission for the First District whether the terms of this order are accepted and will be obeyed.

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(11) With reference to the complaint heretofore filed with the Commission against the New York City Railway Company as to why it should not order the rear inside gates of their cars opened, on Broadway, between Fifty-ninth and Manhattan streets, the following communication withdrawing the said complaint was submitted, and, on motion, ordered filed and the receivers of the said company notified of the withdrawal of the said complaint:

THE WEST END ASSOCIATION,
No. 100 BROADWAY,
January 21, 1908.

MILO R. MALTBIÉ, Esq., Public Service Commissioner, No. 154 Nassau Street, City:

DEAR SIR—Replying to your favor of 20th inst. regarding the ordinance providing for the opening of the inside gates on the Broadway cars, I beg to say that the Railroad Committee of this association has been instructed to withdraw the matter from your Commission and to test the question through an action to be brought by the Corporation Counsel to recover the penalties mentioned in the ordinance. I enclose a copy of resolution to that end adopted by the association on the 6th inst.

Yours truly,

A. WALKER OTIS,
Chairman Railroad Committee, No. 60 Wall street.

(12) The Secretary presented a communication from the High Bridge Taxpayers' Alliance transmitting a resolution protesting against a recent order of the Commission requiring all Ogden avenue cars of the New York City Interborough Railway Company to continue up Aqueeduct avenue instead of crossing Washington Bridge, and requesting the Commission to issue an order providing for an adequate service of through cars over the Ogden avenue line to the One Hundred and Eighty-first street station of the subway. The communication was referred to Commissioner Eustis.

(13) The Secretary presented a communication from the Prospect Heights Citizens' Association of Brooklyn transmitting a resolution approving the plans of the Commission for the construction of a subway from the Manhattan Bridge through Canal street to the North River. The papers were ordered filed.

(14) Commissioner Maltbie—"Inasmuch as the Chief Engineer has made rapid progress on the modifications of the contracts for the so-called Bridge-Subway Loop, and inasmuch as these modifications have already been approved by this Commission, I move that Counsel, with the Chief Engineer, be directed to prepare the modified contracts for approval by this Commission and signature by the contractors."

The motion was duly seconded.

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(15) ORDER FOR ANSWER (No. 218).

On motion, duly seconded, it was

Resolved, That the Interborough Rapid Transit Company be required to inform this Commission in one week from the receipt of this resolution as to the present condition of the changes at the One Hundred and Thirty-eighth and One Hundred and

Forty-ninth street stations of the Third avenue elevated, heretofore authorized, and to give the earliest probable date when such changes will be completed.

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(16)

The Secretary presented the following vouchers, the bills of which had been duly approved by Commissioner McCarroll, Committee on Audit for January, whereupon, on motion, duly seconded, it was

Resolved, That the vouchers enumerated below be approved by this Commission and forwarded to the Comptroller of The City of New York for payment:

No.	Name.	Services and Material.	Amount.
539.	R. B. Arkin & Co.....	Stationery supplies, as per bill of December 24, 1907.....	\$52 50
540.	E. J. Brooks & Co.....	Inspectors' badges, as per bill of December 14, 1907.....	12 50
541.	Bureau of Charities Wood Yard..	Kindling wood, as per bill of December 16, 1907.....	4 75
542.	Alvah Bushnell Company.....	Stationery supplies, as per bill of December 19, 1907.....	8 50
543.	Dixie Book Shop.....	Books and publications, as per bill of December 27, 1907.....	100 25
544.	Everson & Reed.....	Wax seals, as per bill of December 30, 1907..	87 50
545.	Law Reporting Company.....	Typewriting, stenographic work and stationery supplies, as per bills of December 19, 1907 (3), and December 30, 1907.....	1,048 25
546.	Lawyers' Co-operative Publishing Company.....	Law books, as per bill of December 28, 1907..	571 00
547.	Library Bureau.....	Furniture and stationery, as per bills of November 21, 1907, and December 6 and 16, 1907.....	109 70
548.	New York Blue Print Paper Company.....	Blue prints, as per bill of December 1, 1907..	55 59
549.	M. A. O'Connor.....	Postage and stationery, as per bill of December 12, 1907.....	62 50
550.	E. G. Ruehle & Co.....	Blue prints, as per bill of December 1, 1907..	3 24
551.	Schneider Brothers.....	Repairing two Sling psychrometers, as per bill of December 16, 1907.....	5 70
552.	G. E. Stechert & Co.....	Books and publications, as per bills of December 20, 26 and 31, 1907.....	41 12
553.	Florence E. Tallmadge.....	Copying cards for index, as per bill of December 23, 1907.....	8 40
554.	The Twinlock Company.....	Stationery supplies, as per bills of December 16 and 30, 1907.....	30 00
555.	Benj. H. Tyrrel.....	Printing copies of briefs, as per bills of December 15 and 30, 1907.....	324 80
582.	George J. Adams.....	Appraisal of machinery, as per bill of December 23, 1907.....	50 00
583.	H. Anderson.....	Installing drop lights at No. 88 Centre street, as per bill of January 7, 1908.....	26 00
584.	American Ice Company.....	Ice furnished, as per bills of December 2 to 31, 1907 (No. 4 Court square and No. 323 Schermerhorn street).....	3 83
585.	William T. Baker.....	Candles, as per bill of January 4, 1908.....	15 00
586.	Baker, Voorhis & Co.....	Stationery supplies, as per bill of December 24, 1907.....	4 00
587.	The Beck Duplicator Company.....	Stationery supplies, as per bill of January 11, 1908.....	8 50
588.	Martin B. Brown Company.....	Postage and printing, as per bills (6) of January 11, 1908.....	226 50
589.	Buff & Buff Manufacturing Company.....	Engineering supplies and repairs, as per bills of December 16 and 18, 1907.....	45 15
590.	Empire City Savings Bank.....	Rent, second floor of No. 231 West One Hundred and Twenty-fifth street and one room at No. 219 West One Hundred and Twenty-fifth street, as per bill of January, 1908.....	83 33
591.	F. F. Fuhrmann.....	Rubber stamps, as per bill of January 8, 1908..	6 50
592.	Globe-Wernicke Company.....	Furniture, as per bill of December 31, 1907..	26 50
593.	The Gramercy Press.....	Lithographed plates of maps, as per bill of November 30, 1907.....	426 15
594.	The Hall's Safe Company.....	Safe, as per bill of November 15, 1907.....	175 00
602.	E. Belcher Hyde.....	Maps, as per bill of January 13, 1908.....	8 25
603.	Ideal Ventilator Company.....	Ventilators, as per bill of January 15, 1908....	38 50
604.	Koller & Smith.....	Furniture, as per bill of January 6, 1908.....	18 00
605.	Keuffel & Esser Company.....	Engineering supplies, as per bills of January 3 (2), 6 and 7 (2), 10 (3), 11 and 13, 1908..	292 32
606.	Library of Congress.....	Printed cards, as per bill of January 11, 1908..	7 40
607.	New York Improved Meter Company.....	Testing meters, including use of testing bottle, as per bill of December 14, 1907.....	3 35
608.	Law Reporting Company.....	Printed copies of Stenographers' minutes, as per bill of January 9, 1908.....	131 13
609.	New York Blue Print Paper Company.....	Blue prints, as per bills of January 2 and 14, 1908.....	37 98
610.	The Pullman Automatic Ventilator Manufacturing Company.....	Ventilating boards, as per bill of January 11, 1908.....	62 00
611.	Francis H. & Angeline W. Robinson.....	Rent of rooms 707 to 713, Nos. 120 to 124 Liberty street, as per bill for January, 1908....	220 84
612.	Union Towel Supply Company...	Towel service, as per bills of December 31, 1907 (3).....	20 44

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(17)

The Secretary presented the following requisition of John B. McDonald, together with the certificate of the Chief Engineer approving same, as approved by the Committee on Audit:

RAPID TRANSIT SUBWAY CONSTRUCTION COMPANY,
NOS. 13 TO 21 PARK ROW.
NEW YORK, January 18, 1908.

Requisition No. 11, Van Cortlandt Park Extension—For work done and materials furnished under contract dated February 21, 1900, for the construction and operation of the Rapid Transit Railroad of The City of New York, to 31st day of December, 1908, as follows:

Total to date..... \$732,443 50
Less previous requisitions..... 724,333 00

Balance due..... \$8,110 00

JOHN B. McDONALD, Contractor.
By AUGUST BELMONT, Attorneys.

Certificate No. 11, Van Cortlandt Park Extension—I hereby certify that the work done and materials furnished under contract dated February 21, 1900, for the construction and operation of the Rapid Transit Railroad of The City of New York, for which Requisition No. 11, V. C. P. of date January 18, 1908, is made by John B. McDonald, the Contractor, has been done and furnished in accordance with the terms of the contract to the value of eight thousand one hundred and ten dollars (\$8,110), that such value has been ascertained relatively to the contract value of the whole work, and that no certificate has previously been made for such work and materials.

HENRY B. SEAMAN,

Chief Engineer of the Public Service Commission for the First District.

The following resolution was thereupon moved, and duly seconded:

Whereas, The Contractor, John B. McDonald, has made requisition on this Commission, numbered No. 11, and dated January 18, 1908, for work done and materials furnished under contract dated February 21, 1900, for the construction and operation

of the Rapid Transit Railroad of The City of New York, to the 31st day of December, 1908, amounting to eight thousand one hundred and ten dollars (\$8,110); and

Whereas, Henry B. Seaman, Chief Engineer, has certified that the work done and the materials furnished have been done and furnished in accordance with the terms of the contract, that the value has been ascertained relatively to the contract value of the whole work, and that no certificate has been previously made for such work and materials.

Resolved, That this Commission hereby approves the said requisition and directs that a voucher in due form be drawn on the Comptroller for the said amount.

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

(18)

On motion, duly seconded, it was

Resolved, That the following exempt appointment be made:

Name.	Position.	Salary, Per Annum.	To Take Effect.
Louis D. Fouquet.....	Division Engineer.....	\$3,000 00	Jan. 1, 1908

Ayes—Commissioners McCarroll, Maltbie, Eustis.

Nays—None.

Carried.

TRAVIS H. WHITNEY, SECRETARY.

POLICE DEPARTMENT.

January 15, 1908.

The following proceedings were this day directed by the Police Commissioner:

On reading and filing eligible list of the Municipal Civil Service Commission, dated January 3, 1908.

Ordered, That the following-named persons, whose names appear on such eligible list, be and are hereby employed on probation as Patrolmen, being the first installment of the increase of quota of Patrolmen for the year 1908:

John Coulter.	Martin Salomon.
Hugh E. Sullivan.	Charles F. Baumann.
Frederick H. Proch.	Edward D. Potter.
Charles Herrschaft, Jr.	John J. Flynn.
Meil C. Swigert.	John J. Rafferty.
Joseph F. Dunn.	Harry C. Ernst.
Dennis M. Coogan.	James F. Kane.
William J. Tjarks.	Edward F. McAuliff.
John W. Creamer.	Fred Wedinger.
Edgar Van Demark.	Evan L. Powell.
Patrick J. Kavanagh.	William Wayne.
Frederick Attanasio.	William F. Bowden.
Thomas A. Haverty.	George W. Bostwick, Jr.
George Wangerman.	Alfred P. Brandt.
Joseph P. Pelet, Jr.	John Larkin.
Joseph J. Becker.	John A. Lovett.
Daniel Murray.	Willis E. Myers.
Albert E. Smith.	Harry S. Millar.
Herman C. Bressel.	Dennis J. Sullivan.
Harry Rosenhain.	Irvin L. Milk.
John J. Phillips.	Patrick J. Whelan, Jr.
Alexander F. Ditter.	Peter J. Beadle.
George F. Higgins.	Daniel F. Leary.
James McConville.	John A. Nelson.
John Stossel.	Michael F. Slattery.
James G. Hynds.	John Nekola.
Edward J. O'Brien.	William F. Kelly.
Oscar W. H. Johnson.	George H. J. McCabe.
George G. Clarke.	Christopher Schweitzer, Jr.
William F. Barry.	James F. Duncan.
Michael Flynn.	William Carroll.
Stephen S. Thornton.	John A. Logomarsini.
William Bedell.	Joseph E. Dougherty.
Joseph L. Murphy.	George B. MacKenzie.
Samuel Brandwein.	William A. Nealon.
John J. Kilroy.	Daniel J. O'Leary.
James E. Mitchell.	Denis Sullivan.
John J. Flanagan.	William J. Ryan.
Benjamin S. P. Tierney.	Milton T. Engelberg.
Cornelius Casey.	John J. O'Connor.
Frederick J. Munzer.	Edward L. Dermody.
Patrick Campbell.	William F. Keller.
Anthony Horbert.	Thomas F. J. Kerrigan.
Frank J. Stabile.	Emanuel Newman.
Stephen P. Hall.	William D. Harris.
Patrick McCaffery.	Peter W. Haberman.
Joseph C. Coffey.	Theodore S. Cannon.
Otto Hoffman.	Daniel J. O'Connell.
Joseph F. Golden.	Edward Ladue.
Abraham Hirschewitz.	Dennis O'Connell.
Charles Murphy.	John Bresnehan.
Fred V. Sottong.	Charles C. Beyer.
Robert J. Tucker.	Alfred P. Albrecht.
William E. Harris.	Charles F. Wallace.
William H. Bode.	

Ordered, That the Municipal Civil Service Commission be respectfully informed as to the other names appearing on such eligible list that Frederick A. Walter declined appointment; Irving J. LaMontague was rejected for endocarditis and poor physique; Joseph Milasch declined appointment; Thomas J. O'Brien was passed over; Harry Meinke was rejected for varicocele; Frederick L. Kutzleb failed to appear; John M. Stewart was rejected for light weight and insufficient chest measurement; Walter McDonough failed to appear; Joseph P. Haste failed to appear; Patrick J. Downing failed to appear; Valentine R. Raynor failed to appear; Henry A. Fairclough failed to appear; James A. Wall failed to appear; Daniel Sullivan failed to appear; Daniel Gibbons failed to appear; Walter J. Daley failed to appear; John F. Kelly failed to appear; Edward H. Eckert was rejected for cross toes; Henry F. Niemann was rejected for light weight and poor physique; Julius Spanier declined appointment; John J. Helbig was rejected for light weight, defective vision, poor physique and flat feet; George H. Shafer failed to appear; Francis J. Conklin was rejected for valvular disease of the heart; Joseph Gowan failed to appear; Albert W. Schmidt was rejected for cross toes; Hugh Haigney was rejected for muscular tremor, bad physique, coated tongue and pulse 120, and Louis J. Grimm failed to appear.

Having investigated the financial condition of Ellen Musgrave, and as a result of such investigation and from the evidence now before me being of the opinion that the said Ellen Musgrave does not need for her support the pension heretofore granted her; Now, under authority vested in me by section 256 of the Greater New York Charter, it is

Ordered, That the pension heretofore granted to Ellen Musgrave on or about the 19th day of December, 1884, be and the same is hereby revoked as of the 31st day of December, 1907.

Approved.

Application for bond of Charles L. Gott, Bookkeeper, for \$10,000, from January 1, 1908. Referred to the Bankers' Surety Company.

Granted.

Petition for increase of pension of Mary Maher, widow of Denis Maher, and increase of \$120 per annum awarded, making a total pension of \$240 per annum.

Denied.

Petition for pension of Annie A. Huntress, widow of William A. Huntress, pensioner.

Runner's License Granted.

Edward Severin, No. 224 Fourth avenue, Manhattan, from date granted for one year, \$20, bond \$300.

Masquerade Ball Permits Granted.

L. Goldstein, Murray Hill Lyceum, Manhattan, January 16; fee, \$25.
J. Gliconstein, New Star Casino, Manhattan, February 1; fee, \$25.
V. Arneith, Amsterdam Opera House, Manhattan, February 1; fee, \$25.
G. Ostermeyer, Harlem Terrace, Manhattan, February 15; fee, \$10.
E. H. Piepenbring, Beethoven Hall, Manhattan, February 29; fee, \$25.
Barney Knobloch, Stauch's Pavilion, Brooklyn, January 16; fee, \$10.
Mrs. B. Tokaji, Borough Park Club, Brooklyn, January 18; fee, \$10.
Chas. J. Colligan, Congress Hall, Brooklyn, January 18; fee, \$10.
Wm. Koenig, Bedk's Casino, Brooklyn, January 25; fee, \$10.
J. Espenscheid, Queens Avenue Hotel, Queens, January 18; fee, \$5.
Wm. Dauer, Dauer's Hall, Queens, January 18; fee, \$10.
Chas. Schnoor, Metropolitan Park, Queens, January 18; fee, \$10.
Chas. Schnoor, Metropolitan Park, Queens, January 25; fee, \$10.
Chas. Schnoor, Metropolitan Park, Queens, February 1; fee, \$10.

On File, Send Copy.

Reports of Lieutenant in command of Boiler Squad, dated January 13 and 14, 1908, relative to engineers' licenses granted. For publication in the CITY RECORD.
Special Order No. 12, issued this day, is hereby made part of the proceedings of the Police Commissioner.

Special Order No. 12.

The following transfers and assignments are hereby ordered:

To take effect 8 p. m., January 16, 1908:

Lieutenant.

Archie McCullum, from Eighteenth Precinct to Nineteenth Precinct.

Mounted Sergeant.

Peter T. Donovan, Sixty-eighth Precinct, dismounted, and transferred to Twenty-sixth Precinct.

Detective.

Francis E. Hawkins, from Detective Bureau, Brooklyn, to Detective Bureau, Manhattan.

Patrolmen.

Frank A. Campbell, from Sixth Inspection District to Detective Bureau, Manhattan.

George T. Trojan, from Seventh District Court Squad to Detective Bureau, Manhattan.

Joseph E. Curtis, Tenth Precinct, transferred to Sixty-sixth Precinct, and assigned to mounted duty.

Rudolph A. Menten, Thirty-sixth Precinct, transferred to Nineteenth Precinct, and assigned to clerical duty.

Harmon M. Wilcox, Seventeenth Precinct, transferred to Brooklyn Borough Headquarters Squad, and assigned to duty in Bureau of Electrical Service, Queens.

William J. Tracy, from Sixty-third Precinct to One Hundred and Seventy-first Precinct.

To take effect 8 a. m., January 16, 1908:

Patrolman.

John J. Godfrey, Eighty-first Precinct, assigned as Probation Officer to Magistrate Joseph B. Handy.

The following temporary assignments are hereby ordered:

Lieutenant.

Herman Lehr, Thirty-first Precinct, assigned to command precinct, during absence of Captain John Cooney, for one day, from 12 midnight, January 14, 1908.

Sergeants.

Louis Lackey, Two Hundred and Seventy-ninth Precinct, assigned as Acting Lieutenant in precinct, during absence of Lieutenant Edward J. Armstrong at Court of General Sessions, Manhattan, from 8 a. m., January 15, 1908.

John F. McNamara, Two Hundred and Eighty-third Precinct, assigned as Acting Lieutenant in precinct, during absence of Lieutenant Robert Williams on sick leave, from 4 p. m., January 14, 1908.

John McCarthy, Two Hundred and Seventy-eighth Precinct, assigned to Two Hundred and Eighty-third Precinct, as Acting Lieutenant, during absence of Lieutenant John Kessler with leave, from 4 p. m., January 15, 1908.

Richard Hamilton, Twenty-third Precinct, assigned as Acting Lieutenant in precinct, during absence of Lieutenants at trial room, from 8 a. m., January 16, 1908.

Patrolmen.

Harry C. Williams, Twenty-third Precinct, assigned to Central Office Squad, duty as Switchboard Operator in Bureau of Electrical Service, for ten days, from 8 a. m., January 15, 1908.

Thomas Slattery, Twenty-fifth Precinct, assigned to Third Precinct, duty at Third Sub-Precinct, from 2 p. m., January 14, 1908.

Thomas C. McMurray, Second Precinct, assigned as Acting Doorman in precinct, during absence of Doorman George F. Dorsch on sick leave, from 8 a. m., January 14, 1908.

Daniel P. Hart, Fifth Inspection District, and John J. Allen, Thirty-ninth Precinct, assigned to Detective Bureau, Manhattan, for thirty days, from 8 a. m., January 15, 1908.

William J. Gallagher, Twenty-third Precinct, assigned to Central Office Squad, duty in Third Deputy Commissioner's office, for five days, from 12 midnight, January 14, 1908.

James J. Edmonds, Fourteenth Precinct, assigned as Driver of patrol wagon, during absence of Patrolman Michael J. Cox, from 7 a. m., January 13, 1908.

The following Patrolmen from precincts indicated are temporarily assigned to Detective Bureau, Manhattan, from 7:30 a. m., January 15, 1908:

Frederick J. Brickley, First Precinct.
Edward P. O'Hara, First Precinct.
Robert J. Hickson, Fifth Precinct.
Joseph G. Oak, Fifth Precinct.
James F. Neary, Sixth Precinct.
John F. Barry, Sixth Precinct.
John P. Maddock, Ninth Precinct.
James Reilly, Twelfth Precinct.
Fred'k Mielhauser, Twelfth Precinct.
Charles Hemley, Thirteenth Precinct.
George P. Kessler, Thirteenth Precinct.
Edward Lennon, Fourteenth Precinct.
Michael Gorevan, Fourteenth Precinct.
Casimere Kunz, Sixteenth Precinct.
John Campbell, Sixteenth Precinct.
Leo A. Boyle, Seventeenth Precinct.
James Fitzgerald, Eighteenth Precinct.
Joseph Phelan, Nineteenth Precinct.
James Brenick, Twenty-first Precinct.
Edward J. Cousins, Twenty-fifth Precinct.
William Hactor, Twenty-eighth Precinct.
Terence Quinn, Twenty-eighth Precinct.

David P. Lawlor, Twenty-ninth Precinct.
Austin Mead, Twenty-ninth Precinct.
Edward Frey, Thirty-second Precinct.
James McManus, Thirty-fifth Precinct.
Edwin M. Burns, Fortieth Precinct.
John Hussey, Fortieth Precinct.
George Leonard, Forty-third Precinct.
John Ebert, Forty-third Precinct.

The following extensions of temporary assignments are hereby ordered:

Patrolmen.

George T. Conroy, One Hundred and Fiftieth Precinct, to Central Office Squad, duty in Bureau of Electrical Service, for twenty days, from 8 a. m., January 22, 1908.

Thomas McNamara, Fortieth Precinct; Patrick J. Brophy, Thirty-sixth Precinct, and Ezekiel E. Keller, Twenty-ninth Precinct, to Central Office Squad, duty in Bureau of Electrical Service, for thirty days, from 8 a. m., January 14, 1908.

John J. Taylor, First Precinct, to Central Office Squad, duty in Bureau of Electrical Service, for thirty days, from 8 a. m., January 16, 1908.

John V. Lynch, One Hundred and Forty-sixth Precinct, and John J. Gillen, One Hundred and Fiftieth Precinct, to Eighth Inspection District, duty in plain clothes, for five days, from 2 p. m., January 14, 1908.

The following members of the Department are excused as indicated:

Captains.

William Hogan, First Precinct, for twelve hours, from 8 a. m., January 18, 1908.

Edward J. Toole, Fifth Precinct, for twelve hours, from 12 noon, January 16, 1908.

John Buchanan, Ninth Precinct, for twelve hours, from 12 noon, January 16, 1908, with permission to leave City.

John F. O'Connor, Tenth Precinct, for twelve hours, from 12 noon, January 15, 1908, with permission to leave City.

Martin Handy, Thirteenth Precinct, for twelve hours, from 12 noon, January 16, 1908.

Donald Grant, Seventeenth Precinct, for twelve hours, from 12 noon, January 17, 1908, with permission to leave City.

Charles C. Wendell, Thirty-third Precinct, for twelve hours, from 12 noon, January 15, 1908.

Louis Kreuscher, Fortieth Precinct, for twelve hours, from 12 noon, January 17, 1908.

George C. Liebers, Sixty-eighth Precinct, for twelve hours, from 8 a. m., January 16, 1908.

Denis J. Brennan, Sixty-sixth Precinct, for twelve hours, from 9 a. m., January 17, 1908.

Cornelius G. Hayes, Sixty-ninth Precinct, for twelve hours, from 12 noon, January 15, 1908.

Bernard Gallagher, Eighty-first Precinct, for twelve hours, from 12 noon, January 20, 1908, with permission to leave City.

Alexander Pinkerton, One Hundred and Forty-fourth Precinct, for twelve hours, from 12 noon, January 17, 1908, with permission to leave City.

Thomas F. Maude, One Hundred and Forty-sixth Precinct, for twelve hours, from 6 p. m., January 16, 1908.

John McCauley, One Hundred and Forty-seventh Precinct, for twelve hours, from 12 noon, January 17, 1908, with permission to leave City.

James J. Shevlin, One Hundred and Fifty-fourth Precinct, for twelve hours, from 12 noon, January 16, 1908.

Stephen O'Brien, Twenty-second Precinct, for twelve hours, from 12 noon, January 16, 1908.

John J. Farrell, Twenty-eighth Precinct, for twelve hours, from 9 a. m., January 17, 1908, with permission to leave City.

The following leaves of absence are hereby granted without pay:

Captain.

John Cooney, Thirty-first Precinct, for one day, from 12 midnight, January 14, 1908.

Patrolmen.

Paul Bradley, One Hundred and Fifty-fifth Precinct, for one day, from 12 noon, January 16, 1908.

Frank H. Johnson, One Hundred and Sixty-eighth Precinct, for one and one-half days from 12 noon, January 14, 1908, with permission to leave City.

William Carroll, Sixty-fifth Precinct, for three days, from 12 noon, January 13, 1908.

Nicholas O'Neil, Fifth Precinct, for two days, from 12:01 a. m., January 11, 1908.

Probationary Patrolman.

Joseph F. Farrell, Fifty-ninth Precinct, for three days, from 12 noon, January 14, 1908.

The following leave of absence is hereby granted with half pay:

Patrolman.

Stephen A. Crowley, One Hundred and Fiftieth Precinct, for one-half day, from 12:01 a. m., January 14, 1908.

The following application for full pay is hereby granted:

Patrolman.

Richard T. Ahearn, Two Hundred and Seventy-fifth Precinct, from 4 p. m., November 16, 1907, to 12 noon, November 27, 1907.

The following Special Patrolmen are hereby appointed:

Charles A. Nack, for New York Butchers' Dressed Meat Company, Eleventh avenue and Thirty-ninth street, Manhattan.

Thomas F. D. Mohan, for the Jewish Hospital, Classon and St. Mark's avenues, Brooklyn.

The resignations of the following Special Patrolmen are hereby accepted and they are reappointed to take effect as of date indicated:

January 14, 1908:

Charles A. Hanly, for Irving National Bank, West Broadway and Chambers street, Manhattan.

Francis W. Hagan, for Lincoln Trust Company, No. 208 Fifth avenue, Manhattan.

Frederick D. Bergemann, for Brooklyn Rapid Transit Company, No. 168 Montague street, Brooklyn.

Henry Wehrhahn, for Iron Clad Manufacturing Company, No. 204 Varet street, Brooklyn.

David J. Larkins, for the Gorham Company, No. 386 Fifth avenue, Manhattan.

Harry M. Blades, for John Wanamaker, Broadway and Tenth street, Manhattan.

George Pritting, for New York Dock Company, Pier 15, Brooklyn.

The resignations of the following Special Patrolmen are hereby accepted:

John J. Lauben, employed by Thomas Russell & Son, No. 441 Pearl street, Manhattan.

William Brinkner, employed by Lamchick Bros., No. 410 South second street, Brooklyn.

E. B. St. John Henriques, for the Congregation Shearith Israel, Seventieth street and Central Park West, Manhattan.

Timothy J. Fowling, employed by D. Jones' Sons, Lenox avenue and One Hundred and Sixteenth street, Manhattan.

Andrew H. Kellogg, employed by Typothetae of The City of New York, No. 32 Union square, Manhattan.

Michael Gelles, employed by Albemarle Hotel, Broadway and Twenty-fourth street, Manhattan.

Richard Stafford, employed by Dr. V. P. Gibney, No. 16 Park avenue, Manhattan.

Charles C. Luckey, employed by Cruikshank Company, No. 141 Broadway, Manhattan.

The appointment of the following Special Patrolman is hereby revoked
John B. Brennan, employed by William Travers Jerome, District Attorney, County of New York.

THEO. A. BINGHAM, Police Commissioner.

POLICE DEPARTMENT.

Sanitary Company (Boiler Squad),
January 20, 1908. }

Hon. THEODORE A. BINGHAM, Police Commissioner:

Sir—In compliance with orders relative to engineer's certificates issued by me under section 312 of chapter 410 of the Laws of 1882, as amended, the following report will show the names of the persons to whom licenses were issued, class of license and location for the same, during the twenty-four hours ending 12 midnight, January 20, 1908:

First Class.

James C. Mitchell, No. 115 Broadway.
Henry M. Nash, No. 25 William street.
James T. Quail, No. 394 Broadway.
Adolph E. Schaefer, No. 4 East Twenty-eighth street.
Wallace Shepherd, No. 181 Moore street, Brooklyn.

Second Class.

Anton Lechleitner, No. 178 Worth street.
Frank C. Donigan, Prospect avenue and Jennings street.
John Boyle, No. 128 Mott street.
John Daly, Eastern Boulevard and Throggs Neck.
Charles E. Bakns, Manhattan square.
Gustav Marx, No. 114 East One Hundred and Twenty-fourth street.
John M. Bedell, Hopkins street and Delmonico place, Brooklyn.
Samuel P. Siegfried, No. 494 Kent avenue.

Third Class.

James Jarvis, No. 514 West Forty-sixth street.
John P. Vinal, Morris Heights.
John H. Croghan, No. 186 West Fourth street.
Paul Spiegel, No. 129 Chambers street.
John McClain, No. 6 Beaver street.
Lucius Walton, No. 38 Park row.
John E. Schwab, No. 1762 Avenue A.
William Birkle, No. 15 Whitehall street.
Thomas S. Charnley, Hunts Point road.
Mads C. Anderson, No. 743 East Eleventh street.
Henry Abhau, No. 546 Broadway.
Paul Mager, No. 17 Bridge street.
Joel S. Nickerson, No. 304 Hudson street.
Thomas Sammon, Madison avenue and One Hundred and Thirty-eighth street.
Samuel Birney, No. 1121 Broadway.
Patrick Kelly, foot Main street, Brooklyn.
George A. Larsen, Myrtle avenue and Fresh Pond road, Brooklyn.
James Keating, No. 141 North Seventh street, Brooklyn.
Frank McDevitt, Gardner avenue and Bedell street, Brooklyn.

Special.

Lewis C. Parker, Two Hundred and Thirty-third street, Woodlawn, N. Y.
Simeon Basch, Washington avenue and Wallabout Market, Brooklyn.

Respectfully submitted,

HENRY BREEN, Lieutenant in Command.

DEPARTMENT OF WATER SUPPLY, GAS
AND ELECTRICITY.

In compliance with section 1546 of the Greater New York Charter, the Department of Water Supply, Gas and Electricity makes the following report of its transactions for the week ending October 26, 1907:

Public Moneys Received and Deposited.

BOROUGH OF MANHATTAN.

Receipts for water rents.....	\$134,228 20
Receipts for penalties on water rents.....	1,058 38
Receipts for permits to tap mains.....	83 50
Receipts for repairs, Bureau of Chief Engineer.....	1,807 91
Receipts for setting water meters.....	622 38
	\$137,800 37

BOROUGH OF THE BRONX.

Receipts for water rents.....	\$12,228 57
Receipts for penalties on water rents.....	161 10
Receipts for permits to tap mains.....	101 00
	\$12,490 67

BOROUGH OF BROOKLYN.

Receipts for water rents.....	\$69,806 57
Receipts for penalties on water rents.....	1,203 70
Receipts for permits to tap mains.....	485 75
Receipts for miscellaneous work.....	14 78
Receipts for setting water meters.....	119 88
	\$71,630 68
Receipts reported from Arrears office.....	2,276 86
Receipts reported from Tax office.....	6,297 97
	\$80,205 51

BOROUGH OF QUEENS.

Receipts for water rents.....	\$3,152 39
Receipts for penalties on water rents.....	35 51
Receipts for permits to tap mains.....	83 75
	\$3,271 65

BOROUGH OF RICHMOND.

Receipts for water rents.....	\$317 20
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Work Done on Public Lamps.

	(Single Welsbach.)	
	Gas.	Naphtha.
New lamps lighted (Consolidated Gas Company, Manhattan)....	4	..
New lamps lighted (Consolidated Gas Company, The Bronx)....	13	..
Lamps relighted (Consolidated Gas Company, Manhattan)....	12	..
Lamps relighted (Consolidated Gas Company, The Bronx)....	4	..
Lamps discontinued (Consolidated Gas Company, Manhattan)....	19	..

(Single Welsbach.)
Gas. Naphtha.

Lamps discontinued (Consolidated Gas Company, The Bronx)....	6	..
Lamps discontinued (Consolidated Gas Company, Manhattan)....	..	5

New lamp-posts erected by the Consolidated Gas Company in Manhattan.....	4
New lamp-posts erected by the Consolidated Gas Company in The Bronx.....	13
Lamp-posts reset at the expense of private parties.....	2

Lamp-posts removed	24
Lamp-posts reset	5
Lamp-posts straightened	18
Bracket refitted	1
Column refitted	1
Columns released	11
Columns recaulked	15
Service pipes refitted.....	5
Standpipes refitted	4

Contracts Entered Into.

BOROUGH OF QUEENS.

For furnishing and delivering repair and renewal supplies for Pumping Stations, dated, October 22. Contractor, H. Mueller Manufacturing Company. Surety, Empire State Surety Company. Estimated cost, \$1,259.04.

For furnishing and delivering operating supplies for Pumping Stations, dated, October 24. Surety, Metropolitan Surety Company. Estimated cost, \$1,565.63.

Changes in the Working Force.

BOROUGH OF MANHATTAN.

Dropped from Rolls for Continued Absence Without Leave.

One Foreman, 1 Oiler, 1 Pipe Caulker, 1 Assistant Foreman, 13 Laborers.

Deceased.

One Assistant Foreman and 1 Engineman.

Resigned.

One Topographical Draughtsman, 1 Clerk and 1 Laborer.

BOROUGH OF THE BRONX.

Dropped from Rolls for Continued Absence Without Leave.

One Pipe Caulker, 1 Laborer.

Deceased.

One Laborer.

BOROUGH OF BROOKLYN.

Appointed.

Henry Hagedon, Jr., Stationary Engineer, at \$1,460 per annum.

John Cherry, Stationary Engineer, at \$1,460 per annum.

One Pattern Maker, at \$4.25 per day.

Two Machinists, at \$4 per day each.

Title Changed.

One Laborer to Mason's Helper, \$2 to \$2.75 per day.

Transferred.

Joseph Caulfield, Telephone Operator, to Health Department.

Resigned.

Patrick Conway, Engineman.

Dropped from Rolls for Continued Absence Without Leave.

One Engineman, 1 Carpenter, 1 Boilermaker, 1 Driver, 1 Stoker, 7 Laborers.

M. F. LOUGHMAN, Deputy Commissioner.

BOARD OF ESTIMATE AND APPORTIONMENT.

EXTRACT FROM

MINUTES, BOARD OF ESTIMATE AND APPORTIONMENT, CITY OF NEW YORK, JANUARY 24, 1908.

NEW YORK AND PORT CHESTER RAILROAD COMPANY.

By resolution adopted July 8, 1907, the public hearing on the proposed form of contract consenting to certain modifications and alterations in the line of the route of the New York and Port Chester Railroad Company in the Borough of The Bronx, was fixed for September 20, 1907, and on that date continued until November 1, 1907, in consequence of an opinion from the Acting Corporation Counsel, advising the Board that the injunction order entered in the action of Robinson vs. New York, Westchester and Boston Railway Company allowed the Board to continue the advertisement of the hearing, but not hold same, and on November 1, 1907, the hearing was continued until December 13, 1907, and on that date was continued until January 10, 1908, when it was continued until this day.

At the meeting of January 10, 1908, an answer was received from the New York, New Haven and Hartford Railroad Company to the resolution adopted by the Board December 20, 1907, directing the company to submit a statement in writing, relative to its ownership of the New York and Port Chester Railroad Company, the New York, Westchester and Boston Railway Company and the Millbrook Company, or the franchises of either company, and its intentions relative to the construction of the Port Chester or Westchester railroads.

A report was received from the Chief Engineer, stating this answer was not sufficiently definite, and the communication was referred to a Select Committee consisting of the Comptroller, the President of the Borough of The Bronx, the Corporation Counsel and the Chief Engineer of this Board.

The Secretary presented the following:

REPORT No. F-78.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 22, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—At the meeting of the Board of Estimate and Apportionment held on January 10 there was presented a communication from the President of the New York, New Haven and Hartford Railroad Company, in reply to a resolution of the Board, adopted on December 20 last, asking for certain information relative to the relation of the said company to the New York and Port Chester Railroad Company, the New York, Westchester and Boston Railway Company, and the Millbrook Company. At the same time the hearing on the application of the New York and Port Chester Railroad Company for a change of route was continued, owing to pending litigation. On the same date the Appellate Division of the Supreme Court rendered a decision continuing the injunction restraining the Board from acting upon this application. It will therefore be impossible for the Board to take any definite action, and it is recommended that the matter be laid on the table pending a modification of the court order or the conclusion of the litigation.

Respectfully,

NELSON P. LEWIS, Chief Engineer.

BOARD OF ESTIMATE AND APPORTIONMENT,
DIVISION OF FRANCHISES, ROOM 801, No. 277 BROADWAY,
January 21, 1908.

Mr. NELSON P. LEWIS, Chief Engineer:

Sir—The public hearing on the form of contract consenting to certain changes in the line of the route of the New York and Port Chester Railroad, which was, by resolution, adopted July 8, 1907, fixed for September 20, 1907, has been continued from time to time, in consequence of an injunction order issued in the case of Robinson vs. New York, Westchester and Boston Railway Company.

This order restrained the Board of Estimate and Apportionment from granting its consent to the proposed change of line, and until the trial of the action, also restrained the execution of a proposed contract between the New York, Westchester and Boston Railway Company and the New York and Port Chester Railroad Company, whereby the former company was to transfer to the latter company certain properties and consent to a relocation of a portion of the route of the Port Chester Company so as to coincide with a portion of the route of the Westchester Company.

The Appellate Division, First Department, handed down a decision January 10, 1908 (Law Journal, January 21, 1908), affirming the order granting the temporary injunction.

In the prevailing opinion written by Scott, J., it is stated:

"So far as the order appealed from restrains the Board of Estimate and Apportionment, that Board has not appealed, and is not aggrieved by the injunction. It is unnecessary to consider how far it would have the right without the consent of the Westchester Company to consent to the occupation by another of the route already assigned to it, for there is no reason to suppose that it would take such action while the Westchester Company was enjoined from giving such consent."

The public hearing on the form of contract of the New York and Port Chester Railroad Company was, at the meeting of January 10, continued until the meeting of January 24, 1908, pending a decision in the above mentioned case, but as this decision is adverse to the railroad company, the public hearing cannot be held, and I would recommend that the entire matter be laid on the table until the railroad company secures a modification of this order or until the termination of the court proceedings.

Respectfully,

HARRY P. NICHOLS, Engineer in Charge.

The Comptroller moved that the hearing be continued until February 21, 1908, which motion was adopted by the following vote:

Affirmative—The Mayor, the Comptroller, the President of the Board of Aldermen and the Presidents of the Boroughs of Manhattan, Brooklyn and The Bronx—12.

The matter was referred to the Select Committee to whom the communication of the New York, New Haven and Hartford Railroad Company was referred at the meeting of January 10, 1908.

LONG ISLAND RAILROAD COMPANY, FOR ITSELF AND AS LESSEE OF THE NEW YORK, BROOKLYN AND MANHATTAN BEACH RAILWAY COMPANY.

The public hearing on the application of the New York, Brooklyn and Manhattan Beach Railway Company and of the Long Island Railroad Company, its lessee, requesting certain amendments to the agreement with respect to a relocation and change of grade in the tracks of the Manhattan Beach Division of the first named company, was opened.

This application was presented to the Board at its meeting of January 10, 1908, and by resolution duly adopted this day was fixed as a date for public hearing upon the receipt of the following petition:

In the Matter

of

The freight yard of the Long Island Railroad Company, proposed to be located at Avenue I and East Sixteenth street, in the Borough of Brooklyn.

To the Board of Estimate and Apportionment:

The petition of Herbert S. Worthley respectfully shows: That he is the President of the Flatbush Board of Trade of the Thirty-second Ward, having a certified membership of more than one hundred and fifty property owners in the localities hereinafter mentioned.

That said Board is the representative organization of the property owners residing in the section of the said Thirty-second Ward, popularly known as South Midwood, Fiske Terrace, Manhattan Terrace, Oakcrest, Kenwood and Westminster Heights.

That at a regular monthly meeting of said Board, held on August 20, 1907, the members of said Board unanimously adopted the following resolutions:

"Resolved, That the Flatbush Board of Trade earnestly protests against the establishment of a freight yard at Avenue I and East Sixteenth and East Seventeenth streets as unnecessary for the business requirements of the locality, detrimental to the peaceful enjoyment of a highly restricted residential section, and an intolerable nuisance, injurious to the health and comfort of our people.

"Resolved, That a committee of five be appointed by the Chair, with full power to investigate the legal aspects of the case, to interview and communicate with the railroad officials and to devise ways and means for the protection of the community."

That as your petitioner is informed and believes it is the purpose and intention of the Long Island Railroad Company and the corporation known as the Pennsylvania-Long Island Railroad Company to erect and maintain a freight yard and freight buildings on its property, enclosed by the rights of way and railroad tracks, in the vicinity of East Sixteenth street and Avenue I, in the Borough of Brooklyn.

That in the opinion of the residents and property owners in said vicinity such a freight yard and buildings are entirely unnecessary for any business requirements of the locality, detrimental to the peaceful enjoyment of a highly restricted residential section, and an intolerable nuisance, injurious to the health and comfort of the neighborhood.

That should the erection of such freight yard be permitted, it will operate to injure the property for blocks around in Fiske Terrace, which has recently been highly improved with a class of dwellings which, taken together with the land, have sold for prices varying from \$10,000 to \$20,000 each, and will undoubtedly ruin a large part of this section already improved, as well as vacant land in Oakcrest and Manhattan Terrace, which stands on the threshold of marked development and improvement, resulting in a serious loss to the City in the taxable value of the property in question.

That as your petitioner is informed and believes ample facilities will be afforded said railroad company from the freight stations proposed to be erected at Gravesend avenue on the west and at Vandever Park on the east, the total distance between these points not being in excess of two miles.

That deponent is informed and believes that the City of New York is about to enter into an agreement with said railroad company, whereby it is to grant to said railroad company a franchise to operate its trains between East Sixteenth street and the right of way of the Brighton Beach Railroad, operated by the Brooklyn Rapid Transit, from Avenue J on the north to Sheepshead Bay on the south, in return for which said railroad company is to grant and convey to The City of New York the land owned by said railroad company and used by it as its present right of way between the points named.

That by reason of the foregoing, deponent prays that your Honorable Board grant to your petitioner and residents and land owners of the sections mentioned an opportunity to protest against the proposed freight station and yard being located at the place suggested, in that your Board may in its wisdom require as a condition precedent to the execution of the said agreement that the said railroad company be required to abandon its intention to locate said freight yard at the place in question.

Dated Brooklyn, December 14, 1907.

HERBERT S. WORTHLEY, Petitioner.

City and State of New York, County of Kings, ss.:

Herbert S. Worthley, being duly sworn, says: That he is the President of the Flatbush Board of Trade; that he has read the foregoing petition and knows the

contents thereof; that the same is true of his own knowledge, except as to those matters alleged therein upon information and belief, and as to those matters he believes it to be true.

HERBERT S. WORTHLEY.

Sworn to before me this 14th day of December, 1907.

EARL R. CROSS,

Commissioner of Deeds, City of New York.

No one appeared in opposition to nor in favor of the proposed agreement.

The Chair declared the hearing closed.

The President of the Borough of Brooklyn presented the following:

THE CITY OF NEW YORK,

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN,
January 23, 1908.

The Honorable the Board of Estimate and Apportionment:

GENTLEMEN—In the matter of the application of the Brooklyn and Manhattan Beach Railway Company, through the Long Island Railroad Company, its lessee, requesting amendment of an agreement with respect to the relocation and change of grade of tracks of the Manhattan Beach Division of the first named company, which is now to be referred back to the Chief Engineer of the Board, aside from the question of prohibiting a freight yard at Avenue J and East Sixteenth and East Seventeenth streets, and the very reasonable request for a change in the time for executing deeds to the City of areas to be transferred by the railroad company, I call attention of the Board to paragraph 30 in new form of agreement proposed by the counsel of the railroad company. I advocate this amendment as being in general accordance with my position in the matter in the summer of 1906, and believe that its adoption in the amended agreement will result in economy for the City in carrying out the work, saving in time of completion of the improvement, and a more slightly and satisfactory treatment of the embankment by sodding the slopes, with a coping and railing, all of which would be more satisfactory to the property owners along East Sixteenth street.

The great extent of this work, covering as it does about two and one-half miles, makes this detail of construction of considerable importance to the City.

Yours very truly,

BIRD S. COLER,

President, Borough of Brooklyn.

The matter was referred back to the Chief Engineer, as was also the communication from the President of the Borough of Brooklyn.

LONG ISLAND RAILROAD COMPANY.

A communication, dated January 13, 1908, was received from the Mayor's office, returning, duly approved by the Mayor, resolution adopted by the Board January 10, 1908, fixing January 24, 1908, as the date for public hearing on the application of the Long Island Railroad Company for certain changes in its route in the Second Ward, Borough of Queens, and designating the "Flushing Journal" and the "Long Island Star" as the newspapers in which such notice should be published.

Which was ordered filed.

The public hearing on the application of the Long Island Railroad Company for the consent of the Board to a change in the line of its route between a point about 400 feet west of Ascan avenue and a point about 700 feet east of Lefferts avenue, in the Second Ward, Borough of Queens, City of New York, so that same shall be a straight line between these points instead of the existing curve, which was fixed for this day by resolution adopted January 10, 1908, was continued until February 7, 1908.

LONG ISLAND RAILROAD COMPANY, SEA BEACH RAILWAY COMPANY AND BROOKLYN CITY RAILROAD COMPANY.

At the meeting of January 10, 1908, reports were received relative to the petitions signed by Michael O'Sullivan and other property owners and business men, and by N. A. Nelson and other workingmen, requesting the Board to cause the removal of certain fences erected across First avenue at Sixty-third and Sixty-fourth streets, Borough of Brooklyn, and restore the avenue to the citizens as a public highway. Also an application was received from the Long Island Railroad Company requesting an extension of time in which to comply with the provisions of the contract dated February 13, 1906, with respect to closing Sixty-fourth and Sixty-fifth streets and constructing a viaduct over First avenue, Borough of Brooklyn.

Upon motion, duly adopted, consideration was postponed until this day, and the matter referred to the President of the Borough for report.

The President of the Borough of Brooklyn presented the following:

THE CITY OF NEW YORK,

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN,
January 23, 1908.

The Honorable the Board of Estimate and Apportionment:

GENTLEMEN—In the matter of the application of the Long Island Railroad Company for an extension of time in which to comply with the provisions of an agreement dated February 13, 1906, providing for the closing of Sixty-fourth and Sixty-fifth streets and the construction, at the expense of the railroad company, of a viaduct and approaches over First avenue, extending from the centre line of Sixty-second street to Bay Ridge parkway, as referred to me by the Board on the 10th inst. with a report of the Chief Engineer, I would state that while the Long Island Railroad Company may be technically in default in the completion of this contract, the circumstances are such that full consideration should be given to the facts leading up to the present conditions.

The plans and agreement for this First avenue viaduct were prepared by the Bureau of Franchises during the former administration, the Board of Estimate on December 15, 1905, having adopted certain changes in grade which determined the features of the plan provided in this contract of February 13, 1906. Some months subsequent to this date my Consulting Engineer pointed out several features of this plan by which the approach to the First avenue viaduct had been provided for at an excessive grade of about five feet in one hundred, this steep approach terminating directly at Bay Ridge parkway, making a dangerous grade crossing. I thereupon had tentative plans prepared, which I forwarded to the Commissioner of Parks for the purpose of having an arch provided for over Bay Ridge parkway and carrying out the viaduct approach to some point south of this on First avenue. My Engineer notified the Long Island Railroad Company that a moderate change in grade at the southerly end of the steel viaduct which they were to erect would be necessary in carrying out this plan, and the engineer of the railroad company co-operated in the matter, and, for the purpose of expediting this work, made surveys and tentative plans for the arch as suggested to him. These plans were sent to the Commissioner of Parks and to the Comptroller as having a bearing on the proposed approach to the ferry, which he contemplated locating on the City property opposite the proposed viaduct.

The scheme which I proposed has met with approval as a great improvement upon the plan which had been put through by the Bureau of Franchises. If that plan had been carried out the City would have been put to great expense in altering the Long Island Railroad viaduct and the approaches so as to obviate this dangerous grade crossing.

In July, 1906, I sent the proposed plans to the Commissioner of Parks and also communicated with the president of the Long Island Railroad Company, and since that time I have followed up this matter at various dates. In response to one of these communications Mr. Peters, of the Long Island Railroad, wrote me on February 11, 1907, with relation to the construction of the viaduct that his company had begun work and was progressing therewith. The revocable permits for the erection of fences across First avenue at Sixty-third and Sixty-fourth streets were issued by the former Assistant Commissioner of Public Works so as to allow the

railroad company to carry on the very extensive changes in the tracks of the Sea Beach Railroad Company, and the heavy excavation in changes of grade necessary before the viaduct construction could begin.

While technically it may be said that the Long Island Railroad Company should have filed a plan with the Board in accordance with contract of February 13, 1906, they have failed to do this, assuming that a revised plan should be completed before taking such action. On the other hand, it has been the understanding in my office that the viaduct construction was proceeding and that orders had been placed for the steel work subject to changes in lengths and columns for less than one-eighth of the structure at its southerly end.

Relative to the four resolutions for consideration, I would say that:

With regard to (a), the occupation of portions of First avenue by the railroad company is entirely proper under the permits which I have issued, aside from the terms of this contract, under which it is my duty to protect the public from dangerous openings in the street.

With regard to (b), the permit for this spur was duly authorized by me to allow connection from Second avenue to the freight yard of the Sea Beach Railroad Company, this spur taking the place of one which was cut out a block to the south of this connection; and, in any event, under a general opinion of the Corporation Counsel, the permit, in my opinion, was properly issued and was certainly necessary to allow the railroad company to carry out a very important improvement.

With regard to (c), the Long Island Railroad Company is technically in default, but the City could not use a viaduct as planned without having this dangerous grade crossing as a constant menace to traffic on the parkway; and the delay will, as a matter of fact, result in a great saving to the City through the alteration of plan, allowing an intelligent solution of the requirements and future development of the locality, especially if a franchise for a trolley line is at any time extended or granted by the Board through First avenue.

With regard to (d) as submitted, I advise an extension of time of one year, and that the modified agreement provide for a change in plan which will obviate this dangerous grade crossing at the parkway in accordance with the grades which were finally approved by Hon. M. J. Kennedy, Commissioner of Parks, in a communication to me of November 23, 1907, and shown in technical description filed with the Board of Estimate on December 23, 1907.

Yours very truly,
BIRD S. COLER,
President, Borough of Brooklyn.

The matter was referred back to the Chief Engineer.

SEABOARD REFRIGERATION COMPANY.

The Secretary presented the following:

No. 15 GRAMERCY PARK,
NEW YORK, January 20, 1908.

The Honorable Board of Estimate and Apportionment of The City of New York:

GENTLEMEN—Referring to the franchise for a refrigerating pipe line which was granted to this company by your Honorable Board on December 13, 1907, we would say that it is accepted, and would add that we now have positive assurance from a financial house of good standing that they will take up the financing just as soon as the money market will permit the placing of any industrial securities. Inasmuch, however, as it will probably be March or April before the present monetary stringency will allow of this, and it will very soon be too late to erect a building and lay a pipe line before the season opens in Coney Island, when the crowded condition of the streets then would not permit of their being opened, we would respectfully pray your Honorable Board that the payment and deposit required by Section 2, third, and Section 2, twenty-second, be extended to December 1, 1908.

As we are working in good faith in this matter and have already incurred considerable expense, we have every reason to believe that, if your Honorable Board will grant this extension, we shall by that date have our plans completed and successfully under way.

Very respectfully,
SEABOARD REFRIGERATION COMPANY,
By CHARLES E. BOOTH, President.

REPORT No. F-79.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 22, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—The Seaboard Refrigeration Company has, under date of January 20, 1908, requested an extension of time to December 1 next in which to comply with the provisions of the contract granting a franchise to the company, as said contract was amended on December 20, 1907. The company states that it is practically impossible at the present time to finance a project of this kind, and that it will be impossible to do so during the coming summer, and it therefore applies for this extension. In view of present financial conditions, and in view of the fact that there is no special demand for immediate construction, and of the further fact that the Borough authorities are reluctant to permit the opening of streets in Coney Island during the summer season, it is recommended that the extension be granted upon the filing by the company, within thirty days after the adoption of a resolution granting such extension, of an agreement to carry out all the provisions of the contract except those modified by such resolution.

Respectfully,
NELSON P. LEWIS, Chief Engineer.

BOARD OF ESTIMATE AND APPORTIONMENT,
DIVISION OF FRANCHISES, ROOM 801, No. 277 BROADWAY,
January 21, 1908.

Mr. NELSON P. LEWIS, Chief Engineer:

SIR—The Seaboard Refrigeration Company, in a petition dated January 20, 1908, signed by Charles E. Booth, President, requests an extension of time until December 1, 1908, in which to comply with the provisions of Section 2, third, and Section 2, twenty-second, of the contract granting a franchise to the company, and as amended by contract dated December 20, 1907.

The modified contract requires the payment by the company of \$500 in cash within thirty days after the signing of said contract and the further payment of certain specified sums during the life of the franchise; also it requires the company to deposit the sum of \$2,000 with the Comptroller, within thirty days after the execution of the contract, as a security fund for the faithful performance of the terms and conditions thereof. The contract was signed by the Mayor on January 6, 1908, and in consequence the thirty days will expire on February 5, 1908.

The company, in its petition, states that it has positive assurance from a financial house of good standing to finance the enterprise as soon as the money market will permit the placing of industrial securities, but as it will probably be March or April before the financial stringency will permit the placing of such securities advantageously, it will be too late to commence the construction of the pipe line authorized until the opening of the summer season, when, owing to the crowded condition of the streets in that locality, the work could not be carried on in a proper and expeditious manner.

In view of the acknowledged financial depression, and as no public interest will suffer by granting the application of the company, and as there is no special demand from the residents of that vicinity for this pipe line, and as no competing company has applied for such a right in this immediate neighborhood, and as the President of the Borough of Brooklyn has stated that he will not permit the opening of the main streets in Coney Island during the summer season, I believe the application may properly be granted.

The company should, however, be required to execute an instrument in writing, agreeing to accept the extension of time and to abide by and perform all the terms, conditions and requirements in the original contract fixed and contained, except as expressly modified, and file same with the Board of Estimate and Apportionment within thirty days after the adoption of the resolution granting such extension.

I transmit herewith resolution for adoption granting the extension of time requested.

Respectfully,
HARRY P. NICHOLS, Engineer in Charge.

Whereas, The Board did, on June 15, 1906, adopt a resolution authorizing the Mayor to execute, in the name and on behalf of the City, a contract between the Seaboard Refrigeration Company and The City of New York, granting to the company the right or franchise to construct, maintain and operate a conduit, with the necessary branches and connections therefrom, for the sole purpose of supplying refrigeration to consumers under and along certain streets in the Borough of Brooklyn, City of New York, upon certain conditions therein fully set forth; and

Whereas, On the 6th day of July, 1906, the Acting Mayor did execute, in the name and on behalf of The City of New York, a contract granting to the company such right, which contract was dated the 22d day of June, 1906; and

Whereas, On the 13th day of December, 1907, the Board adopted a resolution consenting to certain changes and modifications in the aforesaid contract and authorizing the Mayor to execute and deliver an amended contract in accordance therewith, in the name and on behalf of the City, which resolution was approved by the Mayor on the 18th day of December, 1907; and

Whereas, On the 6th day of January, 1908, the Mayor did execute, in the name and on behalf of the City, a modified contract, which contract was dated the 20th day of December, 1907; and

Whereas, The Seaboard Refrigeration Company, in a petition dated January 20, 1908, requests an extension of time until December 1, 1908, in which to make the payments provided by "Section 2, third," and "Section 2, twenty-second," of the contract dated June 22, 1906; now, therefore, be it

Resolved, That the Board of Estimate and Apportionment hereby grants, upon the conditions hereinafter set forth, an extension of time to and including December 1, 1908, for the Seaboard Refrigeration Company to comply with the provisions of "Section 2, third," and "Section 2, twenty-second," of the contract dated June 22, 1906; and be it further

Resolved, That this extension of time shall not become operative until said Seaboard Refrigeration Company shall duly execute an instrument in writing, to the satisfaction of the Board of Estimate and Apportionment, and file the same in the office of the said Board within thirty (30) days from the date of approval of this resolution by the Mayor, wherein said company shall promise, covenant and agree that the consent of the Board of Estimate and Apportionment so given to the extension of time requested shall not in any wise change, alter or amend any of the terms, conditions and requirements in the contract fixed and contained, which said contract shall remain in full force and effect, except as herein expressly stated, and as heretofore modified or amended by resolutions of this Board.

The matter was referred to a Select Committee consisting of the Comptroller, the President of the Board of Aldermen and the President of the Borough of Brooklyn.

GEORGE J. HOSTER.

The Secretary presented the following:

JOHN F. ROUSER,
NORTHEAST CORNER THIRTY-FOURTH STREET AND ELEVENTH AVENUE,
NEW YORK, January 9, 1908.

To the Honorable Board of Estimate and Apportionment of The City of New York:

GENTLEMEN—In the latter part of the year of 1906 we have applied for a privilege to construct a railroad track spur for the conveyance of merchandise into our new warehouse building located at the northeast corner Thirty-fourth street and Eleventh avenue, this City, which was in due time granted to us by your Honorable Body, and approved by the Mayor on February 13, 1907, and in consequence of which we have immediately proceeded to fulfill the requirements asked of us by you, namely: filing of the \$500 bond with the City for the performance of our part in the contract, and also paid \$167.04 in cash as a payment for the maintenance of the said track during the period from February 13, 1907, to November 1, 1907. We have then repeatedly asked for a permit from the President of the Borough of Manhattan to open the street and lay the above said track, but have been just as often refused to do so on the one ground and the statement made by the Corporation Counsel "that your Honorable Board had and has no right to grant us the same." We therefore beg of you to instruct the Comptroller of The City of New York to reissue the above mentioned bond back to us with the accrued interest thereon, and also the cash payment with the interest on same from the date when it was made, as we have received no consideration or equivalent therefor.

Hoping your Honorable Body will take the matter into consideration immediately, we are

Respectfully yours,
GEORGE J. HOSTER,
Per JOHN F. ROUSER, Agent.

REPORT No. F-80.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 22, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—On October 26, 1906, the Board of Estimate and Apportionment granted to George J. Hoster permission to construct and maintain a single track turnout from the tracks of the New York Central and Hudson River Railroad in Eleventh avenue to premises occupied by him at the northeast corner of Eleventh avenue and West Thirty-fourth street. Owing to the fact that the Corporation Counsel declined to certify the acceptance of Mr. Hoster to the permission given, certified copies of the approved resolution were not delivered to the heads of departments, and Mr. Hoster could not, therefore, secure permits to open the street and lay the tracks. He has therefore applied, under date of January 9, 1908, for a refund of the security deposit and the compensation already paid by him, and inasmuch as he has, through no fault of his own, received nothing for the payments made to the City, it is recommended that the security deposit and the payment, aggregating \$667.04, be returned to him, provided he will execute and deliver to the City a release from any and all claims, and surrendering all right in the streets of the City which it was intended to give him under the consent referred to.

Respectfully,
NELSON P. LEWIS, Chief Engineer.

BOARD OF ESTIMATE AND APPORTIONMENT,
DIVISION OF FRANCHISES, ROOM 801, No. 277 BROADWAY,
January 21, 1908.

Mr. NELSON P. LEWIS, Chief Engineer:

SIR—By resolution adopted by the Board of Estimate and Apportionment October 26, 1906, approved by the Mayor February 13, 1907, George J. Hoster was granted permission to construct, maintain and operate a single track turnout from the existing tracks of the New York Central and Hudson River Railroad Company in Eleventh avenue, to the premises of the petitioner, situated on the northeast corner of Eleventh avenue and West Thirty-fourth street, Borough of Manhattan.

The grantee duly filed a certificate of acceptance, as provided by the terms of the consent, which was forwarded to the Corporation Counsel for approval as to form.

A somewhat similar consent, which had previously been granted to another concern, was at this time the subject of litigation in the courts, and at the meeting of March 22, 1907, a communication was received from the Acting Corporation Counsel, returning the certificate of acceptance without his approval as to form. In accordance with the custom of this Division, the transmission of certified copies of the approved resolution to the officials interested was withheld pending the receipt of the certificate of acceptance approved by the Corporation Counsel, so when same was returned without his approval, the certified copies of the approved resolution were not forwarded to the administrative officials who were vested with authority to grant the necessary permits under the resolution, and, in consequence, such permits were not issued.

John F. Rouser, agent for George J. Hoster, in a communication dated January 9, 1908, recites the fact that he has repeatedly asked for permits from the President of the Borough of Manhattan, to open the street and lay such track, but such permits have been refused. He has, therefore, been unable to construct such track and has derived no benefit whatsoever from such consent, and requests a refund of the security deposit and compensation paid.

Under the circumstances, I have no objection to offer to the application, and I would recommend that the resolution granting the consent be revoked, and the Comptroller be authorized and requested to return to the said George J. Hoster the moneys paid under the consent, as follows:

1. The sum of five hundred dollars (\$500) deposited with the Comptroller as security deposit, for the faithful performance of the terms and conditions of the consent; and

2. The sum of one hundred and sixty-seven dollars and four cents (\$167.04) as compensation for the aforesaid grant from February 13, 1907, to November 1, 1907.

Previous to the return of the moneys herein specified, the petitioner should be required to execute an instrument in writing, releasing The City of New York from any and all claims held or alleged to be held against the City, under the terms and conditions of said consent, and surrendering and waiving any right in the City streets under and by virtue of said consent.

I transmit herewith two resolutions for adoption, carrying into effect the above recommendations.

Respectfully,
HARRY P. NICHOLS, Engineer in Charge.

The following was offered:

Whereas, By resolution duly adopted by the Board of Estimate and Apportionment October 26, 1906, approved by the Mayor February 13, 1907, permission was granted to George J. Hoster to construct, maintain and operate a single track turnout from the existing tracks of the New York Central and Hudson River Railroad Company in Eleventh avenue to the premises of the petitioner, situated on the northeast corner of Eleventh avenue and West Thirty-fourth street, Borough of Manhattan; and

Whereas, George J. Hoster has presented a petition, dated January 9, 1908, requesting a refund of certain moneys heretofore paid by him to The City of New York, in accordance with the terms and conditions of the foregoing resolution, as said track has not been constructed; now, therefore, be it

Resolved, That the said resolution be and it hereby is rescinded.

Which was adopted by the following vote:

Affirmative—The Mayor, the Comptroller, the President of the Board of Aldermen and the Presidents of the Boroughs of Manhattan, Brooklyn and The Bronx—14.

The following was offered:

Whereas, By resolution duly adopted by the Board of Estimate and Apportionment, October 26, 1906, approved by the Mayor February 13, 1907, permission was granted to George J. Hoster to construct, maintain and operate a single track turnout from the existing tracks of the New York Central and Hudson River Railroad Company in Eleventh avenue to the premises of the petitioner, situated on the northeast corner of Eleventh avenue and West Thirty-fourth street, Borough of Manhattan; and

Whereas, George J. Hoster has presented a petition, dated January 9, 1908, requesting a refund of certain moneys heretofore paid by him to The City of New York, in accordance with the terms and conditions of the foregoing resolution; and

Whereas, Said track was not constructed, and the said George J. Hoster derived no benefit whatsoever from said consent; and

Whereas, This Board has this day adopted a resolution revoking the resolution adopted October 26, 1906, and approved by the Mayor February 13, 1907; now, therefore, be it

Resolved, That the Comptroller of the City of New York be and he hereby is authorized and requested to refund to the said George J. Hoster

1. The sum of five hundred dollars (\$500) heretofore deposited with him as a security fund, under the terms and conditions of the aforementioned consent; and

2. The sum of one hundred and sixty-seven dollars and four cents (\$167.04) heretofore paid to The City of New York by George J. Hoster as compensation for the privilege granted by such consent for the period from February 13, 1907, to November 1, 1907; and be it further

Resolved, That this resolution shall not become effective unless and until George J. Hoster executes an instrument in writing releasing the City of New York from any and all claims of any kind, character or description whatsoever, held or claimed to be held under the terms and conditions of the aforesaid consent, and agreeing to quitclaim, waive and surrender any and all rights and privileges in and upon Eleventh avenue and West Thirty-fourth street, held or alleged to be held under and by virtue of said consent, in the manner prescribed by and to the satisfaction of the Comptroller of The City of New York, and file same with said official.

Which was adopted by the following vote:

Affirmative—The Mayor, the Comptroller, the President of the Board of Aldermen and the Presidents of the Boroughs of Manhattan, Brooklyn and The Bronx—14.

NEW YORK CENTRAL AND HUDSON RIVER RAILROAD COMPANY.

In the matter of the application of the New York Central and Hudson River Railroad Company for an extension of time until January 15, 1908, in which to complete the construction of subway through Kingsbridge road, and other streets, in the Borough of The Bronx, for which a franchise was granted by contract dated June 1, 1907.

This petition was presented to the Board at its meeting of January 10, 1908, and referred to the Corporation Counsel to advise the Board if such extension of time could legally be granted under the terms and conditions of the aforesaid contract.

The Secretary presented the following:

LAW DEPARTMENT,
OFFICE OF THE CORPORATION COUNSEL,
January 21, 1908.

To the Board of Estimate and Apportionment:

SIRS—I am in receipt of your communication of the 10th of January, 1908, regarding the application of the New York Central and Hudson River Railroad Company for an extension of time in which to complete the construction of the subway through Kingsbridge road, and other streets in the Borough of The Bronx, for which a franchise was granted by contract dated June 1, 1907, and asking to be advised if such extension of time can legally be granted under the provisions of the said contract.

It seems the work contemplated by the contract has already been done. The City has no fault to find with the manner in which such work has been done other than the omission of the company to finish such work within the time specified in the contract. In a communication I received from Ira A. Place, Vice-President of the company, regarding this matter, he states:

"I beg to advise you that, pursuant to section 8 of said contract, this company could not commence the construction of said subway until a permit for said construction was granted by the Department of Water Supply, Gas and Electricity; that said permit was applied for immediately upon execution of said contract, but was not granted until July 15, 1907, and was not approved by the President of the Borough of The Bronx until July 22, 1907; that during the period between June 13 and July 22, 1907, owing to favorable weather conditions, twice as much work on the subway could have been accomplished as was done during a similar period later in the year, so that the delay in obtaining the necessary permit in reality meant a delay of at least seventy-eight days, and that, although this company prosecuted the work with all possible diligence, it could not complete the said work within the time set by the contract.

"I beg to advise you further that the construction is now wholly completed, and inclose herewith copy of my advice to that effect to the Board of Estimate and Apportionment."

Under such circumstances it would be a gross injustice to deny the extension of time applied for. The rule heretofore laid down as to such extensions of time contemplates a willful or inexcusable neglect to complete the work permitted under a franchise within the time fixed therein. Such is not the case here. The company has apparently acted in good faith and has complied with all the terms and conditions of the franchise, except in the particular pointed out, and for this it seems it was in no wise responsible.

I am therefore of the opinion that under the peculiar circumstances of this case the extension of time applied for should be granted.

Respectfully yours,

F. K. PENDLETON, Corporation Counsel.

REPORT No. F-81.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 22, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—At the meeting of the Board of Estimate and Apportionment held on January 10 there was presented a petition from the New York Central and Hudson River Railroad Company asking for an extension of time within which to complete the construction of subways in various streets in the Borough of the Bronx, for which franchises had been granted on June 13, 1907. The request was referred to the Corporation Counsel for advice as to whether or not the Board could grant such extension, the time stipulated in the original franchise having expired. Under date of January 21, 1908, the Corporation Counsel has submitted an opinion stating that the company had apparently acted in good faith and that its failure to complete the work within the contract time appeared to be due to no negligence on its part, and stating that there is no objection to granting the said extension. The company has since completed its work, and it is therefore recommended that a resolution granting the extension of time asked for be adopted by the Board.

Respectfully,

NELSON P. LEWIS, Chief Engineer.

BOARD OF ESTIMATE AND APPORTIONMENT,
DIVISION OF FRANCHISES, ROOM 801, No. 277 BROADWAY,
January 22, 1908.

Mr. NELSON P. LEWIS, Chief Engineer:

SIR—The New York Central and Hudson River Railroad Company, by Ira A. Place, Vice-President, in a petition dated January 2, 1908, applied for an extension of time to and including January 15, 1908, for the completion of the work authorized by the contract between The City of New York and the railroad company to construct, maintain and operate a subway for the transmission of electrical current under and along certain streets in the Borough of The Bronx, City of New York. This petition was presented to the Board of Estimate and Apportionment at its meeting of January 10, 1908, and by resolution duly adopted on that date the matter was referred to the Corporation Counsel, to advise the Board whether it could legally grant the extension of time requested under the provisions of the aforesaid contract.

In an opinion dated January 21, 1908, the Corporation Counsel has advised the Board that "the company has apparently acted in good faith and has complied with all the terms and conditions of the franchise except in the particular pointed out, and for this it seems it was in no wise responsible. I am therefore of the opinion that under the peculiar circumstances of this case the extension of time applied for should be granted."

In accordance with the opinion of the Corporation Counsel I would recommend that the extension of time up to and including January 15, 1908, be granted, providing the company files an agreement in writing, agreeing to accept the extension of time and to abide by and perform all the terms, conditions and requirements in the contract fixed and contained, except as expressly modified.

In its petition the company stated that the work had practically been completed with the exception of the restoration of the surface of the street, and in a communication dated January 15, 1908, the company states that the construction of the subway was completed January 14, 1908. This communication is on the calendar for the meeting of January 24, 1908.

I transmit herewith resolution for adoption, granting the extension of time requested, together with a form of agreement to be executed by the company, as recommended in this report.

Respectfully,

HARRY P. NICHOLS, Engineer in Charge.

The following was offered:

Whereas, This Board did, on May 10, 1907, adopt a resolution authorizing the Mayor to execute, in the name and on behalf of the City, a contract between the New York Central and Hudson River Railroad Company and The City of New York, granting to the company the right to construct, maintain and operate a subway and all necessary appurtenances for the transmission of electric current required in the operation and maintenance of its railroads now owned or leased under and along certain streets in the Borough of The Bronx, City of New York, upon certain conditions therein fully set forth; and

Whereas, On the 13th day of June, 1907, the Mayor did execute, in the name and on behalf of The City of New York, a contract granting to the company such right, which contract was dated the 1st day of June, 1907; and

Whereas, The New York Central and Hudson River Railroad Company, in a petition dated January 2, 1908, requests an extension of time until January 15, 1908, in which to complete the construction of the aforesaid subway; and

Whereas, The Corporation Counsel, in a communication dated January 21, 1908, has advised this Board that the company has apparently acted in good faith and has complied with all the terms and conditions of the franchise, except in the particular pointed out, and for this it seems it was in no wise responsible, and that under the peculiar circumstances of this case the extension of time applied for should be granted; now, therefore, be it

Resolved, That the Board of Estimate and Apportionment hereby grants, upon the conditions hereinafter set forth, an extension of time up to and including January 15, 1908, for the New York Central and Hudson River Railroad Company to comply with the provisions of Section 2, seventh, of the aforesaid contract; and be it further

Resolved, That this extension of time shall not become operative until said New York Central and Hudson River Railroad Company shall duly execute an instrument in writing to the satisfaction of the Board of Estimate and Apportionment, and file the same in the office of the said Board within thirty (30) days from the date of the approval of this resolution by the Mayor, wherein said company shall promise, covenant and agree that the consent of the Board of Estimate and Apportionment so given to the extension of time requested shall not in any wise change, alter or amend any of the terms, conditions and requirements in the contract fixed and contained, which said contract shall remain in full force and effect, except as herein expressly stated.

Which was adopted by the following vote:

Affirmative—The Mayor, the Comptroller, the President of the Board of Aldermen and the Presidents of the Boroughs of Manhattan, Brooklyn and The Bronx—14.

A communication dated January 15, 1908, was received from the Vice-President of the New York Central and Hudson River Railroad Company, stating that the construction of the subway through Kingsbridge road and other streets in the Borough of The Bronx, authorized by contract dated June 1, 1907, was completed January 14, 1908.

Which was ordered filed.

EBERHARD FABER PENCIL COMPANY.

A communication, dated January 14, 1908, was received from the Mayor's office, returning, duly approved by the Mayor, resolution adopted by the Board January 10, 1908, granting permission to the Eberhard Faber Pencil Company to construct, maintain and use a six-inch wrought-iron pipe under and across the roadway of Kent street, Borough of Brooklyn, to connect the buildings owned by the petitioner on both sides of said street, and to contain wires for the transmission of electric current for light and power, from the building on the southerly side of the street to the building on the northerly side.

Which was ordered filed.

AMERICAN EXPRESS COMPANY.

In the matter of the application of the American Express Company for permission to construct, maintain and use two conduits under and across East Forty-third street, connecting properties owned by the petitioner on both sides of said street, and known as Nos. 217 to 223 and Nos. 212 to 226 East Forty-third street, Borough of Manhattan, to carry steam pipes and to contain electric wires.

This petition was presented to the Board at its meeting of January 10, 1908, and at the request of the company, consideration was postponed until this day.

The Secretary presented the following:

January 15, 1908.

Mr. HARRY P. NICHOLS, Division of Franchises, Room 801, No. 277 Broadway:

MY DEAR SIR—The American Express Company withdraws its application for leave to construct and maintain a tunnel under Forty-third street, referred to in our recent correspondence. This withdrawal is due to a change of plans by the Express Company. I shall be pleased to receive the papers submitted in support of the application.

Yours,
EDWARD S. CLINCH.

Which was ordered filed.

SOUTH SHORE TRACTION COMPANY.

An amended petition was received from the South Shore Traction Company for a franchise to construct, maintain and operate a single or double track street surface railway from the bridge plaza of the Blackwells Island Bridge, upon and along Jackson avenue, the bridge approach to Thompson avenue, and upon and along various streets and avenues to Central avenue, at a point where it intersects the boundary line between The City of New York and the Town of Hempstead, said point being the western terminal point of said railway.

Which was referred to the Chief Engineer.

NASSAU ELECTRIC RAILROAD COMPANY.

The Secretary presented the following:

THE NASSAU ELECTRIC RAILROAD COMPANY,
No. 85 CLINTON STREET,
BROOKLYN, N. Y., January 11, 1908.

Board of Estimate and Apportionment, Mr. JOSEPH HAAG, Secretary, No. 277 Broadway, New York, N. Y.:

DEAR SIR—Pursuant to the terms of the franchise granted by The City of New York to the Nassau Electric Railroad Company, approved by the Mayor on July 29, 1907, I enclose herewith copies of the consents of abutting property owners of more than one-half in value of the property bounded on Livingston street and Lafayette avenue, covered by such franchise.

Kindly acknowledge receipt of same, and oblige,

Yours very truly,
T. S. WILLIAMS, Vice-President.

REPORT No. F-82.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 22, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—The Nassau Electric Railroad Company, through its vice-president, Mr. T. S. Williams, has submitted to the Board copies of consents of property owners along Livingston street and Lafayette avenue, in the Borough of Brooklyn, to the construction and operation of a railroad in these streets between Court and Fulton streets, a franchise for which has already been granted. These consents have been examined and the valuations have been compared in the Division of Franchises, and it is found that the consents represent more than fifty per cent. of the value of the property on both streets, as given in the tax values for the year 1907.

The company has therefore complied with the provisions of its contract, and it is recommended that the consents be placed on file.

Respectfully,

NELSON P. LEWIS, Chief Engineer.

BOARD OF ESTIMATE AND APPORTIONMENT,
DIVISION OF FRANCHISES, ROOM 801, No. 277 BROADWAY,
January 22, 1908.

Mr. NELSON P. LEWIS, Chief Engineer:

SIR—Mr. T. S. Williams, Vice-President of the Nassau Electric Railroad Company, with a communication dated January 11, 1908, has transmitted to the Board of Estimate and Apportionment copies of the consents of property owners abutting on Livingston street and Lafayette avenue, Borough of Brooklyn, pursuant to section 2, first, of the contract granting a franchise to this company to construct, maintain and operate a street surface railroad on Livingston street, from Court street to Flatbush avenue, and on Lafayette avenue from Flatbush avenue to Fulton street.

I have caused the consents to be examined and the valuations as given compared with the assessed valuation for the year 1907. In Livingston street, from Court street to Flatbush avenue, 175 pieces of property are situated, the total assessed valuation being \$11,345,000. The company has filed consents for forty pieces in this locality, the assessed valuation of which amounts to \$6,767,100; the consents thus filed being in excess of one-half the total valuation.

In Lafayette avenue, between Flatbush avenue and Fulton street, forty pieces of property are situated, having a total assessed valuation of \$476,200, and the company has filed consents for twenty-four pieces, having a total assessed valuation of \$287,700; the consents filed being in excess of one-half the total valuation.

As before pointed out, the assessed valuations in every instance were taken from the Assessment Roll for the year 1907.

As the company appears to have complied with the law and the conditions of its franchise in this respect, I would recommend that the consents be placed on file.

Respectfully,

HARRY P. NICHOLS, Engineer in Charge.

The copies of consents and reports were ordered filed.

NEW YORK CENTRAL AND HUDSON RIVER RAILROAD COMPANY.

A communication, dated January 17, 1908, was received from H. G. Schneider, Secretary of the Eleventh Avenue Track Removal Association, transmitting resolutions adopted by that body, requesting this Board to spread upon its minutes the agreement dated January 21, 1887, relative to the New York Central and Hudson River Railroad Company, and also requesting the Board to investigate by what right the company maintains four tracks from Seventy-second street to Spuyten Duyvil.

Which was referred to the Chief Engineer.

CONSIDERATION OF PENDING TELEPHONE APPLICATIONS.

At the meeting of December 20, 1907, the applications of the Atlantic, the Independent and the Star Telephone companies for franchises, and the offer of the New York Telephone Company and the New York and New Jersey Telephone Company to compensate the City during such time as no other companies operate in The City of New York, were referred to a Committee consisting of the Comptroller, the Corporation Counsel and the Chief Engineer, with instructions to report back to the Board at the meeting to be held this day.

The Comptroller, as Chairman of the Select Committee, moved that such committee be granted an extension of time until February 21, 1908, in which to make its report. Which motion was agreed to.

RAPID TRANSIT RAILWAY.
Brooklyn Loop Lines.

At the meeting of January 10, 1908, a communication was received from the Public Service Commission for the First District, submitting certain proposed modifications in the plans for the Manhattan portion of the Brooklyn loop, which was referred to the Chief Engineer.

The Secretary presented the following:

REPORT No. 45.

BOARD OF ESTIMATE AND APPORTIONMENT,
OFFICE OF THE CHIEF ENGINEER,
January 21, 1908.

Hon. GEORGE B. McCLELLAN, Mayor, Chairman of the Board of Estimate and Apportionment:

SIR—At the meeting of the Board of Estimate and Apportionment held on January 10 there was presented a communication from Hon. W. R. Willcox, Chairman of the Public Service Commission for the First District, advising the Board that the Commission had under consideration the advisability of some modifications of the plans for that portion of the subway loop now under construction in the Borough of Manhattan, and stating that the suggestions contained in his letter were presented to the Board for its consideration while the Commission was engaged in further study and the preparation of revised plans and estimates. The communication was referred to the Chief Engineer of the Board for consideration and report.

The suggestions contained in the communication from the Public Service Commission have been the subject of a number of conferences with the Chief Engineer of the Commission. In the preparation of plans for the Fourth avenue subway in the Borough of Brooklyn the Commission and its Engineer were impressed with the fact that if the subway were built of the same dimensions as the present subway it would be impossible to run through it the standard cars of railway companies operating suburban lines, which companies might be logical bidders for the operation of the new line, and that such a limitation in size might restrict the availability of the new subway and lessen the chance of a favorable contract for operating it. Inasmuch as the loop between the Brooklyn, Manhattan and Williamsburg bridges now under construction in the Borough of Manhattan might naturally be operated in conjunction with the Fourth avenue subway, it was apparent that any modification in the plans of the latter, permitting its use by standard cars, should also be made in the section now under contract. At the same time it appears that a study has been made to reduce the grades wherever possible.

The contract plan for the Centre and Delancey streets line provided for a four-track line, which, for the greater part of the distance in Centre street, is on two levels, and in passing from one level to another grades varying from 2.5 per cent. to 5.5 per cent. are employed, while the use of two different levels involves a large amount of excavation below tide, this depth of excavation being still further increased by the inclusion in the present contract of pipe galleries placed over the roof of the proposed subway. The suggested modifications consist of:

First—Placing all of the four tracks at the same level, thereby lessening the grades and reducing the amount of excavation.

Second—The substitution of one station at Canal street for the two stations, one of which is between Leonard and Franklin streets and the other between Howard and Grand streets.

Third—The omission of the pipe galleries permitting a further raising of the level of the subway and reduction in the amount of difficult and expensive excavation below tide level.

The location of one station at Canal street instead of the two stations now planned, which are very near together, would seem advantageous, in view of the fact that it is proposed to build a crosstown line through Canal street, passing under the Centre street tracks, to which passengers could transfer at the proposed new station. The elimination of heavy grades, especially in approaching and leaving stations, should result in greater safety and speed with less power and time and a corresponding increase in capacity. The estimate of the Chief Engineer of the Public Service Commission of this increase in capacity and efficiency shows a minimum of 25 per cent. The only change in the dimensions of the subway are an increase of one foot in clear height above top of rail, making it 14 feet 6 inches, instead of 13 feet 6 inches as now proposed and as in the subway now in operation.

I understand that the suggestion of dispensing with the pipe galleries is made by the Public Service Commission with some hesitancy, owing to the belief that the Board of Estimate and Apportionment and the general public are strongly in favor of the building of such galleries in connection with the construction of Rapid Transit subways. When bids were received for the work now under contract they were taken separately, with and without pipe galleries, the difference between the bids being \$772,340. It is quite evident that this does not represent the cost of building such galleries under normal conditions, but that it includes the cost of their construction, and in addition to that the increased cost of building the subway, owing to the fact that the pipe galleries being placed over the roof of the subway forced the entire structure deeper into the earth and further below tide level. It is estimated that the same length of pipe galleries, which is approximately one mile, could be built in other streets independently of subway construction for some \$300,000, or one-half the cost under the present contract. These pipe galleries are not designed to accommodate electric conductors, but the Commission suggests that if the galleries are omitted, at least along Centre street, they can subsequently make a contract for ducts for electric conductors at an expense not to exceed \$60,000.

These changes have been discussed with the three different contractors now employed on the subway between the Brooklyn and Williamsburg bridges, and they have agreed to a reduction in their contract price aggregating \$924,000 in case the pipe galleries are omitted, and \$365,000 if these galleries are to be built. They have also made a concession as to their contract time, reducing it from three to five months. Whether or not the proposed modifications will constitute such changes of the authorized plans as will require a public hearing I am unable to state until the detailed plans have been submitted, but such a procedure may not be necessary, as the plans which have been formerly approved by the Board did not specify the depth of the proposed tracks and did not indicate the location of the stations.

After a careful study of the plans of the Public Service Commission so far as they have progressed, I am of the opinion that the proposed modifications are wise, being in the interest of increased capacity and speed, economy of cost and decrease in the time needed for construction, and I therefore believe that, if the plans finally submitted by the Public Service Commission to the Board of Estimate and Apportionment are on the lines which have been discussed, the Board can advantageously approve them and consent to the modifications of the contracts. In doing this it is assumed that the Board would in no way recede from the position already assumed by it as to the great desirability of the construction of pipe galleries to minimize or avoid the disturbance of pavements, but would approve the omission of the pipe galleries in connection with the subway, for the reason that the amount required for their construction in this connection would suffice to build at least double their length under other conditions.

Respectfully,

NELSON P. LEWIS, Chief Engineer.

The report was ordered filed and the Secretary was directed to transmit a copy of same to the Public Service Commission for the First District.

The following matter not on the calendar for this day was considered by unanimous consent:

EAST RIVER TERMINAL RAILROAD.

A petition was received from the East River Terminal Railroad for a franchise to construct, maintain and operate a railroad in the Borough of Brooklyn and to lay down and maintain tracks in connection therewith on North Fourth street, Kent and Wythe avenues, in the said Borough.

Which was referred to the Chief Engineer.

The full minutes of the meeting of this day will appear in the CITY RECORD at a later date.

JOSEPH HAAG, Secretary.

METEOROLOGICAL OBSERVATORY OF THE DEPARTMENT OF PARKS.

Abstract of Registers from Self-recording Instruments for the Week Ending January 18, 1908.

Central Park, The City of New York—Latitude, 40° 45' 58" N. Longitude, 73° 57' 58" W. Height of Instruments Above the Ground, 53 feet; Above the Sea, 97 feet.

BAROMETER.

DATE.	January.	7 a. m.	2 p. m.	9 p. m.	Mean for the Day.	Maximum.		Minimum.	
		Reduced to Freezing.	Reduced to Freezing.	Reduced to Freezing.	Reduced to Freezing.	Reduced to Freezing.	Time.	Reduced to Freezing.	Time.
Sunday,	12	29.380	29.100	29.036	29.172	29.940	0 a. m.	29.000	5 p. m.
Monday,	13	29.160	29.234	29.320	29.238	29.376	12 p. m.	29.056	0 a. m.
Tuesday,	14	29.000	29.730	29.070	29.769	30.018	12 p. m.	29.376	0 a. m.
Wednesday,	15	30.122	30.076	30.040	30.079	30.164	10 a. m.	29.966	12 p. m.
Thursday,	16	29.810	29.764	29.030	29.868	30.114	12 p. m.	29.764	2 p. m.
Friday,	17	30.218	30.124	30.036	30.126	30.250	9 a. m.	29.984	12 p. m.
Saturday,	18	29.970	29.984	29.986	29.980	30.000	9 a. m.	29.950	5 a. m.

Mean for the week 29.747 inches.
Maximum " at 9 a. m., January 17 30.250 "
Minimum " at 5 p. m., January 12 29.000 "
Range " 1.250 "

THERMOMETERS.

DATE.	January.	7 a. m.	2 p. m.	9 p. m.	Mean.	Maximum.		Minimum.		Maximum.
		Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.	Dry Bulb.	Time.	Wet Bulb.	Time.	In Sun.
Sunday,	12	44	42	47	45	48	5 p. m.	41	1 a. m.	50
Monday,	13	42	40	44	42	45	0 a. m.	37	12 p. m.	82
Tuesday,	14	32	30	36	34	38	0 a. m.	28	12 p. m.	81
Wednesday,	15	32	30	41	38	40	3 p. m.	28	1 a. m.	72
Thursday,	16	39	37	41	39	42	4 p. m.	26	12 p. m.	49
Friday,	17	25	23	35	34	38	5 p. m.	23	4 a. m.	60
Saturday,	18	34	32	37	34	39	4 p. m.	32	4 a. m.	84

Mean for the week 37.6 degrees.
Maximum " at 8 p. m., Jan. 12 49 "
Minimum " at 4 a. m., Jan. 17 23 "
Range " 26 "

WIND.

DATE.	January.	Direction.			Velocity in Miles.			Force in Pounds per Square Foot.		
		7 a. m.	2 p. m.	9 p. m.	7 a. m.	2 p. m.	9 p. m.	7 a. m.	2 p. m.	9 p. m.
Sunday,	12	NE	NE	SW	123	75	45	1 1/2	0	1
Monday,	13	SW	W	NW	118	80	45	3/4	0	3/4
Tuesday,	14	NW	WNW	WNW	96	116	89	3 1/2	2 1/2	1 1/2
Wednesday,	15	WSW	SW	SW	81	49	64	0	0	1 1/2
Thursday,	16	WSW	SW	NW	100	81	91	3/4	0	2 1/2
Friday,	17	WNW	SW	SW	100	36	45	3/4	0	2 1/2
Saturday,	18	NW	W	WSW	80	70	66	0	3/4	3

Distance traveled during the week 1,656 miles.
Maximum force during the week 6 pounds.

DATE.	January.	Hygrometer.				Clouds.			Rain and Snow.				Ozone.
		Force of Vapor.	Relative Humidity.	Clear.	Overcast.	7 a. m.	2 p. m.	9 p. m.	Time of Beginning.	Time of Ending.	Duration.	Amount of Water.	
Sunday,	12	.241	.273	.260	.258	83	84	77	10	10	10	5.00 a. m. to 5.30 p. m.	0
Monday,	13	.221	.236	.203	.220	83	70	82	0	8 Cir	2 Cir	7.15 p. m. to 2.00 a. m.	0
Tuesday,	14	.144	.120	.149	.140	79	61	89	8 Cu	2 Cir	1 Cu	.....	1
Wed's'd'y,	15	.144	.190	.225	.186	79	74	91	8 Cir	2 Cir	0	.....	0
Thursday,	16	.104	.212	.142	.182	81	82	88	10	10	0	8.30 a. m. to 12 m.	0
Friday,	17	.100	.142	.183	.141	74	70	90	0	0	6 Cu	.....	0
Saturday,	18	.155	.157	.162	.158	79	71	79	9 Cu	2 Cir	0	.....	0

Total amount of water for the week 1.55 inches.
Duration for the week 12 hours, 45 minutes.

DATE.	January.	7 a. m.	2 p. m.
		7 a. m.	2 p. m.
Sunday,	12	Mild, raining.	Mild, drizzling.
Monday,	13	Mild, pleasant.	Mild, pleasant.
Tuesday,	14	Cool, cloudy.	Clear, windy.
Wednesday,	15	Mild, hazy.	Mild, pleasant.
Thursday,	16	Mild, overcast.	Mild, overcast.
Friday,	17	Clear, cold.	Cool, pleasant.
Saturday,	18	Cool, cloudy.	Mild, pleasant.

DANIEL DRAPER, Ph. D., Director.

CHANGES IN DEPARTMENTS, ETC.**DEPARTMENT OF FINANCE.**

January 24—Laurence J. Kelly, No. 879 Tenth avenue, Manhattan, has been appointed as Deputy City Paymaster, with salary at \$2,000 per annum, taking effect January 27, 1908.

Clarence H. Severn, No. 1249 Fortieth street, Brooklyn, Office Boy, transferred from the Board of Water Supply to the Bureau of Municipal Investigation and Statistics of the Department of Finance, taking effect January 22, 1908. Salary \$300 per annum.

Robert B. McIntyre, transferred from the position of Auditor of Accounts to the position of Examiner, with salary at \$4,000 per annum, taking effect January 23, 1908.

FIRE DEPARTMENT.

January 25—

Appointed.

Boroughs of Manhattan and The Bronx. As ununiformed Fireman, for a probationary term of one month, with salary at the rate of \$800 per annum, from January 25, 1908, John L. McBride, assigned to Engine Company No. 5.

Resigned.

Borough of Richmond.

Fireman First Grade Edward S. Paul, Hook and Ladder Company 105, to take effect at 8 a. m., on the 26th inst.

BOARD OF WATER SUPPLY.

January 24—The services of Edmund M. French, Assistant Engineer, terminated January 15, 1908, he having been transferred to the office of the President of the Borough of Brooklyn, and Constant W. Booth, Jr., Assistant Engineer, has also been transferred to the same office. His services with the Board will terminate January 31, 1908.

At the meeting of this Board, held January 22, 1908, the services of Herbert F. Rodman, Gate Keeper, were dispensed with, to take effect immediately, on account of absence from duty without leave for more than five days.

At the same meeting the action of the Board in dispensing with the services of William B. Cook, Rodman, and James W. Laird, Rodman, was rescinded.

DEPARTMENT OF DOCKS AND FERRIES.

January 24—The resignation of Edward J. Gillen, of No. 108 Madison street, Manhattan, from the position of Dock Laborer, has been accepted.

BOARD OF ASSESSORS.

January 25—John J. Sheehan, of No. 203 West One Hundred and Twenty-second street, Manhattan, was appointed to the position of Clerk at a salary of \$1,350 per annum, to take effect on and from Thursday, January 23, 1908, on transfer from the Finance Department.

PRESIDENT OF THE BOROUGH OF BROOKLYN.

January 23—Report of changes in the several bureaus under the jurisdiction of the President of the Borough of Brooklyn for the period from January 1 to 15, inclusive.

Administrative Office.

Fixed the salary of Miss Helen A. Shea, No. 332 East Seventeenth street, Manhattan, Stenographer and Typewriter, at \$1,200 per annum, to date from January 1.

Division of Substructures.

Transferred Joseph J. Sley, Ovington avenue, Brooklyn, Rodman, from the office of the President of the Borough of Richmond, at \$1,050 per annum, to date from January 6.

Transferred George H. Woehrlin, No. 15 West Thirty-eighth street, Manhattan, Topographical Draughtsman, from the office of the President of the Borough of Richmond to a similar position, at a compensation of \$1,200 per annum, to date from January 16.

Transferred Claude S. Haynes, Katonah, New York, Assistant Engineer, from the Aqueduct Commission, at a compensation of \$2,500 per annum, to date from January 16.

Bureau of Highways.

John A. Allen, Topographical Draughtsman, was transferred to a similar position in the office of the President of the Borough of Queens, to date from December 1.

Dismissed John Fox, No. 55 Hull street, Brooklyn, Laborer, on January 7, for failure to report.

Transferred David W. Lellis, No. 503 West One Hundred and Forty-seventh

street, Manhattan, Topographical Draughtsman, from the office of the President of the Borough of Richmond, at a compensation of \$1,200 per annum, to date from January 16.

Transferred the following named Levelers from the office of the President of the Borough of Richmond at a compensation of \$1,350 per annum each, all to date from January 16:

John W. Rust, No. 451 Lenox avenue, Manhattan.

William J. Shea, No. 18 Central avenue, Tompkinsville, Staten Island.

Walter N. Mohn, No. 692 Chauncey street, Brooklyn.

Transferred Benjamin F. Underhill, Katonah, New York, from the office of the Aqueduct Commission, at a compensation of \$1,800 per annum, to date from January 16.

Dropped the following named Laborers on January 13, for failure to report:

Patrick Halpin, No. 63 Columbia street, Brooklyn.

Patrick Hennessey, No. 47 North Portland avenue, Brooklyn.

Topographical Bureau.

Transferred Joseph F. Hawkes, No. 2261 Bathgate avenue, The Bronx, Axeman, from the office of the Public Service Commission, at a compensation of \$900 per annum, to date from January 7.

Granted a leave of absence for three months without pay, to date from February 1, 1908, to Robert L. Allen, Assistant Engineer, on account of illness.

Bureau of Public Buildings and Offices.

Transferred Thomas McDonald, No. 208 Lefferts avenue, Foreman of Laborers, from the Bureau of Highways, at a compensation of \$4 per day, to date from January 1.

Mary Smith, No. 3 Sycamore street, Brooklyn, Cleaner, was transferred to a similar position in the office of the President of the Borough of The Bronx, to date from January 6.

Transferred Michael Harding, No. 471 Douglass street, Brooklyn, Laborer, from the Bureau of Highways, at a compensation of \$750 per annum, to date from January 8.

Promoted John T. Kane, No. 165 Bedford avenue, and Michael A. McMahon, No. 561 Franklin avenue, Brooklyn, Stoker and Oiler, respectively, to Engineman, at a compensation of \$4 per day, to date from January 1.

Bureau of Sewers.

Granted a leave of absence for three months without pay, on account of illness, to Jason Mills, Inspector of Sewer Construction, to date from December 17.

Suspended Robert Hankinson, No. 9 Vandam street, Manhattan, Inspector of Sewer Construction, on account of lack of work, to date from January 6.

DEPARTMENT OF BRIDGES.

January 27—John P. Hagerty, No. 176 East One Hundred and Seventeenth street, New York City, is appointed as Riveter, at a compensation of 56 1/4 cents per hour.

**OFFICIAL DIRECTORY.**

STATEMENT OF THE HOURS DURING which the Public Offices in the City are open for business and at which the Courts regularly open and adjourn, as well as the places where such offices are kept and such Courts are held, together with the heads of Departments and Courts.

CITY OFFICES.**MAYOR'S OFFICE.**

No. 5 City Hall, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.

Telephone, 8020 Cortlandt.

GEORGE B. McCLELLAN, Mayor.

Frank M. O'Brien, Secretary.

William A. Willis, Executive Secretary.

James A. Rierdon, Chief Clerk and Bond and Warrant Clerk.

BUREAU OF WEIGHTS AND MEASURES.

Room 7, City Hall, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.

Telephone, 8020 Cortlandt.

Patrick Derry, Chief of Bureau.

BUREAU OF LICENSES.

9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 820 Cortlandt.
John P. Corrigan, Chief of Bureau.
Principal Office, Room 1, City Hall. Gaetano D'Amato, Deputy Chief, Boroughs of Manhattan and The Bronx.
Branch Office, Room 12, Borough Hall, Brooklyn. James J. Kinsella, Deputy Chief, Borough of Brooklyn.
Branch Office, Richmond Borough Hall, Room 23, New Brighton, S. I. William R. Woelfle, Financial Clerk, Borough of Richmond.
Branch Office, Hackett Building, Long Island City, Borough of Queens.

AQUEDUCT COMMISSIONERS.

Room 207, No. 280 Broadway, 5th floor, 9 a. m. to 4 p. m.
Telephone, 1942 Worth.
The Mayor, the Comptroller, ex-officio, Commissioners John F. Cowan (President), William H. Ten Eyck, John J. Ryan and John P. Windolph; Harry W. Walker, Secretary; Walter H. Sears, Chief Engineer.

ARMORY BOARD.

Mayor George B. McClellan, the President of the Board of Aldermen, Patrick F. McGowan, Brigadier-General John G. Eddy, Brigadier-General George Moore Smith, the President of the Department of Taxes and Assessments, Lawson Purdy, Harrie Davis, Secretary, Room 6, Basement, Hall of Records, Chambers and Centre streets.
Office hours, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 3900 Worth.

ART COMMISSION.

City Hall, Room 21.
Telephone call, 1107 Cortlandt.
Robert W. de Forest, Trustee Metropolitan Museum of Art, President; Frank D. Millet, Painter, Vice-President; Howard Mansfield, Secretary; A. Augustus Healy, President of the Brooklyn Institute of Arts and Sciences; George B. McClellan, Mayor of the City of New York; John Bigelow, President of New York Public Library; John J. Boyle, Sculptor; Arnold W. Brunner, Architect; John B. Pine, Charles Howland Russell.
John Quincy Adams, Assistant Secretary.

BELLEVUE AND ALLIED HOSPITALS.

Office, Bellevue Hospital, Twenty-sixth street and First avenue.
Telephone, 4400 Madison Square.
Board of Trustees—Dr. John W. Brannan, President; James K. Paulding, Secretary; Arden M. Robbins, Samuel Sachs, Leopold Stern, Theodore E. Tack, Myles Tierney, Robert W. Heberd, ex-officio. General Medical Superintendent, S. T. Armstrong, M. D.

BOARD OF ALDERMEN.

No. 11 City Hall, 10 a. m. to 4 p. m.; Saturdays, 10 a. m. to 12 m.
Telephone, 7560 Cortlandt.
Patrick F. McGowan, President.
P. J. Scully, City Clerk.

BOARD OF ASSESSORS.

Office, No. 320 Broadway, 9 a. m. to 4 p. m.; Saturdays, 12 m.
Antonio Zucca.
Paul Weimann.
James H. Kennedy.
William H. Jasper, Secretary.
Telephone, 29, 30 and 31 Worth.

BOARD OF ELECTIONS.

Headquarters, General Office, No. 107 West Forty first street.
Commissioners—John T. Dooling (President), Charles B. Page (Secretary), John Maguire, Rudolph C. Fuller.
A. C. Allen, Chief Clerk.

BOROUGH OFFICES.

Manhattan.
No. 112 West Forty-second street.
William C. Baxter, Chief Clerk.

The Bronx.
One Hundred and Thirty-eighth street and Mott avenue (Solingen Building).
Cornelius A. Bunner, Chief Clerk.

Brooklyn.
No. 42 Court street (Temple Bar Building).
George Russell, Chief Clerk.

Queens.
No. 46 Jackson avenue, Long Island City.
Carl Voegel, Chief Clerk.

Richmond.
Borough Hall, New Brighton, S. I.
Alexander M. Ross, Chief Clerk.
All offices open from 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.

BOARD OF ESTIMATE AND APPORTIONMENT.

The Mayor, Chairman; the Comptroller, President of the Board of Aldermen, President of the Borough of Manhattan, President of the Borough of Brooklyn, President of the Borough of The Bronx, President of the Borough of Queens, President of the Borough of Richmond.

OFFICE OF THE SECRETARY.
No. 277 Broadway, Room 1406. Telephone, 2280 Worth.
Joseph Haag, Secretary; William M. Lawrence, Assistant Secretary. Charles V. Adee, Clerk to Board.

OFFICE OF THE CHIEF ENGINEER.
Nelson P. Lewis, Chief Engineer, No. 277 Broadway, Room 1408. Telephone, 2281 Worth.
Arthur S. Tuttle, Engineer in charge Division of Public Improvements, No. 277 Broadway, Room 1408. Telephone, 2281 Worth.
Harry P. Nichols, Engineer in charge Division of Franchises, No. 277 Broadway, Room 801. Telephone, 2282 Worth.

BOARD OF EXAMINERS.

Rooms 607 and 608 Metropolitan Building, No. 1 Madison avenue, Borough of Manhattan, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 5840 Gramercy.
Warren A. Conover, Charles Buek, Lewis Harding, Charles G. Smith, Edward F. Croker, Henry R. Marshall, and George A. Just, Chairman.
Edward V. Barton, Clerk.
Board meeting every Tuesday at 2 p. m.

BOARD OF REVISION OF ASSESSMENTS.

Herman A. Metz, Comptroller.
Francis K. Pendleton, Corporation Counsel.
Lawson Purdy, President of the Department of Taxes and Assessments.
Henry J. Storrs, Chief Clerk, Finance Department, No. 280 Broadway.
Telephone, 1200 Worth.

BOARD OF WATER SUPPLY.

Office, No. 209 Broadway.
J. Edward Simmons, Charles N. Chadwick, Charles A. Shaw, Commissioners.
Thomas Hassett, Secretary.
J. Waldo Smith, Chief Engineer.

COMMISSIONERS OF ACCOUNTS.

Rooms 114 and 115 Stewart Building, No. 280 Broadway, 9 a. m. to 4 p. m.
Telephone, 4315 Worth.
John Purroy Mitchell, Philip B. Gaynor, Commissioners.

CHANGE OF GRADE DAMAGE COMMISSION.

TWENTY-THIRD AND TWENTY-FOURTH WARDS.
Office of the Commission, Room 138, No. 280 Broadway (Stewart Building), Borough of Manhattan, New York City.
Commissioners—William E. Stillings, George C. Norton, Lewis A. Abrams.
Lamont McLoughlin, Clerk.
Regular advertised meetings on Monday, Wednesday and Friday of each week at 2 o'clock p. m.

CITY CLERK AND CLERK OF THE BOARD OF ALDERMEN.

City Hall, Rooms 11, 12; 10 a. m. to 4 p. m.; Saturdays, 10 a. m. to 12 m.
Telephone, 7560 Cortlandt.
P. J. Scully, City Clerk and Clerk of the Board of Aldermen.
Joseph F. Prendergast, First Deputy City Clerk.
John T. Oakley, Chief Clerk of the Board of Aldermen.
Joseph V. Sculley, Clerk, Borough of Brooklyn.
Thomas J. McCabe, Deputy City Clerk, Borough of The Bronx.
William R. Zimmerman, Deputy City Clerk, Borough of Queens.
Joseph F. O'Grady, Deputy City Clerk, Borough of Richmond.

CITY RECORD OFFICE.

BUREAU OF PRINTING, STATIONERY AND BLANK BOOKS.
Supervisor's Office, Park Row Building, No. 21 Park Row. Entrance, Room 807, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 1505 and 1506 Cortlandt. Supply Room, No. 2 City Hall.
Patrick J. Tracy, Supervisor; Henry McMillen, Deputy Supervisor; C. McKemie, Secretary.

COMMISSIONER OF LICENSES.

Office, No. 277 Broadway.
John N. Bogart, Commissioner.
James P. Archibald, Deputy Commissioner.
John J. Caldwell, Secretary.
Office hours, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 2828 Worth.

COMMISSIONERS OF SINKING FUND.

George B. McClellan, Mayor, Chairman; Herman A. Metz, Comptroller; James J. Martin, Chamberlain; Patrick F. McGowan, President of the Board of Aldermen, and Timothy P. Sullivan, Chairman Finance Committee, Board of Aldermen, Members; N. Taylor Phillips, Deputy Comptroller, Secretary.
Office of Secretary, Room 12, Stewart Building.
Telephone, 1200 Worth.

DEPARTMENT OF BRIDGES.

Nos. 13-21 Park Row.
James W. Stevenson, Commissioner.
John H. Little, Deputy Commissioner.
Edgar E. Schiff, Secretary.
Office hours, 9 a. m. to 4 p. m.
Saturdays, 9 a. m. to 12 m.
Telephone, 6080 Cortlandt.

DEPARTMENT OF CORRECTION.

CENTRAL OFFICE.
No. 148 East Twentieth street. Office hours from 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 1047 Gramercy.
John V. Coggey, Commissioner.
George W. Meyer, Deputy Commissioner.
John B. Fitzgerald, Secretary.

DEPARTMENT OF DOCKS AND FERRIES.

Pier "A," N. R., Battery place.
Telephone, 300 Rector.
John A. Bensel, Commissioner.
Denis A. Judge, Deputy Commissioner.
Joseph W. Savage, Secretary.
Office hours, 9 a. m. to 4 p. m.; Saturdays, 12 m.

DEPARTMENT OF EDUCATION.

BOARD OF EDUCATION.
Park avenue and Fifty-ninth street, Borough of Manhattan, 9 a. m. to 5 p. m. (in the month of August, 9 a. m. to 4 p. m.); Saturdays, 9 a. m. to 12 m.
Telephone, 5580 Plaza.
Richard H. Adams, Richard B. Aldcroft, Jr., Nicholas J. Barrett, Charles E. Bruce, M. D.; Joseph E. Cosgrove, Frederic R. Coudert, Francis W. Crowninshield, Francis P. Cunnion, Thomas M. De Laney, Samuel B. Donnelly, Horace E. Dresser, A. Leo Everett, Alexander Ferris, Joseph Nicola Francolini, George Freifeld, George J. Gillespie, John Greene, Robert L. Harrison, Louis Haupt, M. D.; Thomas J. Higgins, Arthur Hollick, Charles H. Ingalls, Nathan S. Jonas, Hugo Kanzler, Max Katzenberg, John C. Kelley, Alrick H. Man, Clement March, Mitchell May, Dennis J. McDonald, M. D.; Thomas J. O'Donohue, Frank H. Partidge, George W. Schaeffer, Henry H. Sherman, Arthur S. Somers, Abraham Stern, M. Samuel Stern, Cornelius J. Sullivan, Michael J. Sullivan, Bernard Suydam, Rupert B. Thomas, John R. Thompson, George A. Vandenhoff, Frank D. Wilsey, George W. Wingate, Egerton L. Winthrop, Jr., members of the Board.
Egerton L. Winthrop, Jr., President.
John Greene, Vice-President.
A. Emerson Palmer, Secretary.
Fred H. Johnson, Assistant Secretary.
C. B. J. Snyder, Superintendent of School Buildings.
Patrick Jones, Superintendent of School Supplies.
Henry R. M. Cook, Auditor.
Thomas A. Dillon, Chief Clerk.
Henry M. Leipzig, Supervisor of Lectures.
Claude G. Leland, Superintendent of Libraries.

BOARD OF SUPERINTENDENTS.

William H. Maxwell, City Superintendent of Schools, and George S. Davis, Andrew W. Edson, Clarence E. Meleney, Thomas S. O'Brien, Edward B. Shallow, Edward L. Stevens, Gustave Straubmüller, John H. Walsh, Associate City Superintendents.

DISTRICT SUPERINTENDENTS.

Darwin L. Bardwell, William A. Campbell, John J. Chickering, John W. Davis, John Dwyer, James M. Edsall, Matthew J. Elgas, Edward D. Farrell, Cornelius D. Franklin, John Griffin, M. D.; John H. Haaren, John L. N. Hunt, Henry W. Jameson, James Lee, Charles W. Lyon, James J. McCabe, William J. O'Shea, Julia Richman, Alfred T. Schaeffer, Albert Shields, Edgar Dubs Shimer, Seth T. Stewart, Edward W. Stitt, Grace C. Strachan, Joseph S. Taylor, Evangeline E. Whitney.

BOARD OF EXAMINERS.

William H. Maxwell, City Superintendent of Schools, and James C. Byrnes, Walter L. Hervey, Jerome A. O'Connell, George J. Smith, Examiners.

DEPARTMENT OF FINANCE.

Stewart Building, Chambers street and Broadway, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Telephone, 1200 Worth.
Herman A. Metz, Comptroller.
John H. McCooey and N. Taylor Phillips, Deputy Comptrollers.
Hubert L. Smith, Assistant Deputy Comptroller.
Oliver E. Stanton, Secretary to Comptroller.

MAIN DIVISION.

H. J. Storrs, Chief Clerk, Room 11.
BOOKKEEPING AND AWARDS DIVISION.
Frank W. Smith, Chief Accountant and Bookkeeper, Room 8.

STOCK AND BOND DIVISION.

James J. Sullivan, Chief Stock and Bond Clerk, Room 85.

BUREAU OF AUDIT—MAIN DIVISION.

P. H. Quinn, Chief Auditor of Accounts, Room 27.

LAW AND ADJUSTMENT DIVISION.

Jeremiah T. Mahoney, Auditor of Accounts, Room 185.

BUREAU OF MUNICIPAL INVESTIGATION AND STATISTICS.

Charles S. Hervey, Supervising Statistician and Examiner, Room 186.

CHARITABLE INSTITUTIONS DIVISION.

Daniel C. Potter, Chief Examiner of Accounts of Institutions, Room 38.

OFFICE OF THE CITY PAYMASTER.

No. 83 Chambers street and No. 65 Reade street.
John H. Timmerman, City Paymaster.

ENGINEERING DIVISION.

Stewart Building, Chambers street and Broadway, Chandler Withington, Chief Engineer, Room 55.

DIVISION OF REAL ESTATE.

Thomas F. Byrnes, Mortimer J. Brown, Appraisers of Real Estate, Room 157.

BUREAU FOR THE COLLECTION OF TAXES.

Borough of Manhattan—Stewart Building, Room O.
David E. Austen, Receiver of Taxes.
John J. McDonough and William H. Loughran, Deputy Receivers of Taxes.

Borough of The Bronx—Municipal Building, Third and Tremont avenues.
John B. Underhill and Stephen A. Nugent, Deputy Receivers of Taxes.

Borough of Brooklyn—Municipal Building, Rooms 2-8.
James B. Bouck and William Gallagher, Deputy Receivers of Taxes.

Borough of Queens—Hackett Building, Jackson avenue and Fifth street, Long Island City.
George H. Creed and Mason O. Smedley, Deputy Receivers of Taxes.

Borough of Richmond—Borough Hall, St. George, New Brighton.
John De Morgan and F. Wilsey Owen, Deputy Receivers of Taxes.

BUREAU FOR THE COLLECTION OF ASSESSMENTS AND ARREARS.

Borough of Manhattan—Stewart Building, Room 81.
Daniel Moynahan, Collector of Assessments and Arrears.

Richard E. Weldon, Deputy Collector of Assessments and Arrears.
Borough of The Bronx—Municipal Building, Room 1-3.
James J. Donovan, Jr., Deputy Collector of Assessments and Arrears.

Borough of Brooklyn—Mechanics' Bank Building, corner Court and Montague streets.
William E. Melody, Deputy Collector of Assessments and Arrears.

Borough of Queens—Hackett Building, Jackson avenue and Fifth street, Long Island City.
Patrick E. Leahy, Deputy Collector of Assessments and Arrears.

Borough of Richmond—St. George, New Brighton.
George Brand, Deputy Collector of Assessments and Arrears.

BUREAU FOR THE COLLECTION OF CITY REVENUE AND OF MARKETS.

Stewart Building, Chambers street and Broadway, Room 141.
John M. Gray, Collector of City Revenue and Superintendent of Markets.

John F. Hobbs, Deputy Superintendent of Markets.
David O'Brien, Deputy Collector of City Revenue.

BUREAU OF THE CITY CHAMBERLAIN.

Stewart Building, Chambers street and Broadway, Rooms 63 to 67.
James J. Martin, City Chamberlain.
John H. Campbell, Deputy Chamberlain.
Telephone, 4270 Worth.

DEPARTMENT OF HEALTH.

Southwest corner of Fifty-fifth street and Sixth avenue, Borough of Manhattan, 9 a. m. to 4 p. m.
Burial Permit and Contagious Disease Offices always open.

Telephone, 4900 Columbus.
Thomas Darlington, M. D., Commissioner of Health and President.

Alvah H. Doty, M. D., Theodore A. Bingham, Commissioners.
Eugene W. Scheffer, Secretary.

Herman M. Biggs, M. D., General Medical Officer.
James McC. Miller, Chief Clerk.
Walter Bensel, M. D., Sanitary Superintendent.
William H. Guilfoyle, M. D., Registrar of Records.

Borough of Manhattan.

Alonzo Blauvelt, M. D., Assistant Sanitary Superintendent; George A. Roberts, Assistant Chief Clerk.
Charles J. Burke, M. D., Assistant Registrar of Records.

Borough of The Bronx, No. 3731 Third avenue.
Ambrose Lee, Jr., Assistant Chief Clerk; Arthur J. O'Leary, M. D., Assistant Registrar of Records.

Borough of Brooklyn, Nos. 38 and 40 Clinton street.
Traverse R. Maxfield, M. D., Assistant Sanitary Superintendent; Alfred T. Metcalfe, Assistant Chief Clerk; S. J. Byrne, M. D., Assistant Registrar of Records.

Borough of Queens, Nos. 372 and 374 Fulton street, Jamaica.

George R. Crowley, Assistant Chief Clerk; Robert Campbell, M. D., Assistant Registrar of Records.

Borough of Richmond, Nos. 54 and 56 Water street, Stapleton, Staten Island.

John T. Sprague, M. D., Assistant Sanitary Superintendent; Charles E. Hoyer, Assistant Chief Clerk; J. Walter Wood, M. D., Assistant Registrar of Records.

DEPARTMENT OF PARKS.

Henry Smith, Commissioner of Parks for the Boroughs of Manhattan and Richmond, and President Park Board.

Roswell D. Williams, Secretary.
Offices, Arsenal, Central Park.
Telephone, 201 Plaza.

Michael J. Kennedy, Commissioner of Parks for the Boroughs of Brooklyn and Queens.
Offices, Litchfield Mansion, Prospect Park, Brooklyn.
Telephone, 2300 South.

Joseph L. Berry, Commissioner of Parks for the Borough of The Bronx.
Office, Zbrowski Mansion, Claremont Park.
Office hours, 9 a. m. to 4 p. m.; Saturdays, 12 m.
Telephone, 2640 Tremont.

DEPARTMENT OF PUBLIC CHARITIES.

PRINCIPAL OFFICE.

Foot of East Twenty-sixth street, 9 a. m. to 4 p. m. Saturdays, 12 m.
Telephone, 3350 Madison Square.

Robert W. Heberd, Commissioner.
Richard C. Baker, First Deputy Commissioner.
James J. McInerney, Second Deputy Commissioner for Brooklyn and Queens, Nos. 327 to 331 Schermerhorn street, Brooklyn.

J. McKee Borden, Secretary.
Plans and Specifications, Contracts, Proposals and Estimates for Work and Materials for Building, Repairs and Supplies, Bills and Accounts, 9 a. m. to 4 p. m.; Saturdays, 12 m.

Bureau of Dependent Adults, foot of East Twenty-sixth street. Office hours, 8:30 a. m. to 4 p. m.
The Children's Bureau, No. 66 Third avenue. Office hours, 8:30 a. m. to 4 p. m.

Jeremiah Connelly, Superintendent for Richmond Borough, Borough Hall, St. George, Staten Island.

DEPARTMENT OF STREET CLEANING.

Nos. 13 to 21 Park row, 9 a. m. to 4 p. m.
Telephone, 3863 Cortlandt.

Foster Crowl, Commissioner.
William H. Edwards, Deputy Commissioner, Borough of Manhattan.

Owen J. Murphy, Deputy Commissioner, Borough of Brooklyn.
Jerome F. Reilly, Deputy Commissioner, Borough of The Bronx.
John J. O'Brien, Chief Clerk.

DEPARTMENT OF TAXES AND ASSESSMENTS.

Hall of Records, corner of Chambers and Centre streets. Office hours, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.

Commissioners Lawson Purdy, President; Frank Raymond, Nicholas Muller, James H. Tully, Charles Putzel, Thomas L. Hamilton, Hugh Hastings.

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY.

Nos. 13 to 21 Park row, 9 a. m. to 4 p. m.
Telephones, Manhattan, 8520 Cortlandt; Brooklyn, 3980 Main; Queens, 439 Greenpoint; Richmond, 94 Tompkinsville; Bronx, 62 Tremont.

John H. O'Brien, Commissioner.
M. F. Loughman, Deputy Commissioner.
John F. Garvey, Secretary to Department.

I. M. de Varona, Chief Engineer.
George W. Birdsall, Consulting Hydraulic Engineer.

George F. Sever, Consulting Electrical Engineer.
Charles F. Lacombe, Chief Engineer of Light and Power.

Michael C. Padden, Water Register, Manhattan.
William A. Hawley, Secretary to Commissioner.
William C. Cozier, Deputy Commissioner, Borough of Brooklyn, Municipal Building, Brooklyn.

John W. McKay, Acting Chief Engineer, Brooklyn.
William R. McGuire, Water Register, Brooklyn.

Michael Hecht, Deputy Commissioner, Borough of The Bronx, Crotona Park Building, One Hundred and Seventy-seventh street and Third avenue.

Thomas M. Lynch, Water Register, The Bronx.
Charles C. Wissel, Deputy Commissioner, Borough of Queens, Hackett Building, Long Island City.

Charles J. McCormack, Deputy Commissioner, Borough of Richmond, Borough Hall, St. George, S. I.

John W. McKay, Acting Chief Engineer, Borough of Richmond, Borough Hall, St. George, S. I.

EXAMINING BOARD OF PLUMBERS.

Bartholomew F. Donohoe, President; John J. Moore, Secretary; John J. Dunn, Treasurer; ex-officio, Horace Loomis and Matthew E. Healy.

Rooms Nos. 14, 15 and 16 Aldrich Building, Nos. 149 and 151 Church street.

Office open during business hours every day in the year (except legal holidays). Examinations are held on Monday, Wednesday and Friday after 1 p. m.

FIRE DEPARTMENT.

Office hours for all, except where otherwise noted from 9 a. m. to 4 p. m.; Saturdays 12 m.

HEADQUARTERS.

Nos. 157 and 159 East Sixty-seventh street, Manhattan.
Telephone, 2330 Plaza, Manhattan; 2356 Main, Brooklyn.

Francis J. Lantry, Commissioner.
Hugh Bonner, Deputy Commissioner.
Charles C. Wise, Deputy Commissioner, Boroughs of Brooklyn and Queens.

William A. Lantry, Secretary; Michael J. Healion, Secretary to the Commissioner; George F. Dobson, Jr., Secretary to the Deputy Commissioner, Boroughs of Brooklyn and Queens.

Edward F. Croker, Chief of Department.
Thomas Lally, Deputy Chief of Department in charge, Boroughs of Brooklyn and Queens.
Joseph L. Burke, Inspector of Combustibles, Nos. 157 and 159 East Sixty-seventh street, Manhattan. Telephone, 640 Plaza.

Franz S. Wolf, Inspector of Combustibles, Boroughs of Brooklyn and Queens, Nos. 365 and 367 Jay street, Brooklyn. Telephone 350 Main.
Peter Seery, Fire Marshal, Boroughs of Manhattan, The Bronx and Richmond.
William L. Beers, Fire Marshal, Boroughs of Brooklyn and Queens.
Andrew P. Martin, Chief Inspector in Fire Alarm Telegraph Bureau.
William T. Beggin, Chief of Battalion in charge Bureau of Violations and Auxiliary Fire Appliances, Boroughs of Manhattan, The Bronx and Richmond, Nos. 157 and 159 East Sixty-seventh street, Manhattan. Brooklyn and Queens, Nos. 365 and 367 Jay street, Brooklyn.
 Central Office open at all hours.

LAW DEPARTMENT.

OFFICE OF CORPORATION COUNSEL.
 Hall of Records, Chambers and Centre streets, 6th, 7th and 8th floors, 9 a. m. to 4 p. m.; Saturdays 9 a. m. to 12 m.
 Telephone, 3900 Worth.
Francis K. Pendleton, Corporation Counsel.
 Assistants—**Theodore Connolly**, **George L. Sterling**, **Charles D. Olendorf**, **Franklin Chase Hoyt**, **William P. Burr**, **R. Percy Chittenden**, **David Rumsey**, **John L. O'Brien**, **Terence Farley**, **Cornelius F. Collins**, **William Beers Crowell**, **John F. O'Brien**, **Edwin J. Freedman**, **Louis H. Hahlo**, **Frank B. Pierce**, **Stephen O'Brien**, **Charles A. O'Neil**, **Edward S. Malone**, **Richard H. Mitchell**, **John Widdecombe**, **Edward J. McGoldrick**, **Thomas F. Byrne**, **Andrew T. Campbell, Jr.**, **Arthur Sweeney**, **Curtis A. Peters**, **George P. Nicholson**, **Joel J. Squier**, **George H. Folwell**, **Alfred W. Booraem**, **Josiah A. Stover**, **Thomas F. Noonan**, **William H. King**, **Francis J. Byrne**, **Charles McIntyre**, **J. Gabriel Britt**, **Royal E. T. Riggs**, **Solon Berrick**, **J. Townsend Burden**, **Jr.**, **Francis X. McQuade**, **William J. Clarke**, **John W. Goff, Jr.**, **Ricardo M. de Acosta**, **Leonice Fuller**, **Charles W. Miller**, **Henry S. Johnston**, **William H. Doherty**, **Addison B. Scoville**, **Francis Martin**, **Henry W. Mayo**, **Philip N. Harrison**, **Loring T. Hildreth**, **Frank E. Smith**, **Alexander L. Strouse**.
 Secretary to the Corporation Counsel—**Lawson Riggs, Jr.**
 Chief Clerk—**Andrew T. Campbell.**

BROOKLYN OFFICE.

Borough Hall, 2d floor, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 2948 Main.
James D. Bell, Assistant in charge.

BUREAU OF STREET OPENINGS.

No. 90 West Broadway, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 8190 Cortlandt.
John P. Dunn, Assistant in charge.

BUREAU FOR THE RECOVERY OF PENALTIES.
 No. 119 Nassau street, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 4526 Cortlandt.
Herman Stiefel, Assistant in charge.

BUREAU FOR THE COLLECTION OF ARREARS OF PERSONAL TAXES.

No. 280 Broadway, 5th floor. Office hours for public, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 4585 Worth.
Geo. O'Reilly, Assistant in charge.

TENEMENT HOUSE BUREAU AND BUREAU OF BUILDINGS.

No. 44 East Twenty-third street, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 1961 Gramercy.
John P. O'Brien, Assistant in charge.

METROPOLITAN SEWERAGE COMMISSION.

H. de Berkeley Parsons, **Charles SooySmith**, **Dr. Linsly R. Williams**, Commissioners. Office, No. 17 Battery place.
 Telephone, 1694 Rector.

MUNICIPAL CIVIL SERVICE COMMISSION.

No. 299 Broadway, 9 a. m. to 4 p. m.
Frank L. Polk, **R. Ross Appleton**, **Arthur J. O'Keeffe**, **Frank A. Spencer**, Secretary.
John F. Skelly, Assistant Secretary.
 Labor Bureau.
 No. 66 Lafayette street.
 Telephone, 2140 Worth.

MUNICIPAL EXPLOSIVES COMMISSION.

Nos. 157 and 159 East Sixty-seventh street, Headquarters Fire Department.
Hugh Bonner, Deputy Fire Commissioner and Chairman; **William Montgomery**, **John Sherry**, **C. Andrade, Jr.**, **Abram A. Breneman**.
Franz S. Wolf, Secretary, No. 157 East Sixty-seventh street.
 Stated meeting, Thursday of each week, at 3 p. m.
 Telephone, 640 Plaza.

POLICE DEPARTMENT.**CENTRAL OFFICE.**

No. 300 Mulberry street, 9 a. m. to 4 p. m.
 Telephone, 3100 Spring.
Theodore A. Bingham, Commissioner.
William F. Baker, First Deputy Commissioner.
Frederick H. Bugher, Second Deputy Commissioner.
Bert Hanson, Third Deputy Commissioner.
Daniel G. Slattery, Secretary to Commissioner.
William H. Kipp, Chief Clerk.

PUBLIC SERVICE COMMISSION.

The Public Service Commission for the First District, Tribune Building, No. 154 Nassau street, Manhattan.
 Office hours, 8 a. m. to 11 p. m., every day in the year, including holidays and Sundays.
 Stated public meetings of the Commission, Tuesdays and Fridays at 11.30 a. m. in the Public Hearing Room of the Commission, third floor of the Tribune Building, unless otherwise ordered.
 Commissioners—**William R. Willcox**, Chairman; **William McCarrall**, **Edward M. Bassett**, **Milo R. Maltbie**, **John E. Eustis**. Counsel, **George S. Coleman**. Secretary, **Travis H. Whitney**.
 Telephone, 4150 Beekman.

TENEMENT HOUSE DEPARTMENT.

Manhattan Office, No. 44 East Twenty-third street. Telephone, 5331 Gramercy.
Edmond J. Butler, Commissioner.
Harry G. Darwin, First Deputy Commissioner.
 Brooklyn Office (Boroughs of Brooklyn, Queens and Richmond), Temple Bar Building, No. 44 Court street. Telephone, 3825 Main.
John McKeown, Second Deputy Commissioner.
 Bronx Office, Nos. 2804, 2806 and 2808 Third Avenue. Telephone, 667 Melrose.
William B. Calvert, Superintendent.

BOROUGH OFFICES.**BOROUGH OF THE BRONX.**

Office of the President, corner Third avenue and One Hundred and Seventy-seventh street; 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Louis F. Haffen, President.
Henry A. Gumbleton, Secretary.
John F. Murray, Commissioner of Public Works.
Peter J. Stumpf, Assistant Commissioner of Public Works.
Josiah A. Briggs, Chief Engineer.
Frederick Greiffenberg, Principal Assistant Topographical Engineer.
Charles H. Graham, Engineer of Sewers.
Thomas H. O'Neil, Superintendent of Sewers.
Samuel C. Thompson, Engineer of Highways.
Patrick J. Reville, Superintendent of Buildings.
John A. Mason, Assistant Superintendent of Buildings.
Martin Geisler, Superintendent of Highways.
Albert H. Liebenau, Superintendent of Public Buildings and Offices.
 Telephone, 66 Tremont.

BOROUGH OF BROOKLYN.

President's Office, Nos. 15 and 16 Borough Hall, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Bird S. Coler, President.
Charles Frederick Adams, Secretary.
John A. Heffernan, Private Secretary.
Desmond Dunne, Commissioner of Public Works.
David F. Moore, Superintendent of Buildings.
Thomas R. Farrell, Superintendent of the Bureau of Highways.
James Dunne, Superintendent of the Bureau of Sewers.
Joseph M. Lawrence, Superintendent of the Bureau of Public Buildings and Offices.

BOROUGH OF MANHATTAN.

Office of the President, Nos. 14, 15 and 16 City Hall, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
John F. Ahearn, President.
Bernard Downing, Secretary.
Henry S. Thompson, Commissioner of Public Works.
Edward S. Murphy, Superintendent of Buildings.
James J. Hagan, Assistant Commissioner of Public Works.
George F. Scannell, Superintendent of Highways.
William J. Boyhan, Superintendent of Sewers.

BOROUGH OF QUEENS.

President's Office, Borough Hall, Jackson avenue and Fifth street, Long Island City; 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Joseph Bernal, President.
Herman Ringe, Secretary.
Lawrence Gresser, Commissioner of Public Works.
Alfred Denton, Assistant Commissioner of Public Works.
James P. Hicks, Superintendent of Highways.
Carl Berger, Superintendent of Buildings.
Joseph H. De Bragg, Superintendent of Sewers.
Lucien Knapp, Superintendent of Street Cleaning.
 Office, No. 48 Jackson avenue, Long Island City.
Mathew J. Goldner, Superintendent of Public Buildings and Offices. Office, Town Hall, Jamaica.
Robert R. Crowell, Engineer Topographical Bureau. Office, No. 252 Jackson avenue, Long Island City.
 Telephone, 1900 Greenpoint.

BOROUGH OF RICHMOND.

President's Office, New Brighton, Staten Island.
George Cromwell, President.
Maybury Fleming, Secretary.
Louis Lincoln Tribus, Consulting Engineer and Acting Commissioner of Public Works.
John Seaton, Superintendent of Buildings.
H. E. Buel, Superintendent of Highways.
John T. Featherston, Superintendent of Street Cleaning.
Ernest H. Seehusen, Superintendent of Sewers.
John Timlin, Jr., Superintendent of Public Buildings and Offices.
George W. Tuttle, Principal Assistant Engineer, Bureau of Engineering—Topographical.
Theodor S. Oxholm, Principal Assistant Engineer, Bureau of Engineering—Construction.
 Offices—Borough Hall, New Brighton, N. Y., 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 1000 Tompkinsville.

CORONERS.

Borough of The Bronx—Corner of Third avenue and Tremont avenue. Telephone, 1250 Tremont and 1402 Tremont.
Robert F. McDonald, A. F. Schwannecke.
William T. Austin, Chief Clerk.
 Borough of Brooklyn—Office, Rooms 1 and 3 Municipal Building. Telephone, 4004 Main and 4005 Main.
Henry J. Brewer, M. D.; **John F. Kennedy**, **Joseph McGuinness**, Chief Clerk.
 Open all hours of the day and night.
 Borough of Manhattan—Office, Criminal Courts Building, Centre and White streets. Open at all times of the day and night.
 Coroners: **Julius Harburger**, **Peter P. Acritelli**, **George F. Shady, Jr.**, **Peter Dooley**.
Julius Harburger, President Board of Coroners.
Jacob E. Bausch, Chief Clerk.
 Telephones, 1094, 5057, 5058 Franklin.
 Borough of Queens—Office, Borough Hall, Fulton street, Jamaica, L. I.
Samuel D. Nutt, **Alfred S. Ambler**, **Martin Mager, Jr.**, Chief Clerk.
 Office hours, from 9 a. m. to 10 p. m.
 Borough of Richmond—No. 44 Second street, New Brighton. Open for the transaction of business all hours of the day and night.
Matthew J. Cahill.
 Telephone, 7 Tompkinsville.

COUNTY OFFICES.**NEW YORK COUNTY.**

COMMISSIONER OF JURORS.
 Room 127, Stewart Building, Chambers street and Broadway, 9 a. m. to 4 p. m.
Thomas Allison, Commissioner.
Matthew F. Neville, Assistant Commissioner.
Frederick F. Simpson, Assistant Commissioner.
Frederick O'Byrne, Secretary.
 Telephone, 241 Worth.

COMMISSIONER OF RECORDS.

Office, Hall of Records.
William S. Andrews, Commissioner.
James O. Farrell, Superintendent.
James J. Fleming, Jr., Secretary.
 Telephone, 3900 Worth.

COUNTY CLERK.

Nos. 5, 8, 9, 10 and 11 New County Court-house. Office hours from 9 a. m. to 4 p. m.
Peter J. Dooling, County Clerk.
John F. Curry, Deputy.
Joseph J. Glennen, Secretary.
 Telephone, 870 Cortlandt.

DISTRICT ATTORNEY.

Building for Criminal Courts, Franklin and Centre streets.
 Office hours from 9 a. m. to 5 p. m.; Saturdays, 9 a. m. to 12 m.
Wm. Travers Jerome, District Attorney.
John A. Henneberry, Chief Clerk.
 Telephone, 2304 Franklin.

PUBLIC ADMINISTRATOR.

No. 119 Nassau street, 9 a. m. to 4 p. m.
William M. Hoes, Public Administrator.
 Telephone, 6376 Cortlandt.

REGISTER.

Hall of Records. Office hours from 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m. During the months of July and August the hours are from 9 a. m. to 2 p. m.
Frank Gass, Register.
William H. Sinnott, Deputy Register.
 Telephone, 3900 Worth.

SHERIFF.

No. 299 Broadway, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Thomas F. Foley, Sheriff.
John F. Gilchrist, Under Sheriff.
 Telephone, 4984 Worth.

SURROGATES.

Hall of Records. Court open from 9 a. m. to 4 p. m., except Saturday, when it closes at 12 m. During the months of July and August the hours are from 9 a. m. to 2 p. m.
Abner C. Thomas and **Charles H. Beckett**, Surrogates; **William V. Leary**, Chief Clerk.

KINGS COUNTY.**COMMISSIONER OF JURORS.**

5 County Court-house.
Jacob Brenner, Commissioner.
Jacob A. Livingston, Deputy Commissioner.
Albert B. Waldron, Secretary.
 Office hours from 9 a. m. to 4 p. m.; Saturdays, from 9 a. m. to 12 m.
 Office hours during July and August, 9 a. m. to 2 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 1454 Main.

COMMISSIONER OF RECORDS.

Hall of Records.
 Office hours, 9 a. m. to 4 p. m., excepting months of July and August, then 9 a. m. to 2 p. m.; Saturdays, 9 a. m. to 12 m.
John K. Neal, Commissioner.
D. H. Ralston, Deputy Commissioner.
 Telephone, 1114 Main.
Thomas D. Mossrop, Superintendent.
William J. Beattie, Assistant Superintendent.
 Telephone, 1082 Main.

COUNTY CLERK.

Hall of Records, Brooklyn. Office hours, 9 a. m. to 4 p. m.; during months of July and August, 9 a. m. to 2 p. m.; Saturdays, 9 a. m. to 12 m.
Frank Ehlers, County Clerk.
Robert A. Sharkey, Deputy County Clerk.
John Cooper, Assistant Deputy County Clerk.
 Telephone call, 4930 Main.

COUNTY COURT, KINGS COUNTY.

County Court-house, Brooklyn, Rooms 10, 17, 18, 22 and 23. Court opens at 10 a. m. daily and sits until business is completed. Part I., Room No. 23; Part II., Room No. 10, Court-house. Clerk's Office, Rooms 17, 18 and 22, open daily from 9 a. m. to 4 p. m.; Saturdays, 12 m.
Norman S. Dike and **Lewis L. Fawcett**, County Judges.
Charles S. Devoy, Chief Clerk.
 Telephone, 4154 and 4155 Main.

DISTRICT ATTORNEY.

Office, County Court-house, Borough of Brooklyn. Hours, 9 a. m. to 5 p. m.
John F. Clarke, District Attorney.

PUBLIC ADMINISTRATOR.

No. 44 Court street (Temple Bar), Brooklyn. 9 m. to 5 p. m.
Charles E. Teale, Public Administrator.
 Telephone, 2840 Main.

REGISTER.

Hall of Records. Office hours, 9 a. m. to 4 p. m., excepting months of July and August; then from 9 a. m. to 2 p. m., provided for by statute.
William A. Prendergast, Register.
Frederick H. E. Ebstein, Deputy Register.
Waldo R. Blackwell, Assistant Deputy Register.
 Telephone, 2830 Main.

SHERIFF.

County Court-house, Brooklyn, N. Y. 9 a. m. to 4 p. m.; Saturdays, 12 m.
Alfred T. Hobbey, Sheriff.
 Telephone, 6845, 6846, 6847, Main.

SURROGATE.

Hall of Records, Brooklyn, N. Y.
Herbert T. Ketcham, Surrogate.
Edward J. Bergen, Clerk of the Surrogate's Court. Court opens at 10 a. m. Office hours, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
 Telephone, 3954 Main.

QUEENS COUNTY.**COMMISSIONER OF JURORS.**

Office hours, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m. Queens County Court-house, Long Island City.
John P. Balbert, Commissioner of Jurors.
Rodman Richardson, Assistant Commissioner.
 Telephone, 455 Greenpoint.

COUNTY CLERK.

Jamaica, Fourth Ward, Borough of Queens, City of New York.
 Office open, April 1 to October 1, 8 a. m. to 5 p. m.; October 1 to April 1, 9 a. m. to 5 p. m.; Saturdays throughout the year until 12 noon.

John Niederstein, County Clerk.
Henry J. Walter, Jr., Deputy County Clerk.
Charles Mahler, Assistant Deputy County Clerk.
George Distler, Assistant Deputy County Clerk.
Frank C. Klingenberg, Secretary.
 Telephone, 151 Jamaica.

COUNTY COURT.

Temporary County Court-house, Long Island City. County Court opens at 10 a. m. Trial Terms begin first Monday of each month, except July, August and September. Special Terms each Saturday, except during August and first Saturday of September. County Judge's office always open at No. 336 Fulton street, Jamaica, N. Y.
Burt J. Humphrey, County Judge.
 Telephone, 286 Jamaica.

DISTRICT ATTORNEY.

Office, Queens County Court-house, Long Island City, 9 a. m. to 5 p. m.
Ira G. Darrin, District Attorney.
 Telephone, 39 Greenpoint.

PUBLIC ADMINISTRATOR.

No. 17 Cook avenue, Elmhurst.
John T. Robinson, Public Administrator, County of Queens.
 Telephone, 335 Newtown.

SHERIFF.

County Court-house, Long Island City, 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m.
Herbert S. Harvey, Sheriff.
John M. Phillips, Under Sheriff.
 Telephone, 43 Greenpoint (office).
 Telephone, 779 Greenpoint (private).
Henry O. Schleth, Warden, Queens County Jail.
 Telephone, 372 Greenpoint.

SURROGATE.

Daniel Noble, Surrogate.
 Office at Jamaica.
 Except on Sundays, holidays and half holidays, the office is open between March 31 and July 1, from 8 a. m. to 5 p. m.; on Saturdays, from 8 a. m. to 12 m.; between July 1 and September 1, from 9 a. m. to 4 p. m.; on Saturdays, from 9 a. m. to 12 m.
 The calendar is called on Tuesday of each week at 10 a. m., except during the month of August, when no court is held, and the court sits every day thereafter until all contested cases have been disposed of.
 Telephone, 397 Jamaica.

RICHMOND COUNTY.**COMMISSIONER OF JURORS.**

Village Hall, Stapleton.
Charles J. Kullman, Commissioner.
John J. McCaughey, Assistant Commissioner.
 Office open from 9 a. m. until 4 p. m.; Saturdays, from 9 a. m. to 12 m.
 Telephone, 81 Tompkinsville.

COUNTY CLERK.

County Office Building, Richmond, S. I., 9 a. m. to 4 p. m.
C. L. Bostwick, County Clerk.
 County Court-house, Richmond, S. I., 9 a. m. to 4 p. m.
 Telephone, 28 New Dorp.

COUNTY JUDGE AND SURROGATE.

Terms of Court, Richmond County, 1908.
 County Courts—**Stephen D. Stephens**, County Judge.
 First Monday of June, Grand and Trial Jury.
 Second Monday of November, Grand and Trial Jury.
 Fourth Wednesday of January, without a Jury.
 Fourth Wednesday of February, without a Jury.
 Fourth Wednesday of March, without a Jury.
 Fourth Wednesday of April, without a Jury.
 Fourth Wednesday of July, without a Jury.
 Fourth Wednesday of September, without a Jury.
 Fourth Wednesday of October, without a Jury.
 Surrogate's Court—**Stephen D. Stephens**, Surrogate.
 Mondays, at the Borough Hall, St. George, at 10.30 o'clock a. m.
 Tuesdays, at the Borough Hall, St. George, at 10.30 o'clock a. m.
 Wednesdays, at the Surrogate's Office, Richmond, at 10.30 o'clock a. m.

DISTRICT ATTORNEY.

Corn Exchange Bank Building, St. George, S. I.
Samuel H. Evins.
 Telephone, 50 Tompkinsville.

SHERIFF.

County Court-house, Richmond, S. I.
 Office hours, 9 a. m. to 4 p. m.
Joseph J. Barth.

THE COURTS.**APPELLATE DIVISION OF THE SUPREME COURT.****FIRST JUDICIAL DEPARTMENT.**

Court-house, Madison avenue, corner Twenty-fifth street. Court opens at 1 p. m.
Edward Patterson, Presiding Justice, **George L. Ingraham**, **Chester B. McLaughlin**, **Frank C. Laughlin**, **John Proctor Clarke**, **James W. Houghton**, **Francis M. Scott** and **John S. Lambert**, Justices, **Alfred Wagstaff**, Clerk; **William Lamb**, Deputy Clerk.
 Clerk's Office opens at 9 a. m.

SUPREME COURT—FIRST DEPARTMENT.

County Court-house, Chambers street. Court open from 10.15 a. m. to 4 p. m.
 Special Term, Part I. (motions), Room No. 16.
 Special Term, Part II. (ex-parte business), Room No. 13.
 Special Term, Part III., Room No. 19.
 Special Term, Part IV., Room No. 20.
 Special Term, Part V., Room No. 33.
 Special Term, Part VI. (Elevated Railroad cases), Room 31.
 Trial Term, Part II., Room No. 34.
 Trial Term, Part III., Room No. 22.
 Trial Term, Part IV., Room No. 21.
 Trial Term, Part V., Room No. 24.
 Trial Term, Part VI., Room No. 35.
 Trial Term, Part VII., Room No. 27.
 Trial Term, Part VIII., Room No. 26.
 Trial Term, Part IX., Room No. 25.

Trial Term, Part XI., Room No. 37.
Trial Term, Part XII., Room No. 25.
Trial Term, Part XIII., and Special Term, Part VII., Room No. 36.
Appellate Term, Room No. 29.
Naturalization Bureau, Room No. 38, third floor.
Assignment Bureau, room on third floor.
Clerks in attendance from 10 a. m. to 4 p. m.
Clerk's Office, Special Term, Part I. (motions), Room No. 15.
Clerk's Office, Special Term, Part II. (ex-parte business), room southwest corner, mezzanine floor.
Clerk's Office, Special Term, Calendar, room south-east corner, second floor.
Clerk's Office, Trial Term, Calendar, room north-east corner, second floor, east.
Clerk's Office, Appellate Term, room southwest corner, third floor.
Trial Term, Part I. (criminal business).
Criminal Court-house, Centre street.
Justices—Charles H. Truax, Charles F. MacLean, Henry Bischoff, Jr., Leonard A. Giegerich, P. Henry Dugro, Henry A. Gildersleeve, James Fitzgerald, David Leventritt, James A. O'Gorman, James A. Blanchard, Edward S. Clinch, Samuel Greenbaum, Edward E. McCall, Edward B. Amend, Vernon M. Davis, Victor J. Dowling, Joseph Newberger, John W. Goff, Samuel Seabury, M. Warley Platzek, Peter A. Hendrick, John Ford, Charles W. Dayton, John J. Brady, Mitchell L. Erlanger, Charles L. Guy, James W. Gerard.
Peter J. Doelling, Clerk, Supreme Court.
Telephone, 4580 Cortlandt.

SUPREME COURT—SECOND DEPARTMENT.

Kings County Court-house, Borough of Brooklyn, N. Y.
Court open daily from 10 o'clock a. m. to 5 o'clock p. m. Seven jury trial parts. Special Term for Trials. Special Term for Motions.
James F. McGee, General Clerk.
Telephone, 5460 Main.

CRIMINAL DIVISION—SUPREME COURT.

Building for Criminal Courts, Centre, Elm, White and Franklin streets.
Court opens at 10.30 a. m.
Peter J. Doelling, Clerk; Edward R. Carroll, Special Deputy to the Clerk.
Clerk's Office open from 9 a. m. to 4 p. m.
Telephone, 6064 Franklin.

COURT OF GENERAL SESSIONS.

Held in the Building for Criminal Courts, Centre, Elm, White and Franklin streets.
Court opens at 10.30 a. m.
Thomas C. T. Crain, Otto A. Rosalsky, Warren W. Foster, Thomas C. O'Sullivan, Edward Swann, Joseph F. Mulqueen, James T. Malone, Judges of the Court of General Sessions. Edward R. Carroll, Clerk.
Clerk's Office open from 9 a. m. to 4 p. m.
During July and August Clerk's Office will close at 2 p. m., and on Saturdays at 12 m.

CITY COURT OF THE CITY OF NEW YORK.

No. 32 Chambers street, Brownstone Building, City Hall Park, from 10 a. m. to 4 p. m.
Part I.
Part II.
Part III.
Part IV.
Part V.
Part VI.
Part VII.
Part VIII.
Special Term Chambers will be held from 10 a. m. to 4 p. m.
Clerk's Office open from 9 a. m. to 4 p. m.
Edward F. O'Dwyer, Chief Justice; John Henry McCarty, Lewis J. Conlan, Theodore F. Hascall, Francis B. Delehanty, Joseph I. Green, Alexander Finelite, Thomas F. Donnelly, John V. McAvoy, Peter Schmuck, Justices. Thomas F. Smith, Clerk.
Telephone, 6142 Cortlandt.

COURT OF SPECIAL SESSIONS.

Building for Criminal Courts, Centre street between Franklin and White streets, Borough of Manhattan.
Court opens at 10 a. m.
Justices—First Division—John B. McKean, William E. Wyatt, Willard H. Olmsted, Joseph M. Deuel, Lorenz Zeller, John B. Mayo, Charles W. Cullen, Clerk; William M. Fuller, Deputy Clerk.
Clerk's Office open from 9 a. m. to 4 p. m.
Telephone, 2092 Franklin, Clerk's office.
Telephone, 601 Franklin, Justice's chambers.
Second Division—Trial Days—No. 171 Atlantic avenue, Brooklyn, Mondays, Wednesdays and Fridays at 10 o'clock; Town Hall, Jamaica, Borough of Queens, Tuesday at 10 o'clock; Town Hall, New Brighton, Borough of Richmond, Thursday at 10 o'clock.
Justices—Howard J. Forker, Patrick Keady, John Fleming, Morgan M. L. Ryan, Robert J. Wilkin, George J. O'Keefe; Joseph L. Kerrigan, Clerk; John J. Dorman, Deputy Clerk.
Clerk's Office, No. 171 Atlantic avenue, Borough of Brooklyn, open from 9 a. m. to 4 p. m.

CHILDREN'S COURT.

First Division—No. 66 Third avenue, Manhattan.
Edmund C. Lee, Clerk.
Telephone, 5353 Stuyvesant.
Second Division—No. 102 Court street, Brooklyn.
William F. Delaney, Clerk.
Telephone, 627 Main.

CITY MAGISTRATES' COURT.

First Division.

Court opens from 9 a. m. to 4 p. m.
City Magistrates—Robert C. Cornell, Leroy B. Crane, Peter T. Barlow, Matthew P. Breen, Joseph F. Moss, James J. Walsh, Henry Steinert, Daniel E. Finn, Charles G. F. Wahle, Frederick B. House, Charles N. Harris, Frederic Kernochan, Arthur C. Butts, Otto H. Droege, Joseph E. Corrigan, Moses Herrman.
James McCabe, Secretary, No. 125 Sixth avenue.
First District—Criminal Court Building.
Second District—Jefferson Market.
Third District—No. 69 Essex street.
Fourth District—No. 151 East Fifty-seventh street.
Fifth District—One Hundred and Twenty-first street, southeastern corner of Sylvan place.
Sixth District—One Hundred and Sixty-first street and Brook avenue.
Seventh District—No. 314 West Fifty-fourth street.
Eighth District—Main street, Westchester.

Second Division.

Borough of Brooklyn.
City Magistrates—Edward J. Dooley, James G. Tighe, John Naumer, E. G. Higginbotham, Frank E. O'Reilly, Henry J. Furlong, Alfred E. Steers, A. V. B. Voorhees, Jr., Alexander H. Geismar, John F. Hylan.
President of the Board, Edward J. Dooley, No. 318 Adams street.

Secretary to the Board, Charles J. Flanagan, Myrtle and Vanderbilt avenues.

Courts.

First District—No. 318 Adams street.
Second District—Court and Butler streets.
Third District—Myrtle and Vanderbilt avenues.
Fourth District—No. 6 Lee avenue.
Fifth District—No. 249 Manhattan avenue.
Sixth District—No. 495 Gates avenue.
Seventh District—No. 31 Snider avenue (Flatbush).
Eighth District—West Eighth street (Coney Island).
Ninth District—Fifth avenue and Twenty-third street.
Tenth District—No. 133 New Jersey avenue.

Borough of Queens.

City Magistrates—Matthew J. Smith, Joseph Fitch, Maurice E. Connolly, Eugene C. Gilroy.

Courts.

First District—St. Mary's Lyceum, Long Island City.
Second District—Town Hall, Flushing, L. I.
Third District—Central avenue, Far Rockaway, L. I.
Borough of Richmond.
City Magistrates—Joseph B. Handy, Nathaniel Marsh.

Courts.

First District—Lafayette place, New Brighton, Staten Island.
Second District—Village Hall, Stapleton, Staten Island.

MUNICIPAL COURTS.

Borough of Manhattan.

First District—The First District embraces the territory bounded on the south and west by the southerly and westerly boundaries of the said borough, on the north by the centre line of Fourteenth street and the centre line of Fifth street from the Bowery to Second avenue, on the east by the centre lines of Fourth avenue from Fourteenth street to Fifth street, Second avenue, Chrystie street, Division street and Catharine street.
Wauhopé Lynn, William F. Moore, John J. Hover, Justices.
Thomas O'Connell, Clerk; Francis Mangin, Deputy Clerk.
Location of Court—Merchants' Association Building, No. 70 Lafayette street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Additional Parts of Court are now held in No. 128 Prince street, Tenth street and Sixth avenue, and No. 59 Madison street.

Second District—The Second District embraces the territory bounded on the south by the centre line of Fifth street from the Bowery to Second avenue, and on the south and east by the southerly and easterly boundaries of the said borough, on the north by the centre line of East Fourteenth street, on the west by the centre line of Fourth avenue from Fourteenth street to Fifth street, Second avenue, Chrystie street, Division street and Catharine street.
George F. Roesch, Benjamin Hoffman, Leon Sanders, Thomas P. Dinnean, Justices.
James J. Devlin, Clerk; Michael H. Looney, Deputy Clerk.
Location of Court—Nos. 264 and 266 Madison street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 2596 Orchard.

Third District—The Third District embraces the territory bounded on the south by the centre line of Fourteenth street, on the east by the centre line of Seventh avenue from Fourteenth street to Fifty-ninth street and by the centre line of Central Park West from Fifty-ninth street to Sixty-fifth street, on the north by the centre line of Sixty-fifth street and the centre line of Fifty-ninth street from Seventh to Eighth avenue, on the west by the westerly boundary of the said borough.
Thomas E. Murray, James W. McLaughlin, Justices.
Michael Skelly, Clerk; Henry Merzbach, Deputy Clerk.
Location of Court—No. 314 West Fifty-fourth street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone number, 3450 Columbus.

Fourth District—The Fourth District embraces the territory bounded on the south by the centre line of East Fourteenth street, on the west by the centre line of Lexington avenue and by the centre line of Irving place, including its projection through Gramercy Park, on the north by the centre line of Fifty-ninth street, on the east by the easterly line of said borough; excluding, however, any portion of Blackwell's Island.
Michael F. Blake, William J. Boyhan, Justices.
Abram Bernard, Clerk; James Foley, Deputy Clerk.
Location of Court—Part I., No. 407 Second avenue, northwest corner of Second avenue and Twenty-third street. Part II., No. 151 East Fifty-seventh street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 4570 Gramercy.

Fifth District—The Fifth District embraces the territory bounded on the south by the centre line of Sixty-fifth street, on the east by the centre line of Central Park West, on the north by the centre line of One Hundred and Tenth street, on the west by the westerly boundary of said borough.
Alfred P. W. Seaman, William Young, Frederick Spiegelberg, Justices.
James V. Gillon, Clerk; John H. Servis, Deputy Clerk.
Location of Court—Broadway and Ninety-sixth street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 4006 Riverside.

Sixth District—The Sixth District embraces the territory bounded on the south by the centre line of Fifty-ninth street and by the centre line of Ninety-sixth street from Lexington avenue to Fifth avenue, on the west by the centre line of Lexington avenue from Fifty-ninth street to Ninety-sixth street and the centre line of Fifth avenue from Ninety-sixth street to One Hundred and Tenth street, on the north by the centre line of One Hundred and Tenth street, on the east by the easterly boundary of said borough, including, however, all of Blackwell's Island and excluding any portion of Ward's Island.
Herman Joseph, Jacob Marks, Justices.
Edward A. McQuade, Clerk; Thomas M. Campbell, Deputy Clerk; John J. Dietz, Frederick J. Stroh, Assistant Clerks.
Location of Court—Northwest corner of Third avenue and Eighty-third street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 4343 79-St.

Seventh District—The Seventh District embraces the territory bounded on the south by the centre line of One Hundred and Tenth street, on the east by the centre line of Fifth avenue to the northerly terminus thereof, and north of the northerly terminus of Fifth avenue, following in a northerly direction the course of the Harlem river on a line

conterminous with the easterly boundary of said borough, on the north and west by the northerly and westerly boundaries of said borough.

Philip J. Sinnott, David L. Weil, John R. Davies, Justices.
Heman B. Willson, Clerk; Robert Andrews, Deputy Clerk.

Location of Court—No. 70 Manhattan street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.

Eighth District—The Eighth District embraces the territory bounded on the south by the centre line of One Hundred and Tenth street, on the west by the centre line of Fifth avenue, on the north and east by the northerly and easterly boundaries of said borough, including Randall's Island and the whole of Ward's Island.

Joseph P. Fallon, Leopold Prince, Justices.
William J. Kennedy, Clerk; Patrick J. Ryan, Deputy Clerk.

Location of Court—Sylvan place and One Hundred and Twenty-first street, near Third avenue. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 3950 Harlem.

Ninth District—The Ninth District embraces the territory bounded on the south by the centre line of Fourteenth street and by the centre line of Fifty-ninth street from the centre line of Seventh avenue to the centre line of Central Park West, on the east by the centre line of Lexington avenue and by the centre line of Irving place, including its projection through Gramercy Park, and by the centre line of Fifth avenue from the centre line of Ninety-sixth street to the centre line of One Hundred and Tenth street, on the north by the centre line of Ninety-sixth street from the centre line of Lexington avenue to the centre line of Fifth avenue and by One Hundred and Tenth street from Fifth avenue to Central Park West, on the west by the centre line of Seventh avenue and Central Park West.

Edgar J. Lauer, Frederick De Witt Wells, Frank D. Sturges, William C. Wilson, Justices.

William J. Chamberlain, Clerk; Charles Healy, Deputy Clerk.

Location of Court—Southwest corner of Madison avenue and Fifty-ninth street. Clerk's Office open daily (Sundays and legal holidays excepted) from 9 a. m. to 4 p. m.
Telephone, 3873 Plaza.

Borough of The Bronx.

First District—All that part of the Twenty-fourth Ward which was lately annexed to the City and County of New York by chapter 934 of the Laws of 1895, comprising all of the late Town of Westchester and part of the Towns of Eastchester and Pelham, including the Villages of Wakefield and Williamsbridge. Court-room, Town Hall, Main street, Westchester Village. Court open daily (Sundays and legal holidays excepted), from 9 a. m. to 4 p. m. Trial of causes, Tuesday and Friday of each week.

William W. Penfield and Peter A. Sheil, Justices.
Thomas F. Delahanty, Clerk.

Office hours from 9 a. m. to 4 p. m.; Saturdays, closing at 12 m.

Second District—Twenty-third and Twenty-fourth Wards, except the territory described in chapter 934 of the Laws of 1895. Court-room, southeast corner of Washington avenue and One Hundred and Sixty-second street. Office hours, from 9 a. m. to 4 p. m. Court opens at 9 a. m.

John M. Tierney, Justice. Thomas A. Maher, Clerk.

Telephone, 3043 Melrose.

Borough of Brooklyn.

First District—Comprising First, Second, Third, Fourth, Fifth, Sixth, Tenth and Twelfth Wards and that portion of the Eleventh Ward beginning at the intersection of the centre lines of Hudson and Myrtle avenues, thence along the centre line of Myrtle avenue to North Portland avenue, thence along the centre line of North Portland avenue to Flushing avenue, thence along the centre line of Flushing avenue to Navv street, thence along the centre line of Navy street to Johnson street, thence along the centre line of Johnson street to Hudson avenue, and thence along the centre line of Hudson avenue to the point of beginning, of the Borough of Brooklyn. Court-house, northwest corner State and Court streets.

John J. Walsh, Justice. Edward Moran, Clerk.
Clerk's Office open from 9 a. m. to 4 p. m.

Second District—Seventh Ward and that portion of the Twenty-first and Twenty-third Wards west of the centre line of Stuyvesant avenue and the centre line of Schenectady avenue, also that portion of the Twentieth Ward beginning at the intersection of the centre lines of North Portland and Myrtle avenues, thence along the centre line of Myrtle avenue to Waverly avenue, thence along the centre line of Waverly avenue, thence along the centre line of Park avenue to Washington avenue, thence along the centre line of Washington avenue to Flushing avenue, thence along the centre line of Flushing avenue to North Portland avenue, and thence along the centre line of North Portland avenue to the point of beginning.

Court-room, No. 495 Gates avenue.
Gerard B. Van Wart and Edward C. Dowling, Justices. Franklin B. Van Wart, Clerk.
Clerk's Office open from 9 a. m. to 4 p. m.

Third District—Embraces the Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth and Nineteenth Wards, and that portion of the Twenty-seventh Ward lying northwest of the centre line of Starr street between the boundary line of Queens County and the centre line of Central avenue, and northwest of the centre line of Suydam street between the centre lines of Central and Bushwick avenues, and northwest of the centre line of Willoughby avenue between the centre lines of Bushwick avenue and Broadway. Court-house, Nos. 6 and 8 Lee avenue, Brooklyn.

Philip D. Meagher and William J. Bogenschutz, Justices. John W. Carpenter, Clerk.

Clerk's Office open from 9 a. m. to 4 p. m.
Court opens at 9 a. m.

Fourth District—Embraces the Twenty-fourth and Twenty-fifth Wards, that portion of the Twenty-first and Twenty-third Wards lying east of the centre line of Stuyvesant avenue and east of the centre line of Schenectady avenue, and that portion of the Twenty-seventh Ward lying southeast of the centre line of Starr street between the boundary line of Queens and the centre line of Suydam street, and southeast of the centre line of Suydam street between the centre lines of Central and Bushwick avenues, and southeast of the centre line of Willoughby avenue between the centre lines of Bushwick avenue and Broadway.

Court-room, No. 14 Howard avenue.
Thomas H. Williams, Justice. G. J. Wiederhold, Clerk. Milton I. Williams, Assistant Clerk.

Clerk's Office open from 9 a. m. to 4 p. m.

Fifth District—Contains the Eighth, Thirtieth and Thirty-first Wards, and so much of the Twenty-second Ward as lies south of Prospect avenue. Court-house, northwest corner of Fifty-third street and Third avenue.

Cornelius Furgueson, Justice. Jeremiah J. O'Leary, Clerk.

Clerk's Office open from 9 a. m. to 4 p. m.
Telephone, 407 Bay Ridge.

Sixth District—The Sixth District embraces the Ninth and Twenty-ninth Wards and that portion of the Twenty-second Ward north of the centre line of Prospect avenue; also that portion of the Eleventh and the Twentieth Wards beginning at the intersection of the centre lines of Bridge and Fulton streets; thence along the centre line of Fulton street to Flatbush avenue; thence along the centre line of Flatbush avenue to Atlantic avenue; thence along the centre line of Atlantic avenue to Washington avenue; thence along the centre line of Washington avenue to Park avenue; thence along the centre line of Park avenue to Waverly avenue; thence along the centre line of Waverly avenue to Myrtle avenue; thence along the centre line of Myrtle avenue to Hudson avenue; thence along the centre line of Hudson avenue to Johnson street; thence along the centre line of Johnson street to Bridge street, and thence along the centre line of Bridge street to the point of beginning.

Lucien S. Bayless and George Fielder, Justices. Charles P. Bible, Clerk.
Court-house, No. 611 Fulton street.

Seventh District—The Seventh District embraces the Twenty-sixth, Twenty-eighth and Thirty-second Wards.

Alexander S. Rosenthal and Edward A. Richards, Justices. Samuel F. Brothers, Clerk.
Court-house, corner Pennsylvania avenue and Fulton street (No. 31 Pennsylvania avenue).

Clerk's Office open from 9 a. m. to 4 p. m.; Saturdays, 9 a. m. to 12 m. Trial Days, Tuesdays, Wednesdays, Thursdays and Fridays.
Jury Days, Wednesdays and Thursdays.
Telephone, 904 East New York.

Borough of Queens.

First District—First Ward (all of Long Island City formerly composing five wards). Court-room, St. Mary's Lyceum, Nos. 115 and 117 Fifth street, Long Island City.

Clerk's Office open from 9 a. m. to 4 p. m. each day, excepting Saturdays, closing at 12 m. Trial days, Mondays, Wednesdays and Fridays. All other business transacted on Tuesdays and Thursdays.

Thomas C. Kadien, Justice. Thomas F. Kennedy, Clerk.

Telephone, 2376 Greenpoint.

Second District—Second and Third Wards, which include the territory of the late Towns of Newtown and Flushing. Court-room in Court-house of the late Town of Newtown, corner of Broadway and Court street, Elmhurst, New York. P. O. Address, Elmhurst, Queens County, New York.

William Kasquin, Jr., Justice. Luke I. Connor, Clerk. William Repper, Assistant Clerk. James B. Sneider, Stenographer.

Court days, Tuesdays and Thursdays; Fridays (for Jury Trials only.)

Clerk's Office open from 9 a. m. to 4 p. m.
Telephone, 87 Newtown.

Third District—Fourth and Fifth Wards, comprising the territory of the former Towns and Villages of Jamaica, Far Rockaway and Rockaway Beach.

James F. McLaughlin, Justice. George W. Damon, Clerk.

Court-house, Town Hall, Jamaica.
Telephone, 189 Jamaica.

Clerk's Office open from 9 a. m. to 4 p. m.

Court held on Mondays, Wednesdays and Fridays at 9 a. m.

Borough of Richmond.

First District—First and Third Wards (Towns of Castleton and Northfield). Court-room, former Village Hall, Lafayette avenue and Second street, New Brighton.

Thomas C. Brown, Justice. Anning S. Prall, Clerk.

Clerk's Office open from 8.45 a. m. to 4 p. m.
Telephone, 503 Tompkinsville.

Second District—Second, Fourth and Fifth Wards (Towns of Middletown, Southfield and Westfield). Court-room, former Edgewater Village Hall, Stapleton.

George W. Stake, Justice. Peter Tierman, Clerk.

Clerk's Office open from 9 a. m. to 4 p. m.

Court opens at 9 a. m. Calendar called at 10 a. m. Court continued until close of business. Trial days, Mondays, Wednesdays and Fridays.

Telephone, 313 Tompkinsville.

CHANGE OF GRADE DAMAGE COMMISSION.

TWENTY-THIRD AND TWENTY-FOURTH WARDS.

PURSUANT TO THE PROVISIONS OF chapter 537 of the Laws of 1893 and the Acts amendatory thereof and supplemental thereto, notice is hereby given that meetings of the Commissioners appointed under said Acts will be held at the office of the Commission, Room 138, No. 280 Broadway (Stewart Building), Borough of Manhattan, New York City, on Mondays, Wednesdays and Fridays of each week, at 2 o'clock p. m., until further notice.

Dated New York City, October 12, 1907.

WILLIAM E. STILLINGS,

GEORGE C. NORTON,

LEWIS A. ABRAMS,

Commissioners.

LAMONT McLOUGHLIN,

Clerk.

BOARD MEETINGS.

The Board of Estimate and Apportionment meets in the Old Council Chamber (Room 16), City Hall, every Friday, at 10.30 o'clock a. m.

JOSEPH HAAG,

Secretary.

The Commissioners of the Sinking Fund meet in the Old Council Chamber (Room 16), City Hall, at call of the Mayor.

N. TAYLOR PHILLIPS,

Deputy Comptroller, Secretary.

The Board of Revision of Assessments meets in the Old Council Chamber (Room 16), City Hall, every Thursday at 11 a. m., upon notice of the Chief Clerk.

HENRY J. STORRS,

Chief Clerk.

The Board of City Record meets in the Old Council Chamber (Room 16), City Hall, at call of the Mayor.

PATRICK J. TRACY,

Supervisor, Secretary.

BOARD OF ESTIMATE AND APPORTIONMENT.

PUBLIC NOTICE IS HEREBY GIVEN that at a meeting of the Board of Estimate and Apportionment, held this day in the Old Council Chamber, Room 16, City Hall, Borough of Manhattan, the public hearing on the application of the Long Island Railroad Company for the consent of the Board to a change in the line of its route between a point about 400 feet west of Ascan avenue and a point about 700 feet east of Lefferts avenue, in the Second Ward, Borough of Queens, City of New York, which was fixed for this day by resolution duly adopted by this Board January 10, 1908, was continued until February 7, 1908, at the same time and place.

JOSEPH HAAG,
Secretary.

Dated New York, January 24, 1908.

j27,f7

PUBLIC NOTICE IS HEREBY GIVEN that at a meeting of the Board of Estimate and Apportionment, held this day in the Old Council Chamber, Room 16, City Hall, Borough of Manhattan, the public hearing on the proposed form of contract consenting to certain modifications and alterations in the line of the route of the New York and Port Chester Railroad Company, in the Borough of The Bronx, as laid down in the contract dated May 31, 1906, granting a franchise to said company, which, by resolution adopted July 8, 1907, was fixed for September 20, 1907, and on that date continued to November 1, 1907, and on that date continued to December 13, 1907, and on that date continued until January 10, 1908, when it was continued until January 24, 1908, was continued until February 21, 1908.

JOSEPH HAAG,
Secretary.

Dated New York, January 24, 1908.

j27,f21

NOTICE IS HEREBY GIVEN THAT THE Board of Estimate and Apportionment of the City of New York, deeming it for the public interest so to do, proposes to change the map or plan of The City of New York so as to change the lines of Thirty-ninth street, west of Second avenue, and provide an extension of the street and fix grades thereof, Borough of Brooklyn, and that a meeting of said Board will be held in the Old Council Chamber, City Hall, Borough of Manhattan, City of New York, on January 31, 1908, at 10.30 o'clock a. m., at which such proposed change will be considered by said Board, all of which is more particularly set forth and described in the following resolutions, adopted by the Board on January 10, 1908, notice of the adoption of which is hereby given, viz.:

Resolved, That the Board of Estimate and Apportionment of The City of New York, in pursuance of the provisions of section 442 of the Greater New York Charter, as amended, deeming it for the public interest so to do, proposes to change the map or plan of The City of New York by changing the lines of Thirty-ninth street west of Second avenue, and providing an extension of the street, and fixing grades thereof, in the Borough of Brooklyn, City of New York, more particularly described as follows:

1. Thirty-ninth street is to be extended from Second avenue westwardly to the bulkhead, a distance of 1.435 feet.

2. The southerly side of the street is to be a prolongation of the southerly line of Thirty-ninth street as laid out east of Second avenue.

3. The northerly line of the street is to be distant 30 feet northerly from and parallel with the southerly line, the said distance being measured at right angles to the latter course.

4. That portion of Thirty-ninth street heretofore laid out west of Second avenue and not included within the lines of the street now proposed is to be discontinued.

JOSEPH HAAG,
Secretary.

No. 277 Broadway, Room 1406.
Telephone, 2280 Worth.

j18,29

OFFICIAL PAPERS.

Morning—"The Sun," "The New York Times."
Evening—"The Globe," "The Evening Mail."
Weekly—"Democracy," "Real Estate Record and Guide."
German—"Staats-Zeitung."

Designated by the Board of City Record, January 22, 1906. Amended March 1, 1906, November 20, 1906, and February 20, 1907.

DEPARTMENT OF HEALTH.

DEPARTMENT OF HEALTH, CORNER OF FIFTY-FIFTH STREET AND SIXTH AVENUE, BOROUGH OF MANHATTAN, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Board of Health of the Department of Health until 9.45 a. m. on

TUESDAY, FEBRUARY 11, 1908,

FOR FURNISHING AND DELIVERING WHITE ASH ANTHRACITE COAL, AS REQUIRED, TO THE DEPARTMENT STEAMBOATS IN THEIR BUNKERS, AS DIRECTED, THE PLACE FOR COALING TO BE LOCATED ALONG THEIR ROUTES, BETWEEN THE FOOT OF EAST SIXTEENTH STREET, BOROUGH OF MANHATTAN, AND NORTH BROTHER ISLAND, BOROUGH OF THE BRONX, CITY OF NEW YORK, OR AT DOCKS WITHIN A RADIUS OF TWO MILES OF THE TERMINAL POINTS ON THE EAST RIVER, DURING THE YEAR 1908.

The time for the delivery of the supplies and the performance of the contract is during the year 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid. Bids will be compared and the contract awarded to the lowest bidder for the entire contract, as indicated by the specifications.

Blank forms and further information may be obtained at the office of the Chief Clerk of the Department of Health, southwest corner of Fifty-fifth street and Sixth avenue, Borough of Manhattan.

THOMAS DARLINGTON, M. D., President;

ALVAH H. DOTY, M. D.,

THEODORE A. BINGHAM,

Board of Health.

Dated January 28, 1908.

j28,f11

See General Instructions to Bidders on the last page, last column, of the "City Record."

MUNICIPAL CIVIL SERVICE COMMISSION.

MUNICIPAL CIVIL SERVICE COMMISSION, No. 299 BROADWAY, NEW YORK, JANUARY 25, 1908.

PUBLIC NOTICE IS HEREBY GIVEN OF the following proposed amendment of the classification of the Municipal Civil Service:

First—Amending the classification of exempt positions under the heading "Bureau of Public Works in Each Borough," by adding thereto the following title:

"Cashier, Bureau of Sewers, Brooklyn."

Second—Amending the classification of exempt positions, under the heading "The Municipal Court," by adding thereto the following:

"Deputy Clerks and Assistant Clerks, to be assigned by the Board of Justices of the Municipal Court, under the provisions of chapter 603 of the Laws of 1907."

Public hearings will be had on the proposed amendments, in accordance with Civil Service Rule III., at the Commission's offices, No. 299 Broadway, on

WEDNESDAY, JANUARY 29, 1908,

at 10 o'clock in the forenoon.

F. A. SPENCER,

Secretary.

j27,29

MUNICIPAL CIVIL SERVICE COMMISSION, No. 299 BROADWAY, CITY OF NEW YORK.

PUBLIC NOTICE WILL BE GIVEN OF all competitive examinations two weeks in advance of the date upon which the receipt of applications for any scheduled examination will close. Applications will be received for only such examinations as are scheduled.

When an examination is advertised, a person desiring to compete in the same may obtain an application blank upon request made in writing or by personal application at the office of the Commission.

All notices of examinations will be posted in the office of the Commission, City Hall, Municipal Building, Brooklyn, and advertised in the City Record for two weeks in advance of the date upon which the receipt of applications will close for any stated position.

Public notice will also be given by advertisement in most of the City papers.

Wherever an examination is of a technical character, due notice is given by advertisement in the technical journals appertaining to the particular profession for which the examination is called.

Such notices will be sent to the daily papers as matters of news, and to the General Post-office and stations thereof. The scope of the examination will be stated, but for more general information application should be made at the office of the Commission.

Unless otherwise specifically stated, the minimum age requirement for all positions is 21.

WILLIAM F. BAKER,

President;

R. ROSS APPLETON,

FRANK L. POLK,

Commissioners.

FRANK A. SPENCER,

Secretary.

BOROUGH OF BROOKLYN.

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN, ROOM NO. 2, BOROUGH HALL, BOROUGH OF BROOKLYN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Brooklyn at the above office until 11 o'clock a. m. on

THURSDAY, FEBRUARY 13, 1908.

No. 1. FOR FURNISHING AND DELIVERING EIGHT THOUSAND FIVE HUNDRED (8,500) CUBIC YARDS OF SAND, To be delivered in the following quantities at the following corporation yards:

4,500 cubic yards of paving sand, to be delivered at Wallabout Market Corporation Yard.

4,000 cubic yards of asphalt sand, to be delivered at the Municipal Asphalt Plant, at Seventh Street Basin, Gowanus Canal.

The time for the completion of the work and the full performance of the contract is by or before November 1, 1908.

The amount of security required is Three Thousand Dollars.

No. 2. FOR FURNISHING AND DELIVERING SIX HUNDRED THOUSAND (600,000) POUNDS OF PAVING PITCH.

The above material to be delivered at the Wallabout Market Corporation Yard.

The time for the completion of the work and the full performance of the contract is by or before November 1, 1908.

The amount of security required is Two Thousand Dollars.

No. 3. FOR FURNISHING AND DELIVERING TWELVE HUNDRED (1,200) CUBIC YARDS OF PAVING GRAVEL.

The above material to be delivered at the Wallabout Market Corporation Yard.

The time for the completion of the work and the full performance of the contract is by or before December 31, 1908.

The amount of security required is Three Thousand Five Hundred Dollars.

No. 5. FOR FURNISHING AND DELIVERING SIXTY THOUSAND (60,000) SQUARE FEET OF BLUESTONE FLAGSTONE.

The above material to be delivered as follows:

40,000 square feet at the Wallabout Market Corporation Yard.

10,000 square feet at the Hopkinson Avenue Corporation Yard.

10,000 square feet at the North Eighth Street Corporation Yard.

The time for the completion of the work and the full performance of the contract is by or before October 1, 1908.

The amount of security required is Two Thousand Dollars.

No. 6. FOR FURNISHING AND DELIVERING TWENTY-FIVE HUNDRED (2,500) CUBIC YARDS OF SAND.

The above material to be delivered as follows:

1,500 cubic yards at North Eighth Street Yard.

1,000 cubic yards at the Hopkinson Avenue Yard.

The time for the completion of the work and the full performance of the contract is by or before November 1, 1908.

The amount of security required is Eight Hundred Dollars.

No. 7. FOR FURNISHING AND DELIVERING NINE HUNDRED (900) TONS OF ANTHRACITE COAL.

The above material to be delivered as follows:

100 tons of anthracite egg coal at Wallabout Market Corporation Yard.

100 tons of anthracite egg coal at the Sixty-seventh Street Corporation Yard.

100 tons of anthracite egg coal at the Municipal Asphalt Plant, Seventh Street Basin, Gowanus Canal.

600 tons of anthracite pea coal at the Municipal Asphalt Plant, Seventh Street Basin, Gowanus Canal.

The time for the completion of the work and the full performance of the contract is by or before December 1, 1908.

The amount of security required is One Thousand Two Hundred Dollars.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Bureau of Highways, the Borough of Brooklyn, No. 14 Municipal Building, Brooklyn.

BIRD S. COLER,

President.

Dated January 27, 1908.

j28f13

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN, ROOM 2, BOROUGH HALL, BOROUGH OF BROOKLYN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Brooklyn at the above office until 11 o'clock a. m. on

WEDNESDAY, FEBRUARY 5, 1908.

Borough of Brooklyn.

FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR RECONSTRUCTING SEWER IN GUERNEY STREET, FROM NORMAN AVENUE TO NASSAU AVENUE.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such 100 per cent. cost (i. e., such as 95 per cent., 100 per cent., or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate, to an amount necessary to complete the work described in the contract:

37 linear feet of 15-inch pipe sewer laid complete, including all incidentals and appurtenances, per linear foot, \$2.75..... \$101 75

595 linear feet of 12-inch pipe sewer laid complete, including all incidentals and appurtenances, per linear foot, \$2.50..... 1,487 50

7 manholes, complete, with iron heads and covers, including all incidentals and appurtenances, per manhole, \$45..... 315 00

30 cubic yards of concrete cradle in place, complete, including all incidentals and appurtenances, per cubic yard, \$7..... 210 00

3,000 feet (B. M.) of foundation planking laid in place complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30..... 90 00

1,000 feet (B. M.) of sheeting and bracing, driven in place complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30..... 30 00

28 house connection drains reconnected, including all incidentals and appurtenances, per connection, \$5..... 140 00

Total..... \$2,374 25

The time allowed for the completion of the work and full performance of the contract will be 30 working days.

The amount of security required will be \$1,000. The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per board measure, linear foot, cubic yard or other unit of measure, by which the bids will be tested. The bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Blank forms and further information may be obtained at the Bureau of Sewers, the Borough of Brooklyn, No. 215 Montague street, Borough of Brooklyn.

BIRD S. COLER,

President.

Dated January 23, 1908.

j24,f5

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN, ROOM 2, BOROUGH HALL, BOROUGH OF BROOKLYN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Brooklyn at the above office until 11 o'clock a. m. on

WEDNESDAY, FEBRUARY 5, 1908.

Borough of Brooklyn.

No. 1. FURNISHING AND DELIVERING 507,117 POUNDS OF ICE TO THE VARIOUS PUBLIC BUILDINGS, BATHS AND COMFORT STATIONS.

The time for the delivery of the above and full performance of the contract is December 31, 1908.

The amount of security required is Five Hundred Dollars (\$500).

No. 2. FOR RELAUNDERING TOWELS USED AT THE VARIOUS PUBLIC INTERIOR BATHS AND COMFORT STATIONS DURING THE YEAR 1908.

The time for the delivery of the above supply and full performance of the contract is December 31, 1908.

The amount of security required will be Fifteen Hundred Dollars (\$1,500).

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound and dozen.

The bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Public Buildings and Offices, Room 29, Municipal Building, Borough of Brooklyn.

BIRD S. COLER,

President.

Dated January 15, 1908.

j22,f5

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE PRESIDENT OF THE BOROUGH OF BROOKLYN, ROOM 2, BOROUGH HALL, BOROUGH OF BROOKLYN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Brooklyn at the above office until 11 o'clock a. m. on

WEDNESDAY, JANUARY 29, 1908.

No. 1. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER IN THIRD STREET, FROM BOND STREET TO GOWANUS CANAL.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such 100 per cent. cost (i. e., such as 95 per cent., 100 per cent., or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate, to an amount necessary to complete the work described in the contract:

50 linear feet of 15-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.40..... \$120 00

450 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.25..... 1,012 50

5 manholes, complete, with iron heads and covers, including all incidentals and appurtenances, per manhole, \$40..... 200 00

24 cubic yards of concrete cradle, in place, complete, including all incidentals and appurtenances, per cubic yard, \$6..... 144 00

1,000 feet (B. M.) of foundation planking, laid in place, complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30..... 30 00

15,000 feet (B. M.) of sheeting and bracing, driven in place, complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30..... 450 00

Total..... \$1,956 50

The time allowed for the completion of the work and full performance of the contract will be thirty working days.

The amount of security required will be Twelve Hundred Dollars (\$1,200).

No. 2. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER IN BLAKE AVENUE, FROM GEORGIA AVENUE TO SHEFFIELD AVENUE.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such 100 per cent. cost (i. e., such as 95 per cent., 100 per cent., or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate, to an amount necessary to complete the work described in the contract:

230 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$3..... \$690 00

3 manholes, complete, with iron heads and covers, including all incidentals and appurtenances, per manhole, \$50..... 150 00

10,000 feet (B. M.) sheeting and bracing, driven in place, complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30..... 300 00

Total..... \$1,140 00

The time allowed for the completion of the work and full performance of the contract will be thirty working days.

The amount of security required will be Six Hundred Dollars.

No. 3. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER IN FIFTY-SIXTH STREET FROM FOURTEENTH AVENUE TO FIFTEENTH AVENUE.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such one hundred per cent. cost (i. e., such as 95 per cent., 100 per cent. or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate, to an amount necessary to complete the work described in the contract:

45 linear feet of 15-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.25.....	\$101 25
700 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.....	1,400 00
970 linear feet of 6-inch house connection drain, laid complete, including all incidentals and appurtenances, per linear foot, \$1.....	970 00
8 manholes, complete, with iron heads and covers, including all incidentals and appurtenances, per manhole, \$55.....	440 00
Total.....	\$2,911 25

The time allowed for the completion of the work and full performance of the contract will be fifty working days.

The amount of security required will be One Thousand Five Hundred Dollars.

No. 4. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER IN FIFTY-NINTH STREET FROM SIXTH AVENUE TO SEVENTH AVENUE.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such one hundred per cent. cost (i. e., such as 95 per cent., 100 per cent. or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate to an amount necessary to complete the work described in the contract:

45 linear feet of 15-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.25.....	\$101 25
700 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances, per linear foot, \$2.....	1,400 00
970 linear feet of 6-inch house connection drain, laid complete, including all incidentals and appurtenances, per linear foot, \$1.....	970 00
8 manholes, complete, with iron heads and covers, including all incidentals and appurtenances, per manhole, \$55.....	440 00
500 feet (B. M.) of sheeting and bracing driven in place, complete, including all incidentals and appurtenances, per thousand feet (B. M.), \$30.....	15 00
Total.....	\$2,926 25

The time allowed for the completion of the work and full performance of the contract will be 50 working days.

The amount of security required will be Five Hundred Dollars (\$500).

No. 5. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER BASIN AT THE WESTERLY CORNER OF HAMILTON AVENUE AND HENRY STREET.

The following Engineer's preliminary estimate of total cost for the completed work is to be taken as the one hundred per cent. (100%) basis for bidding. Proposals shall state a single percentage of such one hundred per cent. cost (i. e., such as 95 per cent., 100 per cent. or 105 per cent.), for which all material and work called for in the contract and the invitation to bidders is to be furnished to the City. Such percentage, as bid, shall apply to all unit items specified in the Engineer's preliminary estimate to an amount necessary to complete the work described in the contract:

One (1) sewer basin, complete, of either standard design, with iron pans or gratings, iron basin hood and connecting culvert, including all incidentals and appurtenances, per basin, \$190.....	\$190 00
Total.....	\$190 00

The time allowed for the completion of the work and full performance of the contract will be 10 working days.

The amount of security required will be One Hundred Dollars (\$100).

No. 6. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR DREDGING AT AND IN THE VARIOUS BASINS OF GOWANUS CANAL, VIZ.: FIRST STREET BASIN, FIFTH STREET BASIN, SIXTH STREET BASIN, SEVENTH STREET BASIN AND ELEVENTH STREET BASIN.

The Engineer's estimate of the quantity of material necessary to be dredged is as follows:

33,600 cubic yards of scow measurement.

The time allowed for the completion of the work and full performance of the contract will be 100 calendar days.

The amount of security required will be Eleven Thousand Dollars (\$11,000).

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per cubic yard or other unit of measure, by which the bids will be tested.

The bids will be compared and the contract awarded at a lump or aggregate sum.

Blank forms and further information may be obtained and the plans and drawings may be seen at the office of the Bureau of Sewers, the Borough of Brooklyn, No. 215 Montague street, Brooklyn.

BIRD S. COLER,

President.

Dated December 18, 1907.

See General Instructions to Bidders on the last page, last column, of the "City Record."

BOROUGH OF THE BRONX.

NOTICE OF SALE AT PUBLIC AUCTION.

SATURDAY, FEBRUARY 8, 1908, AT 10 o'clock a. m., under the direction of Louis F. Haffen, President of the Borough of The Bronx, on the line of the storm relief tunnel sewer, Sedgwick avenue, 200 feet north of High Bridge.

Giant Portland Cement.

Where Stored.	Barrels of Cement.	Bags of Cement.	Empty Cement Bags.
Lot 1. In shed, about 50 feet west of the west line of Sedgwick avenue, about 200 feet north of High Bridge.	4	2,784	1,089
Lot 2. Westerly side of Inwood avenue, at the intersection of Macomb's road.....	273	757	4
Lot 3. Westerly side of Jerome avenue, about 75 feet south of West One Hundred and Seventy-second street.....	..	1,056	..

Broken Native Stone.

Where Stored.	Cubic Yards.
Lot 4. Near stone crusher, at High Bridge	147
In bin, near crusher, at High Bridge	44
In box, near sewer trench, Station 4-75.....	10
Near crusher, at Inwood avenue	49
In chute, near crusher, at Inwood avenue.....	12
Total.....	262

Ransome Twisted Steel Bars, Stored in Shed About 50 Feet West of the West House Line of Sedgwick Avenue, About 200 Feet North of High Bridge.

	No. of Ransome Twisted Steel Bars.	Size.	Lengths Vary From.	Total Weight.
			Feet.	Pounds.
Lot 5....	40	7-16	6 to 30.1	701
Lot 6....	29	9-16	11.5 to 11.6	363
Lot 7....	50	5-8	30	1,999
Lot 8....	51	5-8	11.1 to 12.9	827
Lot 9....	2,432	7-8	12.8 to 30.9	96,918
Lot 10....	297	7-8	13.7 to 16.9	11,424
Lot 11....	2	7-8	16.9	88
Lot 12....	64	1	16.8 to 30.1	4,896
Lot 13....	73	1	15.5 to 17.6	4,298
Lot 14....	38	1-16	17	2,488
Lot 15....	464	1-14	15.8 to 31.8	46,824
Lot 16....	401	1-14	16.8 to 17	35,949

Steel I Beams, Tie Rods, Splice Plates and Cast-Iron Separators, Stored on South Side of Sewer Trench, West of Sedgwick Avenue.

Steel I Beams.
Lot 17. 163 of 15 inches, at 18 feet long, at 100 pounds, equals 293,400 pounds.
Lot 18. 20 of 15 inches, at 15.24 feet long, at 100 pounds, equals 30,480 pounds.
Lot 19. 1 of 12 inches, at 16.1 feet long, at 55 pounds, equals 886 pounds.

Steel Tie Rods.

Lot 20. 1,708 pounds.

Steel Splice Plates.

Lot 21. 11,702 pounds.

Cast-Iron Separators.

Lot 22. 23,625 pounds.

TERMS OF SALE.

Cash payment in bankable funds at the time and place of sale, and removal of the materials within fifteen days from the date of sale. If the purchaser or purchasers do not comply with the above conditions of removal they shall forfeit his or their purchase money and the ownership of the articles purchased.

And the President of the Borough of The Bronx reserves the right on the day of sale to withdraw from the sale any of the articles and materials, or to reject any and all bids.

LOUIS F. HAFEN,
President, Borough of The Bronx.
j28,f8

OFFICE OF THE PRESIDENT OF THE BOROUGH OF THE BRONX, MUNICIPAL BUILDING, CROTONA PARK, ONE HUNDRED AND SEVENTY-SEVENTH STREET AND THIRD AVENUE.

SEALED BIDS OR ESTIMATES WILL BE RECEIVED BY THE PRESIDENT OF THE BOROUGH OF THE BRONX AT THE ABOVE OFFICE UNTIL 11 O'CLOCK A. M. ON

THURSDAY, JANUARY 30, 1908.

No. 1. FOR FURNISHING AND DELIVERING HARDWARE, RUBBER HOSE, PAINTS, ETC., TO THE BUREAU OF SEWERS.

The time allowed for the delivery of the articles will be during the year 1908.

The amount of security required will be One Thousand Dollars.

No. 2. FOR FURNISHING AND DELIVERING COAL TO THE BUREAU OF PUBLIC BUILDINGS AND OFFICES.

250 gross tons of white ash anthracite coal, egg size.

80 gross tons of white ash anthracite coal, stove size.

The time allowed for the performance of the contract will be during the year 1908.

The amount of security required will be Six Hundred Dollars.

No. 3. FOR FURNISHING AND DELIVERING RUBBER BOOTS TO THE BUREAU OF SEWERS.

The time allowed for the performance of the contract will be during the year 1908.

The amount of security required will be Seven Hundred Dollars.

No. 4. FOR FURNISHING AND DELIVERING LUMBER TO THE BUREAU OF SEWERS.

The time allowed for the performance of the contract is during the year 1908.

The amount of security required will be Seven Hundred and Fifty Dollars.

No. 5. FOR FURNISHING AND DELIVERING FORAGE TO THE BUREAU OF SEWERS.

1,500 bushels of No. 1 white clipped oats.

40,000 pounds of best timothy hay.

1,000 pounds of bran.

4,000 pounds of straw.

100 pounds of oil meal.

100 pounds of corn meal.

100 pounds of corn on cob.

200 pounds of lump rock salt.

50 pounds of condition powder.

100 pounds of table salt.

The time allowed for the performance of the contract will be as directed during the year 1908.

The amount of security required will be Seven Hundred and Fifty Dollars.

No. 6. FOR REGULATING, GRADING, BUILDING APPROACHES AND PLACING FENCES IN JOHNSON AVENUE, BETWEEN KAPOCK STREET AND SPUYEN DUYVIL ROAD AT WEST TWO HUNDRED AND TWENTY-SEVENTH STREET AND IN SPUYEN DUYVIL ROAD BETWEEN JOHNSON AVENUE AT WEST TWO HUNDRED AND TWENTY-SEVENTH STREET AND WEST TWO HUNDRED AND THIRTIETH STREET.

The Engineer's estimate of the work is as follows:

9,000 cubic yards of earth excavation.

7,500 cubic yards of rock excavation.

25,000 cubic yards of filling.

4,650 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

150 cubic yards of concrete.

300 linear feet of vitrified stoneware pipe 12 inches in diameter.

100 linear feet of vitrified stoneware pipe 18 inches in diameter.

The time allowed for the completion of the work will be 200 working days.

The amount of security required will be Twelve Thousand Dollars.

No. 7. FOR REGULATING, GRADING, SETTING CURBSTONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS, BUILDING APPROACHES, PLACING FENCES, PROVIDING FOR NECESSARY DRAINAGE, PLACING CATCH BASINS, MANHOLES AND STEEL RODS IN PLACE, IN WEST FARMS ROAD FROM MORRIS PARK AVENUE TO THE INTERSECTION OF WESTCHESTER AVENUE AND FORMER MAIN STREET IN THE OLD VILLAGE OF WESTCHESTER.

The Engineer's estimate of the work is as follows:

31,500 cubic yards of earth excavation.

13,600 cubic yards of rock excavation.

136,000 cubic yards of filling.

17,700 linear feet of new curbstone, furnished and set.

65,600 square feet of new flagging, furnished and laid.

1,000 square feet of old flagging, rejointed and relaid.

18,200 square feet of new bridgestone for crosswalks, furnished and laid.

640 square feet of old bridgestone for crosswalks, rejointed and relaid.

5,600 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

25 cubic yards of brick masonry.

2,300 linear feet of vitrified stoneware pipe 12 inches in diameter.

1,400 linear feet of vitrified stoneware pipe 15 inches in diameter.

1,350 linear feet of vitrified stoneware pipe 18 inches in diameter.

370 linear feet of concrete drain 3 feet in diameter.

10,000 feet (B. M.) of lumber, furnished and laid.

685 linear feet of new iron fence in place.

4,800 linear feet of guard rail in place.

820 cubic yards of Class "A" concrete.

106,000 pounds of steel rods in place.

5,000 pounds of cast iron in inlet frames and covers in place.

32 manholes, complete.

35 catch basins, complete.

100 cubic yards of rubble masonry in mortar.

The time allowed for the completion of the work will be 400 working days.

The amount of security required will be Sixty Thousand Dollars.

No. 8. FOR REGULATING, GRADING, SETTING CURBSTONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS, BUILDING APPROACHES AND PLACING FENCES IN MOSHOLU PARKWAY NORTH, FROM JEROME AVENUE TO GUN HILL ROAD.

The Engineer's estimate of the work is as follows:

1,930 cubic yards of earth excavation.

4,000 cubic yards of rock excavation.

8,150 cubic yards of filling.

1,150 linear feet of new curbstone, furnished and set.

4,300 square feet of new flagging, furnished and laid.

250 square feet of new bridgestone for crosswalks, furnished and laid.

120 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

10 linear feet of vitrified stoneware pipe 12 inches in diameter.

750 linear feet of new guard rail in place.

The time allowed for the completion of the work will be 125 working days.

The amount of security required will be Forty-five Hundred Dollars.

No. 9. FOR REGULATING, GRADING, SETTING CURBSTONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS, BUILDING APPROACHES AND PLACING FENCES IN WEST ONE HUNDRED AND NINETY-SECOND STREET, FROM CROTON AQUEDUCT TO AQUEDUCT AVENUE.

The Engineer's estimate of the work is as follows:

100 cubic yards of excavation of all kinds.

4,300 cubic yards of filling.

600 linear feet of new curbstone, furnished and set.

2,541 square feet of new flagging, furnished and laid.

100 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

50 linear feet of vitrified stoneware pipe 12 inches in diameter.

500 linear feet of new guard rail in place.

The time allowed for the completion of the work will be 60 working days.

The amount of security required will be Twelve Hundred Dollars.

No. 10. FOR REGULATING, GRADING, SETTING CURBSTONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS, BUILDING APPROACHES AND PLACING FENCES IN WEST ONE HUNDRED AND NINETY-SECOND STREET, FROM DAVIDSON AVENUE TO JEROME AVENUE.

The Engineer's estimate of the work is as follows:

100 cubic yards of excavation of all kinds.

1,150 cubic yards of filling.

510 linear feet of new curbstone, furnished and set.

2,125 square feet of new flagging, furnished and laid.

112 square feet of new bridgestone for crosswalks, furnished and laid.

50 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

200 linear feet of guard rail in place.

The time allowed for the completion of the work will be 30 working days.

The amount of security required will be Five Hundred Dollars.

No. 11. FOR REGULATING, GRADING, SETTING CURBSTONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS, BUILDING APPROACHES AND PLACING FENCES IN WEST ONE HUNDRED AND SEVENTY-SEVENTH STREET, FROM SEDGWICK AVENUE TO AQUEDUCT AVENUE.

The Engineer's estimate of the work is as follows:

11,500 cubic yards of earth excavation.

1,700 cubic yards of rock excavation.

6,000 cubic yards of filling.

2,800 linear feet of new curbstone furnished and set.

10,000 square feet of new flagging furnished and laid.

800 square feet of new bridgestone for crosswalks furnished and laid.

300 cubic yards of dry rubble masonry in retaining walls, culverts and gutters.

100 linear feet of vitrified stoneware pipe, 12 inches in diameter.

400 linear feet of new guard rail in place.

The time allowed for the completion of the work will be 150 working days.

The amount of security required will be Six Thousand Dollars.

No. 12. FOR PAVING WITH ASPHALT BLOCKS ON A CONCRETE FOUNDATION, AND WITH GRANITE BLOCKS ON A SAND FOUNDATION, THE ROADWAY OF EAST ONE HUNDRED AND EIGHTY-SECOND STREET, FROM QUARRY ROAD TO BOSTON ROAD, AND SETTING CURB WHERE NECESSARY.

The Engineer's estimate of the work is as follows:

14,850 square yards of completed asphalt block pavement, and keeping the same in repair for five years from date of acceptance.

2,370 cubic yards of concrete, including mortar bed.

1,000 linear feet of new curbstone, furnished and set in concrete.

6,800 linear feet of old curbstone rejointed, recut on top and reset in concrete.

3,980 square yards of new granite block pavement on a sand foundation, laid with sand joints, and keeping the same in repair for one year from date of acceptance.

The time allowed for the completion of the work will be 60 consecutive working days.

The amount of security required will be Seventeen Thousand Dollars.

No. 13. FOR REPAVING WITH ASPHALT BLOCKS ON A CONCRETE FOUNDATION THE ROADWAY OF EAST ONE HUNDRED AND SIXTY-NINTH STREET, FROM WESTER AVENUE TO NEW YORK AND HARLEM RAILROAD, AND SETTING CURB WHERE NECESSARY.

The Engineer's estimate of the work is as follows:

826 square yards of completed asphalt block pavement, and keeping the same in repair for five years from date of acceptance.

140 cubic yards of concrete, including mortar bed.

100 linear feet of new curbstone, furnished and set in concrete.

516 linear feet of old curbstone rejointed, recut on top and reset in concrete.

The time allowed for the completion of the work will be 30 consecutive working days.

25 linear feet of 12-inch drain pipe furnished and laid.
The time allowed for the completion of the work will be 75 working days.
The amount of security required will be Two Thousand Dollars.

No. 17. FOR CONSTRUCTING A SEWER AND APPURTENANCES IN EAST ONE HUNDRED AND EIGHTY-FIRST STREET, BETWEEN VALENTINE AVENUE AND RYER AVENUE.
The Engineer's estimate of the work is as follows:

195 linear feet of 12-inch pipe sewer.
24 spurs for house connections, over and above the cost per linear foot of sewer.
2 manholes, complete.
435 cubic yards of rock to be excavated and removed.
3 cubic yards of Class "B" concrete in place, additional to that shown on the plan.
1,000 feet (B. M.) of timber for foundations furnished and laid, and sheeting furnished and left in place.
10 linear feet of 12-inch drain pipe furnished and laid.

The time allowed for the completion of the work will be 40 working days.
The amount of security required will be One Thousand Dollars.

Blank forms can be obtained upon application therefor, and the plans and specifications may be seen and other information obtained at said office.

LOUIS F. HAFEN,
President.
j20,30

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF CORRECTION

DEPARTMENT OF CORRECTION, No. 148 EAST TWENTIETH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Correction at the above office until 11 o'clock a. m. on

TUESDAY, FEBRUARY 4, 1908.

Borough of Manhattan.

FOR FURNISHING AND DELIVERING SUPPLIES FOR MANUFACTURING PURPOSES, ETC.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before 90 days.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the totals and awards made to the lowest bidder on each item.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Correction, the Borough of Manhattan, No. 148 East Twentieth street.

JOHN V. COGGEY,
Commissioner.

Dated January 22, 1908.

j23,f4

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICIAL BOROUGH PAPERS.

BOROUGH OF THE BRONX.

"North Side News," "Harlem Reporter and Bronx Chronicle," "Bronx Independent."

BOROUGH OF RICHMOND.

"Staten Islander," "Staten Island Star."

BOROUGH OF QUEENS.

"Long Island Star" (First and Second Wards), "Flushing Evening Journal" (Third Ward), "Long Island Farmer" (Fourth Ward), "Rockaway News" (Fifth Ward).

BOROUGH OF BROOKLYN.

"Brooklyn Eagle," "Brooklyn Times," "Brooklyn Citizen," "Brooklyn Standard-Union," "Brooklyn Free Press."

BOROUGH OF MANHATTAN.

"Tammany Times" (Harlem District), "Manhattan and Bronx Advocate" (Washington Heights, Morningside Heights and Harlem Districts), "New York Daily News."

Designated by Board of City Record June 19, 1906.

Amended June 20, 1906; July 1, 1907; September 30, 1907.

BOROUGH OF MANHATTAN.

OFFICE OF THE PRESIDENT OF THE BOROUGH OF MANHATTAN, CITY HALL, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at the City Hall, Room 16, until 2 o'clock p. m. on

WEDNESDAY, JANUARY 29, 1908.

No. 1. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR RECONSTRUCTION OF SEWER AND APPURTENANCES IN FOURTH STREET, BETWEEN AVENUES A AND C.

The Engineer's estimate of the quantity and quality of the material and the nature and extent, as near as possible, of the work required, is as follows:

1,045 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class I.
250 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class II.
150 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class III.
21 linear feet of salt-glazed vitrified stone-ware pipe culvert of 12 inches interior diameter.
50,000 feet (B. M.) of timber and planking for bracing and sheet piling.

The time allowed to complete the whole work will be two hundred and fifty (250) working days.

The amount of the security required will be Ten Thousand Dollars (\$10,000).

No. 2. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR RECONSTRUCTION OF SEWER AND APPURTENANCES IN FIFTH STREET, BETWEEN AVENUES A AND C.

The Engineer's estimate of the quantity and quality of the material and the nature and extent, as near as possible, of the work required, is as follows:

1,045 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class I.
250 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class II.
150 linear feet of brick sewer of 4 feet by 2 feet 8 inches interior diameters, Class III.
36 linear feet of salt-glazed vitrified stone-ware pipe culvert of 12 inches interior diameter.
50,000 feet (B. M.) of timber and planking for bracing and sheet piling.

The time allowed to complete the whole work will be two hundred and fifty (250) working days.

The amount of the security required will be Ten Thousand Dollars (\$10,000).

No. 3. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR EXTENSION OF SEWER AND APPURTENANCES IN ONE HUNDRED AND FORTY-FIRST STREET, BETWEEN HARLEM RIVER AND END OF PRESENT SEWER.

The Engineer's estimate of the quantity and quality of the material and the nature and extent, as near as possible, of the work required, is as follows:

288 linear feet of brick sewer of 3 feet 6 inches by 2 feet 4 inches interior diameters, including embankment, etc., Class I.

289 linear feet of brick sewer of 3 feet 6 inches by 2 feet 4 inches interior diameters, Class II.

1,000 feet (B. M.) of timber and planking for bracing and sheet piling.

The time allowed to complete the whole work will be one hundred (100) working days.

The amount of the security required will be Two Thousand Five Hundred Dollars (\$2,500).

Each contract must be bid for separately.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per foot, yard or other unit of measure, or article, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total.

Blank forms may be had and the plans and drawings may be seen at the office of the Commissioner of Public Works, Nos. 13 to 21 Park row, Bureau of Sewers, Borough of Manhattan.

HENRY S. THOMPSON,
Acting Borough President and
Commissioner of Public Works.
The City of New York, January 18, 1908.

j18,29

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF PARKS.

OFFICE OF THE DEPARTMENT OF PARKS, ARSENAL BUILDING, FIFTH AVENUE AND SIXTY-FOURTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the above office of the Department of Parks until 3 o'clock p. m. on

THURSDAY, FEBRUARY 6, 1908.

Borough of The Bronx.

FOR FURNISHING AND DELIVERING FORTY THOUSAND (40,000) POUNDS BEST NO. 1 WHITE CLIPPED OATS, TWENTY (20) TONS TIMOTHY HAY AND TEN (10) TONS BEST RYE STRAW (NO. 1, 1908) FOR PARKS, BOROUGH OF THE BRONX.

The time for the delivery and the full performance of the contract is before July 1, 1908.

The amount of security required is Six Hundred Dollars (\$600).

The bids will be compared and the contract awarded at a lump or aggregate sum.

Blank forms may be obtained at the office of the Department of Parks, Zbrowski Mansion, Claremont Park, The Bronx.

HENRY SMITH,
President;

JOSEPH I. BERRY,
MICHAEL J. KENNEDY,
Commissioners of Parks.

j24,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE DEPARTMENT OF PARKS, ARSENAL BUILDING, FIFTH AVENUE AND SIXTY-FOURTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the above office of the Department of Parks until 3 o'clock p. m. on

THURSDAY, FEBRUARY 6, 1908.

Boroughs of Brooklyn and Queens.

No. 1. FOR FURNISHING AND DELIVERING BLACKSMITHS' SUPPLIES AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Fifteen Hundred Dollars (\$1,500).

No. 2. FOR FURNISHING AND DELIVERING WHEELWRIGHTS' SUPPLIES AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Seven Hundred and Fifty Dollars (\$750).

No. 3. FOR FURNISHING AND DELIVERING HARDWARE AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is One Thousand Dollars (\$1,000).

No. 4. FOR FURNISHING AND DELIVERING LUMBER IN PARKS AND PARKWAYS, BOROUGH OF BROOKLYN AND QUEENS.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Five Thousand Dollars (\$5,000).

No. 6. FOR FURNISHING AND DELIVERING TOOLS AND IMPLEMENTS AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Fifteen Hundred Dollars (\$1,500).

No. 7. FOR FURNISHING AND DELIVERING OILS, ETC., AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is One Thousand Dollars (\$1,000).

No. 8. FOR FURNISHING AND DELIVERING RUBBER GOODS AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is One Thousand Dollars (\$1,000).

The contracts must be bid for separately.

The bids will be compared and the contracts awarded at a lump or aggregate sum for each contract.

Blank forms may be obtained and plans may be seen at the office of the Department of Parks, Litchfield Mansion, Prospect Park, Brooklyn.

HENRY SMITH,
President;

JOSEPH I. BERRY,
MICHAEL J. KENNEDY,
Commissioners of Parks.

Dated January 16, 1908.

j22,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE DEPARTMENT OF PARKS, ARSENAL BUILDING, FIFTH AVENUE AND SIXTY-FOURTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the above office of the Department of Parks until 3 o'clock p. m. on

THURSDAY, FEBRUARY 6, 1908.

Borough of Brooklyn.

No. 1. FOR FURNISHING AND DELIVERING MASONS' SUPPLIES AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Fifteen Hundred Dollars (\$1,500).

No. 2. FOR FURNISHING AND DELIVERING FORAGE AT PROSPECT PARK, BOROUGH OF BROOKLYN.

The time for the completion of the contract will be on or before December 31, 1908.

The amount of security required is Five Thousand Dollars (\$5,000).

The contracts must be bid for separately.

The bids will be compared and the contracts awarded at a lump or aggregate sum for each contract.

Blank forms may be obtained and plans may be seen at the office of the Department of Parks, Litchfield Mansion, Prospect Park, Brooklyn.

HENRY SMITH,
President;

JOSEPH I. BERRY,
MICHAEL J. KENNEDY,
Commissioners of Parks.

Dated January 17, 1908.

j21,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE DEPARTMENT OF PARKS, ARSENAL BUILDING, FIFTH AVENUE AND SIXTY-FOURTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the above office of the Department of Parks until 3 o'clock p. m. on

THURSDAY, JANUARY 30, 1908.

Borough of The Bronx.

FOR FURNISHING AND DELIVERING TWO HUNDRED (200) TONS NO. 1 WHITE ASH ANTHRACITE COAL (NO. 2, 1908), FOR PARKS, BOROUGH OF THE BRONX.

The time for the delivery and the full performance of the contract is before March 15, 1908.

The amount of security required is Seven Hundred Dollars (\$700).

The bids will be compared and the contract awarded at a lump or aggregate sum.

Blank forms may be obtained at the office of the Department of Parks, Zbrowski Mansion, Claremont Park, The Bronx.

HENRY SMITH,
President;

JOSEPH I. BERRY,
MICHAEL J. KENNEDY,
Commissioners.

j16,30

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE DEPARTMENT OF PARKS, ARSENAL BUILDING, FIFTH AVENUE AND SIXTY-FOURTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the above office of the Department of Parks until 3 o'clock p. m. on

THURSDAY, JANUARY 30, 1908.

Boroughs of Brooklyn and Queens.

FOR FURNISHING AND DELIVERING COAL IN PARKS AND ON PARKWAYS IN THE BOROUGH OF BROOKLYN AND QUEENS.

The time stipulated for the completion of the contract is before December 31, 1908.

The amount of security required is Six Thousand Dollars (\$6,000).

The bids will be compared and the contract awarded at a lump or aggregate sum.

Blank forms may be obtained at the office of the Department of Parks, Litchfield Mansion, Prospect Park, Brooklyn.

HENRY SMITH,
President;

JOSEPH I. BERRY,
MICHAEL J. KENNEDY,
Commissioners of Parks.

Dated January 8, 1908.

j14,30

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF PUBLIC CHARITIES.

DEPARTMENT OF PUBLIC CHARITIES, FOOT OF EAST TWENTY-SIXTH STREET, NEW YORK.

TO CONTRACTORS.

PROPOSALS FOR BIDS OR ESTIMATES.

SEALED BIDS OR ESTIMATES WILL BE received by the Department of Public Charities at the above office until 2.30 o'clock p. m. on

TUESDAY, FEBRUARY 4, 1908.

FOR THE PROVIDING OF ALL LABOR AND MATERIALS REQUIRED FOR THE COMPLETION OF THE ABANDONED CONTRACT OF THE CHURCH CONSTRUCTION COMPANY, DATED DECEMBER 12, 1905, FOR THE ERECTION AND ENTIRE COMPLETION OF THE NEW MUNICIPAL LODGING HOUSE IN THE BOROUGH OF MANHATTAN, SITUATED APPROXIMATELY FOUR HUNDRED (400) FEET EAST OF FIRST AVENUE, AND ON THE SOUTHERLY SIDE OF TWENTY-FIFTH STREET, THE CITY OF NEW YORK, TOGETHER WITH THE ABANDONED SUPPLEMENTAL CONTRACT, DATED JUNE 7, 1907, FOR THE COMPLETION OF A BOILER PIT, CAISSON WORK, NEW FOUNDATION WORK, ETC.

The time allowed for doing and completing the entire work and the full performance of the contract is two hundred and forty (240) consecutive calendar days.

The surety required will be Sixty-seven Thousand Dollars (\$67,000).

The bidder will state one aggregate price for the whole work described and specified, as the contract is entire and for a complete job.

Blank forms and further information may be obtained at the office of Raymond F. Almirall, Architect, No. 51 Chambers street, The City of New York, where plans and specifications may be seen.

ROBERT W. HEBBERD,
Commissioner.

Dated January 21, 1908.

j21,f4

See General Instructions to Bidders on the last page, last column, of the "City Record."

OFFICE OF THE PRESIDENT OF THE BOROUGH OF RICHMOND, BOROUGH HALL, ST. GEORGE, NEW BRIGHTON, NEW YORK CITY.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Richmond at the above office until 12 o'clock noon on

TUESDAY, JANUARY 28, 1908.

Borough of Richmond.

No. 1. FOR FURNISHING AND DELIVERING THREE HUNDRED (300) BARRELS OF PORTLAND CEMENT, AT SUCH POINTS WITHIN THE BOROUGH OF RICHMOND, AND IN SUCH QUANTITIES, FROM TIME TO TIME, AS THE SUPERINTENDENT OF THE BUREAU OF HIGHWAYS MAY DIRECT.

The time for the completion of the work and the full performance of the contract is until October 1, 1908.

The amount of security required is Three Hundred Dollars (\$300).

No. 2. FOR FURNISHING AND DELIVERING TWENTY THOUSAND (20,000) FEET (B. M.) SPRUCE, AND FIVE THOUSAND (5,000) FEET (B. M.) YELLOW PINE, LUMBER, AT SUCH POINTS WITHIN THE BOROUGH OF RICHMOND, AND IN SUCH QUANTITIES, FROM TIME TO TIME, AS THE SUPERINTENDENT OF THE BUREAU OF HIGHWAYS MAY DIRECT.

The time for the completion of the work and the full performance of the contract is until November 30, 1908.

The amount of security required is Five Hundred Dollars (\$500).

No. 3. FOR FURNISHING AND DELIVERING EIGHT HUNDRED (800) CUBIC YARDS OF BUILDING SAND AT SUCH POINTS WITHIN THE BOROUGH OF RICHMOND, AND IN SUCH QUANTITIES, FROM TIME TO TIME, AS THE SUPERINTENDENT OF THE BUREAU OF HIGHWAYS MAY DIRECT.

The time for the completion of the work and the full performance of the contract is until October 1, 1908.

The amount of security required is Five Hundred Dollars (\$500).

No. 4. FOR FURNISHING AND DELIVERING TEN THOUSAND (10,000) TONS ONE AND ONE-HALF (1½) INCH OR THREE-QUARTER (¾) INCH BROKEN STONE OR SCREENINGS ON RICHMOND VALLEY ROAD AND AMBOY ROAD OR AVENUE.

The time for the completion of the work and the full performance of the contract is until June 30, 1908.

The amount of security required is Eight Thousand Dollars (\$8,000).

The contracts must be bid for separately, and the bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Bidders are requested to make their bids or estimates upon the blank form prepared by the President, a copy of which, with the proper envelope in which to inclose the bid, together with

a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefor at the office of the said President. The plans and drawings may be seen and other information obtained at the office of the Commissioner of Public Works of the Borough of Richmond, Borough Hall, New Brighton, Borough of Richmond.

GEORGE CROMWELL,
President.
The City of New York, January 8, 1908.

See General Instructions to Bidders on the last page, last column, of the "City Record."

FIRE DEPARTMENT.

HEADQUARTERS OF THE FIRE DEPARTMENT OF THE CITY OF NEW YORK, NOS. 157 AND 159 EAST SIXTY-SEVENTH STREET, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Fire Commissioner at the above office until 10.30 o'clock a. m. on

MONDAY, FEBRUARY 3, 1908.

Borough of Manhattan.

No. 1. FOR FURNISHING AND DELIVERING TWELVE HUNDRED (1,200) TONS OF ANTHRACITE COAL FOR FIREBOATS BERTHED ON THE EAST RIVER.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before March 31, 1909.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

No. 2. FOR FURNISHING AND DELIVERING TWENTY-FIVE HUNDRED (2,500) TONS OF ANTHRACITE COAL FOR FIREBOATS BERTHED ON THE NORTH RIVER.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before March 31, 1909.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

Borough of The Bronx.

No. 1. FOR FURNISHING AND DELIVERING TWO THOUSAND (2,000) TONS OF ANTHRACITE COAL FOR COMPANIES LOCATED IN THE BOROUGH OF THE BRONX.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before March 31, 1909.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price for each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested.

The extensions must be made and footed up, as the bids will be read from the total. The bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Fire Department, Nos. 157 and 159 East Sixty-seventh street, Manhattan.

FRANCIS J. LANTRY,
Fire Commissioner.
Dated January 20, 1908.

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF TAXES AND ASSESSMENTS.

THE CITY OF NEW YORK, DEPARTMENT OF TAXES AND ASSESSMENTS, MAIN OFFICE, BOROUGH OF MANHATTAN, HALL OF RECORDS, JANUARY 10, 1908.

NOTICE IS HEREBY GIVEN, AS REQUIRED by the Greater New York Charter, that the books called "The Annual Record of the Assessed Valuation of Real and Personal Estate of the Boroughs of Manhattan, The Bronx, Brooklyn, Queens and Richmond," comprising The City of New York, will be open for public inspection, examination and correction on the second Monday of January, and will remain open up to and including the 31st day of March, 1908.

During the time that the books are open for public inspection, application may be made by any person or corporation claiming to be aggrieved by the assessed valuation of real or personal estate to have the same corrected.

In the Borough of Manhattan, at the main office of the Department of Taxes and Assessments, Hall of Records, No. 31 Chambers street.

In the Borough of The Bronx, at the office of the Department, Municipal Building, One Hundred and Seventy-seventh street and Third avenue.

In the Borough of Brooklyn, at the office of the Department, Municipal Building.

In the Borough of Queens, at the office of the Department, Hackett Building, Jackson avenue and Fifth street, Long Island City.

In the Borough of Richmond, at the office of the Department, Borough Hall, New Brighton, Staten Island.

Corporations in all the boroughs must make application only at the main office in the Borough of Manhattan.

Applications in relation to the assessed valuation of personal estate must be made by the person assessed at the office of the Department in the borough where such person resides, and in case of a non-resident carrying on business in The City of New York at the office of the Department of the borough where such place of business is located, between the hours of 10 a. m. and 2 p. m., except on Saturday, when all applications must be made between 10 a. m. and 12 noon.

LAWSON PURDY,
President;
FRANK RAYMOND,
JAMES H. TULLY,
NICHOLAS MULLER,
CHAS. PUTZEL,
THOS. L. HAMILTON,
HUGH HASTINGS,
Commissioners of Taxes and Assessments.

j2,m31

DEPARTMENT OF EDUCATION.

DEPARTMENT OF EDUCATION, CORNER OF PARK AVENUE AND FIFTY-NINTH STREET, BOROUGH OF MANHATTAN, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Supplies at the above office of the Department of Education until 12 o'clock noon on

FRIDAY, JANUARY 31, 1908.

FOR FURNISHING AND DELIVERING GASOLINE MOTOR TRUCK TO THE BOARD OF EDUCATION, THE CITY OF NEW YORK.

The time for the delivery of the articles, materials and supplies and the performance of the contract is within sixty (60) consecutive working days.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, by which the bids will be tested. Award will be made to the lowest bidder.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Superintendent of School Supplies, Board of Education, the Borough of Manhattan, southwest corner of Park avenue and Fifty-ninth street.

PATRICK JONES,
Superintendent of School Supplies.

j21,31

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF EDUCATION, CORNER OF PARK AVENUE AND FIFTY-NINTH STREET, BOROUGH OF MANHATTAN, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Supplies at the above office of the Department of Education until 12 o'clock noon on

FRIDAY, JANUARY 31, 1908.

FOR FURNISHING AND DELIVERING DIRECT TO EACH SCHOOL, GENERAL APPARATUS AND SUPPLIES FOR THE DEPARTMENTS OF CHEMISTRY, PHYSICS, BIOLOGY, PHOTOGRAPHY, PHYSIOGRAPHY, BOTANICAL AND ZOOLOGICAL SUPPLIES, DAY AND EVENING HIGH SCHOOLS; AND SUPPLIES FOR TRAINING SCHOOLS FOR TEACHERS; AND FOR FURNISHING AND DELIVERING TO PARK AVENUE AND FIFTY-NINTH STREET, SUPPLIES FOR THE USE OF NURSES OF THE CITY OF NEW YORK.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before December 31, 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

Bidder must enter his price under the separate headings, and in estimating the amount of his bid upon which security will be required, said security must be based on the highest price quoted on each item.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, dozen, gallon, yard or other unit of measure, by which the bids will be tested. Award will be made to the lowest bidder on each item whose goods are equal to the sample furnished for inspection or referred to by catalogue number. The said reference is made only as a means of briefly describing the article called for.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Superintendent of School Supplies, Board of Education, the Borough of Manhattan, southwest corner of Park avenue and Fifty-ninth street.

PATRICK JONES,
Superintendent of School Supplies.

j21,31

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF STREET CLEANING.

MAIN OFFICE OF THE DEPARTMENT OF STREET CLEANING, ROOM 1403, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Street Cleaning at the above office until 12 o'clock m., on

THURSDAY, FEBRUARY 6, 1908.

Boroughs of Manhattan, The Bronx and Brooklyn.

CONTRACT FOR FURNISHING AND DELIVERING 2,180 PAIRS OF HORSESHOE PADS.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before December 31, 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

For the purpose of comparing bids and awarding the contract, each bidder shall state a price per pair for each of the following sizes, on the basis of one hundred (100) pairs in the proportion as follows: 10 pairs of No. 3; 20 pairs of No. 3½; 24 pairs of No. 4; 26 pairs of No. 4½; 20 pairs of No. 5, and the prices so bid per pair on the lowest bid shall be the prices to be paid under the contract.

The pads are to be delivered at the office of the Property Clerk, at Stable "A," Seventeenth street and Avenue C, in the Borough of Manhattan, and at the office of the Property Clerk at Stable "B," Butler street, between Fourth avenue and Fifth avenue, in the Borough of Brooklyn, in such quantities and at such times as may be required, but not to exceed three thousand (3,000) pairs per month altogether.

Each bidder must submit along with his bid a sample of each size of the pad which he proposes to furnish.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Street Cleaning, Borough of Manhattan, Nos. 13 to 21 Park row.

FOSTER CROWELL,
Commissioner of Street Cleaning.
Dated January 24, 1908.

j25,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

MAIN OFFICE OF THE DEPARTMENT OF STREET CLEANING, ROOM 1403, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Street Cleaning at the above office until 12 o'clock m., on

THURSDAY, FEBRUARY 6, 1908.

Boroughs of Manhattan and The Bronx.

CONTRACT FOR FURNISHING AND DELIVERING CARRIAGE TRIMMINGS.

The time for the delivery of the articles, materials and supplies and the performance of the contract is 30 days.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total and awards made to the lowest bidder.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Street Cleaning, the Borough of Manhattan, Nos. 13 to 21 Park row.

FOSTER CROWELL,
Commissioner of Street Cleaning.
Dated January 24, 1908.

j25,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

MAIN OFFICE OF THE DEPARTMENT OF STREET CLEANING, ROOM 1403, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Street Cleaning at the above office until 12 o'clock m. on

MONDAY, FEBRUARY 3, 1908.

Boroughs of Manhattan, The Bronx and Brooklyn.

CONTRACT FOR FURNISHING AND DELIVERING WHEELWRIGHTS' AND BLACKSMITHS' SUPPLIES.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

For the purpose of proper inspection of the supplies to be furnished under the above contract, a Special Inspector will be appointed by the Commissioner of Street Cleaning, and the compensation of this Inspector is to be paid by the contractor under the contract at the rate of 2½ per cent. of the total amount of the contract.

In making a bid for the above contract, this amount of 2½ per cent. for compensation of the Special Inspector should be taken into account, but must not be distributed among the prices of the several items. It must be added by the bidder at the foot of his bid, as a separate and distinct item, thus: "Compensation of Special Inspector at 2½ per cent."—then extending this amount as 2½ per cent. of the total of his extended prices.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, per hundred pounds, ton, dozen, or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total and awards made to the lowest bidder.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Street Cleaning, the Borough of Manhattan, Nos. 13 to 21 Park row.

FOSTER CROWELL,
Commissioner of Street Cleaning.
Dated January 21, 1908.

j23,f3

See General Instructions to Bidders on the last page, last column, of the "City Record."

MAIN OFFICE OF THE DEPARTMENT OF STREET CLEANING, ROOM 1403, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Street Cleaning at the above office until 12 o'clock m. on

MONDAY, FEBRUARY 3, 1908.

Boroughs of Manhattan, The Bronx and Brooklyn.

CONTRACT FOR FURNISHING AND DELIVERING COAL FOR HEATING PURPOSES.

The time for the delivery of the articles, materials and supplies and the performance of the contract is by or before December 31, 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

ules herein contained or hereto annexed, per ton of 2,000 pounds, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each class and awards made to the lowest bidder on each class.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Street Cleaning, the Borough of Manhattan, Nos. 13 to 21 Park row.

FOSTER CROWELL,
Commissioner of Street Cleaning.
Dated January 21, 1908.

See General Instructions to Bidders on the last page, last column, of the "City Record."

MAIN OFFICE OF THE DEPARTMENT OF STREET CLEANING, ROOM 1403, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, THE CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Street Cleaning at the above office until 12 o'clock m., on

TUESDAY, JANUARY 28, 1908.

Boroughs of Manhattan, The Bronx and Brooklyn.

CONTRACTS FOR FURNISHING ALL THE LABOR AND DELIVERING

2. WHEELS, HUBS AND HUB BANDS.
3. PARTS FOR REPAIRS OF SWEEPING MACHINES AND SPRINKLING TRUCKS.
4. CARRIAGE SUPPLIES.
5. STOVES AND STOVE SUPPLIES.
6. LAMPS AND LAMP SUPPLIES.
7. WINDOW GLASS.
8. DRUGS AND DRUGGISTS' SUNDRIES.
9. SPONGES.

The time for the delivery of the above is ninety (90) days for bicycles and bicycle supplies, wheels, etc., parts for repairs, etc., and carriage supplies, and thirty (30) days for the remainder, except drugs and druggists' sundries, which are to be delivered as required during the year 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

Bids for sponges will be received from those only who are actually engaged in the importation of sponges.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, per hundred pounds, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each class and awards made to the lowest bidder on each class.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the office of the Department of Street Cleaning, the Borough of Manhattan, Nos. 13 to 21 Park row.

FOSTER CROWELL,
Commissioner of Street Cleaning.
Dated January 14, 1908.

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF STREET CLEANING OF THE CITY OF NEW YORK, NOS. 13 TO 21 PARK ROW, NEW YORK, BOROUGH OF MANHATTAN.

PUBLIC NOTICE IS HEREBY GIVEN that written applications for non-competitive examinations for the following positions on the steam dumper "Cinderella," "Aschenbroedel" and "Cenerentola," in accordance with the rules of the Municipal Civil Service Commission, will be received at the main office of the Department of Street Cleaning, on the fourteenth floor, Nos. 13 to 21 Park row, Room 1416, on the Wednesday of each week, at 2 p. m., beginning Wednesday, October 2, 1907:

Masters,
Mates,
Marine Enginemen,
Deckhands,
Firemen.

FOSTER CROWELL,
Commissioner of Street Cleaning.

ASHES, ETC., FOR FILLING IN LANDS.

PERSONS HAVING LANDS OR PLACES in the vicinity of New York Bay to fill in can procure material for that purpose—ashes, street sweepings, etc., collected by the Department of Street Cleaning—free of charge by applying to the Commissioner of Street Cleaning, Nos. 13 to 21 Park row, Borough of Manhattan.

FOSTER CROWELL,
Commissioner of Street Cleaning.

DEPARTMENT OF DOCKS AND FERRIES.

DEPARTMENT OF DOCKS AND FERRIES, FIRE "A," NORTH RIVER, NEW YORK, MARCH 31, 1904.

THE COMMISSIONER HAS FIXED THE amounts of bonds required on contracts awarded by this Department, as follows:

On all contracts for supplies, 40 per cent. of the estimated cost;

On all contracts, other than contracts for supplies, where the estimated cost is not over \$200,000, 40 per cent. of the estimated cost;

On all contracts, other than contracts for supplies, where the estimated cost is over \$200,000, but not over \$1,000,000, 25 per cent. of the estimated cost;

On all contracts, other than contracts for supplies, where the estimated cost is over \$1,000,000, 20 per cent. of the estimated cost.

JOSEPH W. SAVAGE,
Secretary.

BOROUGH OF QUEENS.

OFFICE OF THE PRESIDENT OF THE BOROUGH OF QUEENS, THIRD FLOOR OF THE BOROUGH HALL, FIFTH STREET AND JACKSON AVENUE, LONG ISLAND CITY, BOROUGH OF QUEENS, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Queens, at the above office, until 11 o'clock a. m. on

WEDNESDAY, FEBRUARY 5, 1908.

No. 1. CONTRACT FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED FOR THE REMOVAL OF SNOW AND ICE IN THE FIRST, THIRD, FOURTH AND FIFTH DISTRICTS, BOROUGH OF QUEENS.

The time allowed for the completion of the work and the full performance of the contract is by or before April 15, 1908.

The amount of security required is Four Thousand Dollars for all of the four districts, or One Thousand Dollars for any one of the four districts.

The compensation will be for the actual amount of snow and ice removed and dumped by the contractor, at a price per cubic yard, and each bid or estimate must be for one or more of all of the four districts.

Each bid or estimate must distinctly state the price per cubic yard in each separate district. A contract or contracts, if awarded, will be awarded to the lowest bidder for each district.

No. 2. FOR FURNISHING TO THE BUREAU OF HIGHWAYS BROKEN STONE AND SCREENINGS OF LIMESTONE AND BROKEN STONE AND SCREENINGS OF TRAP ROCK, IN THE BOROUGH OF QUEENS.

The amount of security required will be thirty per cent, (30%) of the amount of bid.

The time allowed for the furnishing of the above is on or before May 1, 1908.

To be furnished in the quantities and at the points designated in the specifications.

The total amount of material to be furnished in cubic yards is as follows:

Item No. 1—5,000 cubic yards of limestone screenings.

Item No. 2—5,000 cubic yards of broken stone of limestone.

Item No. 3—5,000 cubic yards of trap rock screenings.

Item No. 4—5,000 cubic yards of broken stone of trap rock, size one and one-half inches (1½ inches).

Item No. 5—5,000 cubic yards of broken stone of trap rock, size three-quarters of an inch (¾ inch).

No. 3. FOR HAULING TO THE BUREAU OF HIGHWAYS BROKEN STONE AND SCREENINGS OF TRAP ROCK, AND BROKEN STONE AND SCREENINGS OF LIMESTONE, IN THE BOROUGH OF QUEENS.

The time allowed for the hauling of the above is on or before May 1, 1908.

The amount of security required will be Five Hundred Dollars.

The total amount of material to be hauled in cubic yards is as follows:

Item No. 1—5,000 cubic yards of limestone screenings.

Item No. 2—5,000 cubic yards of broken stone of limestone.

Item No. 3—5,000 cubic yards of trap rock screenings.

Item No. 4—5,000 cubic yards of broken stone of trap rock, size one and one-half inches (1½ inches).

Item No. 5—5,000 cubic yards of broken stone of trap rock, size three-quarters of an inch (¾ inch).

No. 4. FOR FURNISHING AND DELIVERING TO THE BUREAU OF HIGHWAYS, BOROUGH OF QUEENS, RESIDUUM OIL.

The time allowed for the delivery of the above material and the performance of the contract will be ninety days.

The amount of security required will be Two Thousand Dollars (\$2,000).

The total quantity to be furnished is:

150,000 gallons residuum oil.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereafter annexed, per square yard, linear foot, or other unit of measure, by which the bids will be tested.

The extensions must be made and footed up, as the bids will be read from a total.

Bids will be compared and the contract awarded at a lump or aggregate sum.

Blank forms and further information may be obtained at the office of the President of the Borough of Queens.

JOSEPH BERTEL,

President of the Borough of Queens.

Dated Long Island City, January 24, 1908.

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See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF FINANCE.

CORPORATION SALE OF BUILDINGS AND APPURTENANCES THERETO ON CITY REAL ESTATE.

AT THE REQUEST OF THE PRESIDENT of the Board of Trustees of Bellevue and Allied Hospitals public notice is hereby given that the Commissioners of the Sinking Fund, by virtue of the powers vested in them by law, will offer for sale at public auction the building and contents thereof standing within the line of property acquired by The City of New York for hospital purposes in the

Borough of Manhattan.

Being the building known as the plant of the United Electric Light and Power Company and all the machinery contained therein, viz.:

Three 600 horse-power Corliss engines;

Direct connected exciter outfit;

Three Westinghouse 400-kilowatt generators;

One 2,000 horse-power heater;

Boiler feed pumps;

Sixteen hundred horse-power boilers;

Steam exhaust pipe;

Three steel stacks;

Breachings, dampers;

Steam and exhaust pipe covering;

Eight 1,200 horse-power engines;

Nine thousand six hundred horse-power kilowatt condenser;

Eight 750-kilowatt generators;

Three 225-kilowatt exciter outfits;

Force draught outfit;

Twenty-five-ton traveling crane;

Seven 200 horse-power Climax boilers;

Coal and ash conveying apparatus;

Steam and exhaust piping;

Two feed-water heaters, 2,000 horse-power;

Three boiler feed pumps;

Steam and exhaust pipe covering;

Four steel stacks;

Breachings, damper and damper regulators;

said building being situated between Twenty-eighth and Twenty-ninth streets and between First avenue and the East River, Borough of Manhattan, and which is more particularly described on a certain map on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

Pursuant to a resolution of the Commissioners of the Sinking Fund the sale of the above described building and contents thereof will be held on

THURSDAY, FEBRUARY 6, 1908

at 10 a. m. on the premises, upon the following

TERMS AND CONDITIONS.

It being understood that the purchasers at the time of the auction sale, when the said bid is accepted by the City, shall execute a contract with the City of New York for the proper compliance with these terms and conditions, which contract shall provide for liquidated damages at so

much per day for each and every day the removal of the buildings, etc., remains incomplete after the expiration of sixty days from the day of sale. A copy of the contract is on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

The buildings and appurtenances thereto will be sold to the highest bidder, who must pay immediately cash or a certified check drawn to the order of the Comptroller of The City of New York, and must either give a certified check or cash in half the amount of the purchase price as security for the faithful performance of the terms and conditions of the sale and contract.

Where the amount of the purchase price does not equal or exceed the sum of fifty dollars the sum of fifty dollars shall be the amount of the security deposited. This security must be deposited within forty-eight hours after the sale, and may, at any time after the expiration of the contract period, be applied by the City to the cost of completing any work required under the contract but unfinished at the expiration of the contract period.

All the material of the buildings, sheds, walks, structures and cellars of whatsoever nature, with their exterior and interior fixtures, appurtenances and foundations of all kinds, except the sidewalk and curb in front of said buildings, existing within the described area and down to the level of the cellar bottom, shall be torn down and removed from the premises. None of the dirt, debris or waste resulting from demolition shall be allowed to remain on the premises, except old mortar or plaster only, which may be left, but not higher at any point than two (2) feet below the curb opposite that point; also the foundation walls of all classes shall be taken down only to a plane whose elevation shall be the level of the curb in front of the building.

The purchaser at the sale shall also withdraw and remove all abandoned water taps and old service mains, and in place thereof cause to be inserted a brass plug in the main water pipe in the street, in compliance with the rules and regulations of the Department of Water Supply, Gas and Electricity, and furnish the Department of Finance with a certificate from the Department of Water Supply, Gas and Electricity that this has been performed.

The purchaser at the sale shall also remove all house sewer connections to the main sewer in the street, and the opening in main sewer in street shall be properly closed, in compliance with the directions of the Bureau of Sewers, Borough of Manhattan, and furnish the Department of Finance with a certificate from the Bureau of Sewers that said work has been properly performed.

The permits for all openings in the street to be obtained by and at the expense of the purchaser of the building.

Failure to remove said buildings or appurtenances, or any portion thereof, within sixty days from the day of sale will work forfeiture of ownership of such buildings or appurtenances or portion thereof, and the bidder's standing, and the bidder's assent to the above conditions being understood to be implied by the act of bidding, and The City of New York will without notice to the purchaser, cause the same to be removed and the costs and expenses thereof charged against the security above mentioned.

The work of removal must be carried on in every respect in a thorough and workmanlike manner, and must be completed within sixty days from the day of sale, and the successful bidder will provide and furnish all materials of labor and machinery necessary thereto, and will place proper and sufficient guards and fences and warning signs by day and night for the prevention of accidents, and will indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against any and all suits and actions, claims and demands of every name and description brought against it, against any of them, and against and from all damages and costs to which it, they, or any of them, be put by reason of injury to the person or property of another resulting from negligence or carelessness in the performance of the work, or in guarding the same, or from any improper or defective materials or machinery, implements or appliances used in the removal of the said buildings.

Party walls and fences, when existing against adjacent property not sold, shall not be taken down. All furrings, plaster, chimneys, projecting brick, etc., on the faces of such party walls are to be taken down and removed. The walls shall be made permanently self-supporting, beam holes, etc., bricked up, and the wall pointed and made to exclude wind and rain and present a clean exterior. The roofs of the adjacent buildings shall be properly flashed and painted and made water tight where they have been disturbed by the operations of the contractor.

The Comptroller of The City of New York reserves the right on the day of sale to withdraw from sale any of the buildings, parts of buildings and machinery included therein, or to reject any and all bids.

H. A. METZ,

Comptroller.

City of New York, Department of Finance,

Comptroller's Office, January 22, 1908.

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NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF the Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessment for LOCAL IMPROVEMENTS in the BOROUGH OF MANHATTAN:

TWELFTH WARD, SECTION 8.

AMSTERDAM AVENUE—SEWER, east side, between One Hundred and Eighty-first and One Hundred and Eighty-sixth streets. Area of assessment: East side of Amsterdam avenue, from One Hundred and Eighty-first street to One Hundred and Eighty-eighth street.

That the same was confirmed by the Board of Assessors on January 21, 1908, and entered on January 21, 1908, in the Record of Titles and Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessment, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of 7 per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides: "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears

of Taxes and Assessments and of Water Rents, Room H, No. 280 Broadway, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 21, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of 7 per centum per annum from the date when above assessment became a lien to the date of payment.

HERMAN A. METZ,

Comptroller.

City of New York, Department of Finance,

Comptroller's Office, January 21, 1908.

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NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF the Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessment for LOCAL IMPROVEMENTS in the BOROUGH OF RICHMOND:

FIRST WARD.

REGULATING AND GRADING THE ROADWAYS OF BIDWELL AVENUE, from Watchog road to Indiana avenue; DEMOREST AVENUE, from Lathrop avenue to Watchog road; DICKIE AVENUE, from Columbus place to Indiana avenue; GARRISON AVENUE, from Neal Dow avenue to Wooley avenue; LATHROP AVENUE, from Fisk avenue to Wooley avenue; LEONARD AVENUE, from Jewett avenue to Wooley avenue; LIVERMORE AVENUE, from Watchog road to Indiana avenue; MAINE AVENUE, from Willard avenue to Wooley avenue; SPRINGFIELD AVENUE, from Willard avenue to Bidwell avenue, and WOOLEY AVENUE, from Watchog road to Indiana avenue.

Area of assessment: Both sides of Bidwell avenue, from Watchog road to Indiana avenue; both sides of Demarest avenue, from Lathrop avenue to Watchog road; both sides of Dickie avenue, from Columbus place to Indiana avenue; both sides of Garrison avenue, from Neal Dow avenue to Wooley avenue; both sides of Lathrop avenue, from Fisk avenue to Wooley avenue; both sides of Leonard avenue, from Jewett avenue to Wooley avenue; both sides of Livermore avenue, from Watchog road to Indiana avenue; both sides of Maine avenue, from Willard avenue to Wooley avenue; both sides of Springfield avenue, from Willard avenue to Bidwell avenue; both sides of Wooley avenue, from Watchog road to Indiana avenue, and to the extent of half the block at the intersecting streets and avenues.

That the same was confirmed by the Board of Assessors January 21, 1908, and entered on January 21, 1908, in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessment, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof on the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides: "An assessment shall become a lien upon the real estate affected thereby, ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, at Borough Hall, St. George, Borough of Richmond, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 21, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when above assessment became a lien to the date of payment.

HERMAN A. METZ,

Comptroller.

City of New York, Department of Finance,

Comptroller's Office, January 21, 1908.

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CORPORATION SALE OF BUILDINGS, MACHINERY AND APPURTENANCES THERETO ERECTED UPON PROPERTY OWNED BY THE CITY OF NEW YORK.

PUBLIC NOTICE IS HEREBY GIVEN that the Commissioners of the Sinking Fund, by virtue of the powers vested in them by law, will offer for sale at public auction the buildings, parts of buildings and machinery and appurtenances thereto standing upon property owned by The City of New York, acquired for the use of the terminal on the Manhattan side of the Brooklyn Bridge, the said buildings being situated in the

Borough of Manhattan.

and being more particularly described as follows:

Being the remaining buildings which were not sold at the sale held on Monday, April 1, 1907, upon the block bounded by the northerly side of Tryon row, the easterly side of Centre street and the southerly side of Chambers street, and the northwesterly side of Park row, Borough of Manhattan, all of which property is situated in Block 121 on the land map in the County of New York. The following is the list of machinery in the building known as the Staats Zeitung Building:

Basement.

Two horizontal steam boilers, each 48 inches by 15 feet, with 47 flues, 3½ inches in diameter, full cast iron fronts and usual furnishings, including grates.

(Thirty-five years old), grates are loose "pull out" bars of wrought iron.

(No brickets as flues connect direct to brick chimney.)

Brick work setting (in battery) for above two boilers.

One horizontal steam boiler, 66 inches by 16 feet, with 70 flues 3 inches in diameter, full cast iron fronts and usual furnishings, including grates.

(Sixteen years old), grates same as above two. Brick work setting for this boiler.

Sheet iron smoke pipe from the boiler to chimney.

One "Cameron" steam pump, size 5, 7 inches by 3½ inches by 12 inches, brass lined, etc., erected on wooden shelf on iron brackets to sidewalk wall.

Two "Worthington" water meters, 2-inch size, both erected on wooden shelves on iron brackets to sidewalk walls.

One "Berryman" type feed water heater, 10-inch exhaust pipe, including erection, covering of this heater.

One hot water receiving tank, 40 inches by 6 feet, about one-fourth of diameter down in basement floor, horizontal.

One "Cameron" steam pump, size 7, 10 inches by 5 inches by 13 inches, brass lining, etc., mounted on brick pier, with granite stone top (22 years old).

One "Cameron" steam pump, No. 7, same as above (12 years old).

One "Wm. Wright" stationary engine, 16-inch by 32-inch cylinder, fly wheel 10 feet by 24 inches (12 years old).

Brick foundation, including pier for pillow block and pit for fly wheel, granite stone cap to walls.

One pair "Wm. Wright" stationary engine, 12-inch by 24-inch cylinder, no pillow blocks, two main pulleys 7 feet by 13 inches, one fly wheel 8 feet by 6 inches (23 years old).

Brick foundation for this pair of engines, shallow pit for fly wheel and stone cap for walls.

One belt tightener for 24-inch main belt from 16-inch engine, hung to building column.

One belt tightener for 20-inch belt, from main line shaft to shaft under floor.

One "Clayton" air compressor, duplex and steam driven, 5 inches by 5 inches by 6 inches, fly wheel in centre.

Two reservoirs (for air storage) in connection with above compressor.

One main line of shafting (overhead), takes belts from three engines, including one friction clutch pulley, one friction cut-off coupling, pulleys, hangers and erecting.

Enclosure around 20-inch belt from above shaft.

One line of shafting (to drive presses) in pit under floor, including pillow blocks, couplings, pulleys and erecting.

Pit for this line of shafting, consisting of brick walls, brick piers, with stone caps for bearings and erecting.

Three pits for belts from line shaft to printing presses.

One "Worthington" steam pump, 4½ inches by 2½ inches by 4 inches.

One "Kieley" No. 2, pump governor, reducing valve, piping, etc., foundations and erecting.

One ink pumping outfit, consisting of one "Knowles" single steam pump, 4 inches by 4 inches by 5 inches; one tank and piping to connect this pump to three printing presses.

One 6-inch by 65-foot artesian well; supplies two tanks on top floor (one tank for elevators), one tank for general house supply.

Two disc ventilating fans, 36 inches in diameter, in iron castings (one has C shaft), both mounted on wooden shelves in window spaces.

One New York Safety Steam Power Company vertical engine (drives above two fans), 5½ inches by 7 inches, erected.

Two "Nason Manufacturing Company" pneumatic elevators (life about 16 feet); two cages, 26 inches by 45 inches by 19 inches (put up in pair), (carry papers from pressroom to shipping room).

One "Fairbanks" dormant scales, platform 48 inches by 50 inches (2,000 pounds), let down into cement floor.

Pipe guard railing for two pneumatic elevators, including wire panels.

Pipe guard railing around air compressor.

Pipe guard railing around elevator pump.

Pipe guard railing around 16-inch engine; wire paneling for 16-inch engine.

Railing at two 12-inch engines.

Pipe guard railing for two Ball & Wood engines (electric plant).

Leather belting in basement from engines to line shafting; shafting to presses and from engines to dynamos.

Miscellaneous piping, fittings, valves, etc., connecting boilers, engines, steam pumps, elevator pumps, electric plant engines, exhaust pipes, feed water heater and connections for steam heating; includes one 10-inch back pressure valve, one grease extractor, lot of steam traps and erecting in basement only.

Covering or jacketing of above piping and fittings.

"Otis Elevator Company" equipment, consisting of one passenger elevator (2,500 pounds), five-story lift, about 70 feet, cylinder 16 inches (hydraulic system).

One elevator from press room to stereotype room on fifth story; lift about 90 feet; cylinder, 8 inches.

One sidewalk elevator 20-foot lift, 13-inch plunger.

One pump, 16 inches by 10¼ inches by 10 inches.

One pump, 14 inches by 8½ inches by 10 inches.

One tank in basement.

One tank in fifth story.

Entire plant installed and including pumps, tanks, piping, valves, etc., except steam and exhaust for pumps; also foundations, except support for tank on fifth story.

Miscellaneous piping, fittings, valves, etc., above roof and on fifth story, including exhaust pipe heads, exhaust pipes from basement to roof; steam heating supply pipes, basement to fifth story; steam and exhaust pipes for three vertical engines on fifth story.

Miscellaneous radiators throughout building, including steam and exhaust valves and pipe connections for these radiators and erecting.

On fifth story in composing room:

Two "New York Safety Steam Power Company" vertical engines, 8 inches by 9 inches, pulley wheel 42 inches by 9 inches, cast base.

Foundation for these; wrought iron bars secured to building I beams.

In stereotype room:

One engine same as above.

Zinc pan on floor, under and around the above two engines.

Pipe guard railing around the above two engines and on motor platform.

Leather belting in fifth story.

One house supply water tank, 6 feet 5 inches wide by 11 feet long by 5 feet 6 inches high (5-16-inch plate).

Columns I beams, etc., for supporting this tank and for supporting electric motor.

One "Bullock" electric motor for driving line shaft; belted type,

One exhaust fan, etc., including all straps, hangers, etc.
 Electrical plant entire building; includes two Ball & Wood engines, two generators, switchboards, meters, all wiring, combination fixtures with lamps, globes, reflectors, etc.
 Six pairs "Cooper Hewitt" series lamps.
 Four "Cooper Hewitt" lamps (3 1/2-ampere).
 Eight electric fans, 1-12 horse power each.
 Nine electric fans, 1-6 horse power each.
 Pursuant to the resolutions of the Commissioners of the Sinking Fund, adopted at a meeting held March 13, 1907, the above-described buildings, appurtenances thereto, and machinery will be held by direction of the Comptroller on

MONDAY, FEBRUARY 3, 1908,

at 10 a. m., on the premises, upon the following

TERMS AND CONDITIONS.

It being understood that the purchasers at the time of the auction sale, when the said bid is accepted by the City, shall execute a contract with The City of New York for the proper compliance with these terms and conditions, which contract shall provide for liquidated damages at so much per day for each and every day the removal of the buildings, etc., remains incomplete after the expiration of sixty days from the day of sale. A copy of the contract is on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

The buildings and appurtenances thereto will be sold to the highest bidder, who must pay immediately cash or a certified check drawn to the order of the Comptroller of The City of New York, and must either give a certified check or cash in half the amount of the purchase price as security for the faithful performance of the terms and conditions of the sale and contract. Where the amount of the purchase price does not equal or exceed the sum of fifty dollars, the sum of fifty dollars shall be the amount of the security deposited. This security must be deposited within forty-eight hours after the sale, and may at any time after the expiration of the contract period be applied by the City to the cost of completing any work required under the contract but unfinished at the expiration of the contract period.

All the material of the buildings, sheds, walks, structures and cellars of whatsoever nature, with their exterior and interior fixtures, appurtenances and foundations of all kinds, except the sidewalk and curb in front of said buildings, existing within the described area and down to the level of the cellar bottom, shall be torn down and removed from the premises. None of the dirt, debris or waste resulting from demolition shall be allowed to remain on the premises, except old mortar or plaster only, which may be left but not higher at any point than two (2) feet below the curb opposite that point; also the foundation walls of all classes shall be taken down only to a plane whose elevation shall be the level of the curb in front of the building.

The purchaser at the sale shall also withdraw and remove all abandoned water taps and old service mains, and in place thereof cause to be inserted a brass plug in the main water pipe in the street, in compliance with the rules and regulations of the Department of Water Supply, Gas and Electricity, and furnish the Department of Finance with a certificate from the Department of Water Supply, Gas and Electricity that this has been performed.

The purchaser at the sale shall also remove all house sewer connections to the main sewer in the street, and the opening in main sewer in street shall be properly closed, in compliance with the directions of the Bureau of Sewers, Borough of Manhattan, and furnish the Department of Finance with a certificate from the Bureau of Sewers that said work has been properly performed.

The permits for all openings in the street to be obtained by and at the expense of the purchaser of the building.

Failure to remove said buildings or appurtenances, or any portion thereof, within sixty days from the day of sale will work forfeiture of ownership of such buildings or appurtenances or portion as shall then be left standing, and the bidder's assent to the above conditions being understood to be implied by the act of bidding, and The City of New York will, without notice to the purchaser, cause the same to be removed and the costs and expenses thereof charged against the security above mentioned.

The work of removal must be carried on in every respect in a thorough and workmanlike manner and must be completed within sixty days from the day of sale, and the successful bidder will provide and furnish all materials of labor and machinery necessary thereto, and will place proper and sufficient guards and fences and warning signs by day and night for the prevention of accidents, and will indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against any and all suits and actions, claims and demands of every name and description brought against it, them or any of them, and against and from all damages and costs to which it, they, or any of them be put by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work, or in guarding the same, or from any improper or defective materials or machinery, implements or appliances used in the removal of the said buildings.

Party walls and fences, when existing against adjacent property not sold, shall not be taken down. All furnishings, plaster, chimneys, projecting brick, etc., on the faces of such party walls are to be taken down and removed. The walls shall be made permanently self-supporting, beam-holes, etc., bricked up, and the wall pointed and made to exclude wind and rain and present a clean exterior. The roofs of the adjacent buildings shall be properly flashed and painted and made watertight where they have been disturbed by the operations of the contractor.

The Comptroller of The City of New York reserves the right on the day of sale to withdraw from sale any of the buildings, parts of buildings and machinery included therein, or to reject any and all bids.

H. A. METZ,
Comptroller.

City of New York, Department of Finance,
Comptroller's Office, January 14, 1908.

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NOTICE OF ASSESSMENTS FOR OPENING STREETS AND PARKS.

IN PURSUANCE OF SECTION 1005 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice of the confirmation by the Supreme Court, and the entering in the Bureau for the Collection of Assessments and Arrears of the assessments for OPENING AND ACQUIRING TITLE to the following named avenue and street in the BOROUGH OF THE BRONX:

TWENTY-FOURTH WARD, SECTION 11.
 VANDERBILT AVENUE WEST—OPENING from East One Hundred and Seventy-third street

to Pelham avenue. Confirmed November 9, 1906; entered January 17, 1908. Area of assessment includes all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, and being that part of Old Quarry road or Valentine avenue or East One Hundred and Seventy-eighth street, Block 3028, bounded by Webster avenue, Vanderbilt Avenue (Park avenue) West, East One Hundred and Seventy-eighth street and East One Hundred and Seventy-ninth street and known as Lot No. 1.

WEST ONE HUNDRED AND SEVENTY-SIXTH STREET—OPENING, from Sedgwick avenue to the easterly line of the New York and Putnam Railroad, and from the westerly line of the Spuyten Duyvil and Port Morris Railroad to the Harlem river. Confirmed November 11, 1907; entered January 17, 1908. Area of assessment includes all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz.:

Beginning at a point formed by the intersection of the northeasterly line of Washington Bridge with the northwesterly line of Aqueduct avenue; running thence northwesterly along said northeasterly line of Washington Bridge to its intersection with a line parallel to and distant one hundred and one hundred (100) feet northwesterly of the northwesterly line of Undercliff avenue; thence northeasterly along said parallel line to its intersection with the middle line of the blocks between Washington Bridge and West One Hundred and Seventy-sixth street; thence northwesterly along said middle line to its intersection with the United States pierhead and bulkhead line of the Harlem river; thence northeasterly along said pierhead and bulkhead line to its intersection with a line at right angles to the pierhead and bulkhead line where same intersects, on the southeasterly line of Cedar avenue, a line parallel to and distant one hundred (100) feet northwesterly of the northwesterly line of Sedgwick avenue; thence southeasterly along said last mentioned line to its intersection with a line parallel to and distant one hundred (100) feet northwesterly of the northwesterly line of Sedgwick avenue; thence northeasterly along said parallel line to its intersection with a line midway between West One Hundred and Seventy-seventh street and West One Hundred and Seventy-eighth street and also through a point on the southeasterly line of the Croton Aqueduct midway between West One Hundred and Seventy-seventh street and Burnside avenue; thence southeasterly along said last mentioned line to its intersection with a line parallel to and distant one hundred (100) feet northwesterly of the northwesterly line of Andrews avenue; thence southwesterly along said parallel line to its intersection with a line parallel to and distant one hundred (100) feet northwesterly of the northwesterly line of West One Hundred and Seventy-seventh street; thence southeasterly along said parallel line to its intersection with the northwesterly line of Aqueduct avenue; thence southwesterly along said northwesterly line of Aqueduct avenue to the point or place of beginning.

The above entitled assessments were entered on the date hereinbefore given in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents. Unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessment interest will be collected thereon, as provided in section 1006 of the Greater New York Charter.

Said section provides that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record." "The above assessments are payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, in the Municipal Building, corner of One Hundred and Seventy-seventh street and Third avenue, Borough of The Bronx, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m.; and all payments made thereon on or before March 17, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when above assessments became liens to the date of payment."

HERMAN A. METZ,
Comptroller.

City of New York, Department of Finance,
Comptroller's Office, January 17, 1908.

j18,j31

NOTICE OF ASSESSMENTS FOR OPENING STREETS AND PARKS.

IN PURSUANCE OF SECTION 1005 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice of the confirmation by the Supreme Court, and the entering in the Bureau for the Collection of Assessments and Arrears of the assessment for OPENING AND ACQUIRING TITLE to the following named street in the BOROUGH OF MANHATTAN:

TWELFTH WARD, SECTIONS 7 AND 8.

EDGEcombe ROAD—OPENING, from One Hundred and Fifty-fifth street to a point in the easterly line of Tenth avenue, opposite One Hundred and Seventy-fifth street. Confirmed December 4, 1907. Entered January 17, 1908. Area of assessment includes all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of Manhattan, in The City of New York, which, taken together, are bounded and described as follows, viz.:

Beginning at a point on a line drawn parallel to One Hundred and Eighty-first street distant 100 feet northerly from the northerly side thereof, and distant also 100 feet westerly from the westerly side of Audubon avenue; thence easterly along said line drawn parallel to One Hundred and Eighty-first street to a line drawn parallel to Amsterdam avenue and distant 100 feet easterly from the easterly side thereof; thence southerly along said line drawn parallel to Amsterdam avenue to the southerly exterior line of the reservoir; thence easterly along the southerly exterior line of the reservoir and said line produced to the easterly side of the Croton Aqueduct; thence southerly along the easterly side of the Croton Aqueduct to the prolongation easterly of the centre line of One Hundred and Fifty-eighth street; thence easterly along said prolongation to the centre line of the Harlem River driveway; thence southerly along said centre line of the Harlem River driveway to the

centre line of Edgecombe avenue; thence southerly along said centre line of Edgecombe avenue to the northerly side of One Hundred and Forty-fifth street; thence westerly along said northerly side of One Hundred and Forty-fifth street to a line drawn parallel to Avenue St. Nicholas and distant 100 feet westerly from the westerly side thereof; thence northerly along said line to the centre line of One Hundred and Fifty-eighth street; thence northerly along the middle line of the blocks between Avenue St. Nicholas and Amsterdam avenue to the middle line of blocks between One Hundred and Sixtieth street and One Hundred and Sixty-first street; thence westerly along the middle line of the blocks between One Hundred and Sixtieth street and One Hundred and Sixty-first street to a line drawn parallel to Amsterdam avenue and distant 100 feet westerly from the westerly side thereof; thence northerly along said line drawn parallel to Amsterdam avenue and distant 100 feet westerly from the westerly side thereof to the middle line of the blocks between One Hundred and Sixty-sixth street and One Hundred and Sixty-seventh street; thence westerly along said middle line of the blocks between One Hundred and Sixty-sixth street and One Hundred and Sixty-seventh street to a line drawn parallel to Audubon avenue and distant 100 feet westerly from the westerly side thereof; thence northerly along said line to the point or place of beginning.

The above entitled assessment was entered on the date hereinbefore given in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents. Unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessments interest will be collected thereon, as provided in section 1006 of the Greater New York Charter.

Said section provides that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessments to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears, at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, Room 85, No. 280 Broadway, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 17, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when above assessment became a lien to the date of payment."

HERMAN A. METZ,
Comptroller.

City of New York, Department of Finance,
Comptroller's Office, January 17, 1908.

j18,j31

NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessments for LOCAL IMPROVEMENTS in the BOROUGH OF THE BRONX:

TWENTY-FOURTH WARD, SECTION 12.

SUMMIT PLACE—SEWER AND APPURTENANCES, between Heath avenue and Boston avenue. Area of assessment: South side of Summit place, between Heath avenue and Boston avenue, and block bounded by Summit place, Heath and Boston avenues.

That the same was confirmed by the Board of Revision of Assessments January 16, 1908, and entered January 16, 1908, in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessments interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, in the Municipal Building, corner of One Hundred and Seventy-seventh street and Third avenue, Borough of The Bronx, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 17, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when the above assessment became a lien to the date of payment."

HERMAN A. METZ,
Comptroller.

City of New York, Department of Finance,
Comptroller's Office, January 16, 1908.

j17,j30

NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessment for LOCAL IMPROVEMENTS in the BOROUGH OF MANHATTAN:

TWELFTH WARD, SECTION 7.

ONE HUNDRED AND TWENTY-FIFTH STREET—SEWER, between Broadway and Claremont avenue. Area of assessment: Both sides of West One Hundred and Twenty-fifth street, from Broadway to Claremont avenue.

That the same was confirmed by the Board of Revision of Assessments on January 16, 1908, and entered on January 16, 1908, in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days

after the date of said entry of the assessments, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, Room H, No. 280 Broadway, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and all payments made thereon on or before March 16, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when above assessment became a lien to the date of payment."

HERMAN A. METZ,
Comptroller.

City of New York, Department of Finance,
Comptroller's Office, January 16, 1908.

j17,j30

NOTICE OF SALE OF LANDS AND TENEMENTS WITHIN THAT PART OF THE CITY OF NEW YORK NOW KNOWN AS THE BOROUGH OF RICHMOND, FOR UNPAID TAXES AND ASSESSMENTS.

THE CITY OF NEW YORK, DEPARTMENT OF FINANCE, BUREAU FOR THE COLLECTION OF ASSESSMENTS AND ARREARS OF TAXES, ASSESSMENTS AND WATER RENTS, STEWART BUILDING, No. 280 BROADWAY, BOROUGH OF MANHATTAN, NEW YORK CITY, August 10, 1907.

UNDER THE DIRECTION OF HERMAN A. Metz, Comptroller of The City of New York, the undersigned hereby gives public notice pursuant to the provisions of section 1027 of the Greater New York Charter:

That the respective owners of the lands and tenements within that part of The City of New York now known as the Borough of Richmond, on which taxes have been laid and confirmed according to law by The City of New York for the years 1899, 1900, 1901, 1902 and 1903, including taxes on the real estate of corporations for the said years and taxes on the special franchises of corporations for the years 1900, 1901, 1902 and 1903, and which now remain due and unpaid:

And also the respective owners of all lands and tenements in The City of New York, situated in the borough aforesaid, on which the assessments have been laid according to law by the said City of New York for the years 1899, 1900, 1901, 1902, 1903 and 1904, and which now remain due and unpaid, are required to pay the amount of the said taxes and assessments so remaining due and unpaid, with the interest thereon at the rate of seven (7) per centum per annum, from the time when the same became due to the time of payment, together with the charges of this notice and advertisement, to the Collector of Assessments and Arrears, at his office in the Borough Hall, New Brighton, in the Borough of Richmond, in The City of New York.

And that, if default shall be made in such payment, such lands and tenements will be sold at public auction, in Room 129, Borough Hall, New Brighton, in the Borough of Richmond, in The City of New York, on

WEDNESDAY, NOVEMBER 20, 1907,

at 10 o'clock in the forenoon of that day, for the lowest term of years at which any person shall offer to take the same, in consideration of advancing the said taxes or assessments, as the case may be, and the interest thereon as aforesaid, to the time of sale, together with the charges of this notice and advertisement, and all other costs and charges accrued thereon; and that such sale will be continued from time to time until all the lands and tenements so advertised for sale shall be sold.

Notice is hereby further given that a detailed statement of such taxes and assessments and the ownership of the property taxed and on which such taxes and assessments remain unpaid, is published in a pamphlet and that copies of the said pamphlet are deposited in the offices of the Collector of Assessments and Arrears in the Boroughs of Manhattan and Richmond, and will be delivered to any person applying for the same.

DANIEL MOYNAHAN,
Collector of Assessments and Arrears
of The City of New York.

The foregoing sale will continue on
 WEDNESDAY, FEBRUARY 5, 1908.

at 10 o'clock a. m., in Room 129, Borough Hall,
 Borough of Richmond.

DANIEL MOYNAHAN,
Collector of Assessments and Arrears.

j17,f5

NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF THE Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessment for LOCAL IMPROVEMENTS in the BOROUGH OF MANHATTAN:

TWELFTH WARD, SECTION 8 (MARBLE HILL).

TERRACE VIEW AVENUE (north)—PAVING, CURBING AND RECURRING, from Broadway to the westerly side of Jansen avenue. Area of assessment: Both sides of Terrace View avenue (north), from Broadway to the westerly side of Jansen avenue, and to the extent of half the block at the intersecting streets and avenues.

WICKER PLACE—PAVING, CURBING AND RECURRING, from Jansen avenue to Kingsbridge avenue. Area of assessment: Both sides of Wicker place (Two Hundred and Twenty-seventh street), from Jansen avenue to Kingsbridge avenue (Marble Hill avenue), and to the extent of half the block at the intersecting streets and avenues.

VAN CORLEAR PLACE—PAVING, CURBING AND RECURRING, from a line 175 feet west of Kingsbridge avenue, southerly around the circle and northerly to Wicker place. Area of assessment: Both sides of Van Corlear place, from Wicker place to Kingsbridge avenue, and to the extent of half the block at the intersecting streets and avenues.

That the same were confirmed by the Board of Assessors on January 14, 1908, and entered on January 14, 1908, in the Board of Titles of

Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessments, interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of 7 per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides: "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessments are payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, Room H, No. 280 Broadway, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 14, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of 7 per centum per annum from the date when above assessments became liens to the date of payment.

HERMAN A. METZ,

City of New York, Department of Finance,
Comptroller's Office, January 14, 1908.

j16,29

NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF the Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessments for LOCAL IMPROVEMENTS in the BOROUGH OF THE BRONX:

TWENTY-THIRD WARD, SECTION 10.

RECEIVING BASINS and appurtenances at the northeast and northwest corners of Austin place and East One Hundred and Forty-fourth street, and on East One Hundred and Forty-fourth street, south side, opposite Austin place. Area of assessment: North side of One Hundred and Forty-fourth street, from Timpan place to Whitlock avenue; both sides of Austin place, from One Hundred and Forty-fourth to One Hundred and Forty-seventh street; triangular lot bounded by Southern boulevard, One Hundred and Forty-fourth street and Whitlock avenue.

—that the same was confirmed by the Board of Assessors January 14, 1908, and entered January 14, 1908, in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessments interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof in the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides: "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessment is payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, in the Municipal Building, corner of One Hundred and Seventy-seventh street and Third avenue, Borough of The Bronx, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 14, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when the above assessment became a lien to the date of payment.

HERMAN A. METZ,

City of New York, Department of Finance,
Comptroller's Office, January 14, 1908.

j16,29

CORPORATION SALE OF BUILDINGS AND APPURTENANCES THERETO ON CITY REAL ESTATE.

AT THE REQUEST OF THE PRESIDENT of the Borough of Manhattan, public notice is hereby given that the Commissioners of the Sinking Fund, by virtue of the powers vested in them by law, will offer for sale at public auction all the buildings, parts of buildings, etc., standing within the lines of property owned by The City of New York, acquired for street opening purposes, in the

Borough of Manhattan.

Being the buildings, or parts of buildings, within the area of the proposed Delancey street extension, located between Broome and Spring streets, and extending from Elizabeth to Marion street, in the Borough of Manhattan, which were not sold on Monday, June 24, 1907, and which are more particularly described as follows: Nos. 7, 9, 11 Marion street, and from Nos. 8 to 22 Marion street (entire buildings), Nos. 196 to 204 Mulberry street (31 square feet), No. 188 Mulberry street (882 square feet), No. 185 Mott street (51 square feet), Nos. 156 to 162 Elizabeth street (entire buildings and machinery), which are more particularly described on a certain map on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

Pursuant to a resolution of the Commissioners of the Sinking Fund adopted at a meeting held June 5, 1907, the sale of the above described buildings and appurtenances thereto will be held by direction of the Comptroller on

WEDNESDAY, JANUARY 29, 1908

at 10 a. m., on the premises, upon the following

TERMS AND CONDITIONS.

It being understood that the purchasers at the time of the auction sale, when the said bid is accepted by the City, shall execute a contract with The City of New York for the proper compliance with these terms and conditions, which contract shall provide for liquidated damages at so much per day for each and every day the removal of the buildings, etc., remains incomplete

after the expiration of thirty days from the day of sale. A copy of the contract is on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

The buildings and appurtenances thereto will be sold to the highest bidder, who must pay immediately cash or a certified check drawn to the order of the Comptroller of The City of New York, and must either give a certified check or cash in half the amount of the purchase price as security for the faithful performance of the terms and conditions of the sale and contract. Where the amount of the purchase price does not equal or exceed the sum of fifty dollars the sum of fifty dollars shall be the amount of the security deposited. This security must be deposited within forty-eight hours after the sale, and may at any time after the expiration of the contract period be applied by the City to the cost of completing any work required under the contract but unfinished at the expiration of the contract period.

All the material of the buildings, sheds, walks, structures and cellars of whatsoever nature, with their exterior and interior fixtures, appurtenances and foundations of all kinds, except the sidewalk and curb in front of said buildings, existing within the described area and down to the level of the cellar bottom, shall be torn down and removed from the premises. None of the dirt, debris or waste resulting from demolition shall be allowed to remain on the premises, except old mortar or plaster only, which may be left, but not higher at any point than two (2) feet below the curb opposite that point; also the foundation walls of all classes shall be taken down only to a plane whose elevation shall be the level of the curb in front of the building.

The purchaser at the sale shall also withdraw and remove all abandoned water taps and old service mains, and in place thereof cause to be inserted a brass plug in the main water pipe in the street in compliance with the rules and regulations of the Department of Water Supply, Gas and Electricity, and furnish the Department of Finance with a certificate from the Department of Water Supply, Gas and Electricity that this has been performed.

The purchaser at the sale shall also remove all house sewer connections to the main sewer in the street, and the opening in main sewer in street shall be properly closed in compliance with the directions of the Bureau of Sewers, Borough of Manhattan, and furnish the Department of Finance with a certificate from the Bureau of Sewers that said work has been properly performed.

The permits for all openings in the street to be obtained by and at the expense of the purchaser of the building.

Failure to remove said buildings or appurtenances, or any portion thereof, within thirty days from the day of sale will work forfeiture of ownership of such buildings or appurtenances or portion as shall then be left standing, and the bidder's assent to the above conditions being understood to be implied by the act of bidding, and The City of New York will, without notice to the purchaser, cause the same to be removed and the costs and expenses thereof charged against the security above mentioned.

The work of removal must be carried on in every respect in a thorough and workmanlike manner and must be completed within thirty days from the day of sale, and the successful bidder will provide and furnish all materials of labor and machinery necessary thereto, and will place proper and sufficient guards and fences and warning signs by day and night for the prevention of accidents, and will indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against any and all suits and actions, claims and demands of every name and description brought against it, them or any of them, and against and from all damages and costs to which it, they or any of them be put by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work, or in guarding the same, or from any improper or defective materials or machinery, implements or appliances used in the removal of the said buildings.

Party walls and fences, when existing against adjacent property not sold, shall not be taken down. All furrings, plaster, chimneys, projecting brick, etc., on the faces of such party walls are to be taken down and removed. The walls shall be made permanently self-supporting, beam-holes, etc., bricked up, and the wall pointed and made to exclude wind and rain and present a clean exterior. The roofs of the adjacent buildings shall be properly flashed and painted and made water-tight where they have been disturbed by the operation of the contractor.

The Comptroller of The City of New York reserves the right on the day of sale to withdraw from sale any of the buildings, parts of buildings and machinery included therein, or to reject any and all bids.

H. A. METZ,

City of New York, Department of Finance,
Comptroller's Office, January 14, 1908.

j15,29

NOTICE TO PROPERTY OWNERS.

IN PURSUANCE OF SECTION 1018 OF the Greater New York Charter, the Comptroller of The City of New York hereby gives public notice to all persons, owners of property, affected by the following assessments for LOCAL IMPROVEMENTS in the BOROUGH OF MANHATTAN:

TWELFTH WARD, SECTION 7.

RESTORING ASPHALT PAVEMENT on MANHATTAN AVENUE, east side, between Cathedral parkway and One Hundred and Eleventh street, known as Lots Nos. 1, 3, 27, 28 and 30, in Block 1846.

RESTORING ASPHALT PAVEMENT on CONVENT AVENUE, east side, between One Hundred and Twenty-eighth and One Hundred and Twenty-ninth streets, and known as Lot No. 29, in Block 1968.

These assessments were certified to the Collector of Assessments and Arrears, under the provisions of section 391 of the Greater New York Charter.

—that the same were entered on January 13, 1908, in the Record of Titles of Assessments, kept in the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the date of said entry of the assessments interest will be collected thereon, as provided in section 1019 of said Greater New York Charter.

Said section provides, in part, that "If any such assessment shall remain unpaid for the period of sixty days after the date of entry thereof on the said Record of Titles of Assessments, it shall be the duty of the officer authorized to collect and receive the amount of such assessment to charge, collect and receive interest thereon at the rate of seven per centum per annum, to be calculated to the date of payment from the date when such assessment became a lien, as provided by section 159 of this act."

Section 159 of this act provides: "An assessment shall become a lien upon the real estate affected thereby ten days after its entry in the said record."

The above assessments are payable to the Collector of Assessments and Arrears at the Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents, Room H, No. 280 Broadway, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m., and all payments made thereon on or before March 13, 1908, will be exempt from interest, as above provided, and after that date will be subject to a charge of interest at the rate of seven per centum per annum from the date when above assessments became liens to the date of payment.

HERMAN A. METZ,

City of New York, Department of Finance,
Comptroller's Office, January 13, 1908.

j15,28

CORPORATION SALE OF BUILDINGS AND APPURTENANCES THERETO ON CITY REAL ESTATE.

AT THE REQUEST OF THE BOARD OF Education, public notice is hereby given that the Commissioners of the Sinking Fund, by virtue of the powers vested in them by law, will offer for sale at public auction all the buildings, parts of buildings, etc., now standing upon property owned by The City of New York, acquired for school purposes in the

Borough of The Bronx.

Being all those buildings, parts of buildings, fences, etc., on the southwest corner of Prospect avenue and One Hundred and Seventy-sixth street, Borough of The Bronx, and which are more particularly described on a certain map on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

Pursuant to a resolution of the Commissioners of the Sinking Fund, adopted at a meeting held December 18, 1907, the sale of the above described buildings and appurtenances thereto will be held by direction of the Comptroller on

TUESDAY, JANUARY 28, 1908,

at 10 a. m., on the premises, upon the following

TERMS AND CONDITIONS.

It being understood that the purchasers at the time of the auction sale, when the said bid is accepted by the City, shall execute a contract with The City of New York for the proper compliance with these terms and conditions, which contract shall provide for liquidated damages at so much per day for each and every day the removal of the buildings, etc., remains incomplete after the expiration of sixty days from the day of sale. A copy of the contract is on file in the office of the Collector of City Revenue, Department of Finance, Room 141, No. 280 Broadway, Borough of Manhattan.

The buildings and appurtenances thereto will be sold to the highest bidder, who must pay immediately cash or a certified check drawn to the order of the Comptroller of The City of New York, and must either give a certified check or cash in half the amount of the purchase price as security for the faithful performance of the terms and conditions of the sale and contract. Where the amount of the purchase price does not equal or exceed the sum of fifty dollars the sum of fifty dollars shall be the amount of the security deposited. This security must be deposited within forty-eight hours after the sale, and may at any time after the expiration of the contract period be applied by the City to the cost of completing any work required under the contract but unfinished at the expiration of the contract period.

All the buildings, structures and parts thereof, their fixtures and foundations, of every class and description within the described area, are to be torn down to the existing curb level, and structures which may exist within any of the buildings, such as engine beds, boiler settings, etc., and all stoops and area walls shall be torn down to the same level. All partitions, sheds and fences shall be removed from the premises. All brick laid in mortar, all floor beams, joists, studdings, flooring, ceiling, roofing, boards and woodwork of every description, and all gas, water, steam and soil piping shall be removed from the premises. All combustible matter, such as tar and felt roofing, broken lath and fragments of timber, chips, splinters, etc., which are of no value, shall be gathered together by the contractor and burned or carried away.

The purchaser at the sale shall also shut off and cap all water pipes at the main pipe in the street, in compliance with the rules and regulations of the Department of Water Supply, Gas and Electricity.

Failure to remove said buildings or appurtenances, or any portion thereof, within sixty days from the day of sale, will work forfeiture of ownership of such buildings or appurtenances or portion as shall then be left standing, and the bidder's assent to the above conditions being understood to be implied by the act of bidding, and The City of New York will, without notice to the purchaser, cause the same to be removed and the costs and expenses thereof charged against the security above mentioned.

The work of removal must be carried on in every respect in a thorough and workmanlike manner, and must be completed within sixty days from the day of sale, and the successful bidder will provide and furnish all materials of labor and machinery necessary thereto, and will place proper and sufficient guards and fences and warning signs by day and night for the prevention of accidents, and will indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against any and all suits and actions, claims and demands of every name and description brought against it, them or any of them, and against and from all damages and costs to which it, they or any of them be put by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work, or in guarding the same, or from any improper or defective materials or machinery, implements or appliances used in the removal of the said buildings.

Party walls and fences, when existing against adjacent property not sold, shall not be taken down. All furrings, plaster, chimneys, projecting brick, etc., on the faces of such party walls are to be taken down and removed. The walls shall be made permanently self-supporting, beam-holes, etc., bricked up, and the wall pointed and made to exclude wind and rain and present a clean exterior. The roofs of the adjacent buildings shall be properly flashed and painted and made water-tight where they have been disturbed by the operations of the contractor.

The Comptroller of The City of New York reserves the right on the day of sale to withdraw from sale any of the buildings, parts of buildings and machinery included therein, or to reject any and all bids.

H. A. METZ,

City of New York, Department of Finance,
Comptroller's Office, January 9, 1908.

j13,28

DEPARTMENT OF FINANCE, CITY OF NEW YORK, BUREAU FOR THE COLLECTION OF ASSESSMENTS AND ARREARS, BOROUGH OF BROOKLYN, May 17, 1907.

NOTICE IS HEREBY GIVEN TO ALL whom it may concern that, in pursuance of law, a list has been prepared and may be obtained at the office of the Deputy Collector of Assessments and Arrears in the Borough of Brooklyn, Mechanics' Bank Building (third floor), corner of Montague and Court streets, in said Borough, of the parcels of land and premises in said Borough upon which any tax, assessment or water rates, levied or imposed subsequent to July 1, 1882, and prior to January 1, 1898, had been returned or transmitted to the former Registrar of Arrears prior to the thirty-first day of December, 1897, or to the Collector of Assessments and Arrears subsequent thereto, and now remains unpaid and in arrears, and that the said several parcels of land specified in the said list will be sold, at public auction, to the highest bidder, on Wednesday, June 19, 1907, at 2 o'clock p. m., in the Borough Hall, in the said Borough of Brooklyn, in the large room designated Room No. 2, in the rear of the Borough Hall, now used by the Spanish War Veterans' Association, for the payment of the aggregate amount of all arrears of taxes, assessments and water rents due thereon and returned and transmitted as aforesaid, with all default, interest and expenses accrued thereon.

HERMAN A. METZ,

Comptroller of The City of New York.

This sale will be continued on
WEDNESDAY, JANUARY 29, 1908
at 2 o'clock p. m., in Room No. 2, in basement of Borough Hall, Borough of Brooklyn.

HERMAN A. METZ,

Comptroller of The City of New York.

d28,j29

DEPARTMENT OF FINANCE, CITY OF NEW YORK, December 14, 1906.

UNTIL FURTHER NOTICE AND UNLESS otherwise directed in any special case, any company will be accepted as sufficient upon the following contracts to the amounts named:

Supplies of Any Description, including Gas and Electricity—

One company on a bond up to \$50,000.

Two companies on a bond up to \$125,000.

Three companies on a bond up to \$200,000.

Asphalt, Asphalt Block and Wood Block Pavements—

Two companies on a bond up to \$50,000.

Three companies on a bond up to \$125,000.

Regulating, Grading, Paving, Sewers, Water Mains, Dredging, Construction of Parks, Parkways, Etc.—

One company on a bond up to \$25,000.

Two companies on a bond up to \$75,000.

Three companies on a bond up to \$150,000.

Four companies on a bond up to \$250,000.

New Docks, Buildings, Bridges, Aqueducts, Tunnels, Etc.—

One company on a bond up to \$25,000.

Two companies on a bond up to \$75,000.

Three companies on a bond up to \$150,000.

Four companies on a bond up to \$250,000.

Repairs, Ventilating, Heating, Plumbing, Etc.—

One company on a bond up to \$25,000.

Two companies on a bond up to \$75,000.

Three companies on a bond up to \$150,000.

Four companies on a bond up to \$250,000.

On bonds regarded as hazardous risks additional surety will be required as the Comptroller sees fit in each instance.

All bonds exceeding \$250,000 will by that fact alone be considered hazardous risks, no matter what the nature of the work.

H. A. METZ,

Comptroller.

BOARD OF ASSESSORS.

PUBLIC NOTICE IS HEREBY GIVEN TO the owner or owners of all houses and lots, improved or unimproved lands affected thereby, that the following proposed assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz:

BOROUGH OF THE BRONX.

List 9481, No. 1. Receiving basins and appurtenances at the northeast, southeast, southwest and northwest corners of One Hundred and Forty-ninth street and Walton avenue.

List 9483, No. 2. Sewer and appurtenances in East One Hundred and Seventy-third street, between Southern boulevard and Hoe avenue, and in Hoe avenue, between East One Hundred and Seventy-third street and One Hundred and Seventy-second street.

List 9484, No. 3. Sewer and appurtenances in East One Hundred and Seventy-ninth street, between Arthur avenue and Hughes avenue.

List 9494, No. 4. Paving with asphalt blocks, curbing Dawson street, from Longwood to Intervale avenue.

BOROUGH OF QUEENS.

List 9508, No. 5. Sewer in First avenue, between Broadway and Graham avenue.

List 9509, No. 6. Catch basin on the southeast corner of Ditmars avenue and Eleventh avenue.

List 9527, No. 7. Catch basins on the northwest corner of Hamilton street and Washington avenue; on the southwest corner of Hamilton street and Washington avenue, and on the northeast corner of Hamilton street and Washington avenue.

BOROUGH OF RICHMOND.

List 9428, No. 8. Regulating, grading and paving College avenue, from Jewett avenue to the second proposed street east; Waters avenue, from Livermore avenue to Jewett avenue, and Willard avenue, from Watchogue road to Indiana avenue.

The limits within which it is proposed to lay the said assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Walton avenue, from One Hundred and Forty-sixth to One Hundred and Fiftieth street; west side of Mott avenue, between One Hundred and Forty-sixth and One Hundred and Fiftieth streets.

No. 2. Both sides of Hoe avenue, from One Hundred and Seventy-second to One Hundred and Seventy-fourth street; both sides of Bryant avenue, between One Hundred and Seventy-second and One Hundred and Seventy-fourth streets; both sides of One Hundred and Seventy-third street, from the Southern boulevard to Longfellow avenue.

No. 3. Both sides of One Hundred and Seventy-ninth street, between Arthur and Hughes avenues.

No. 4. Both sides of Dawson street, from Intervale avenue to Longwood avenue, and to the extent of half the block at the intersecting and terminating streets and avenues.

No. 5. Both sides of First avenue, from Graham avenue to Broadway; northwest side of Second avenue, from Graham avenue to a point about 400 feet easterly therefrom.

No. 6. South side of Eleventh avenue, from Potter avenue to Ditmas avenue, and east side of Potter avenue, from Sound street to Eleventh avenue.

No. 7. Both sides of Hamilton street, from Pierce avenue to Washington avenue, and north side of Hamilton street, from Washington avenue to a point about 140 feet westerly therefrom.

No. 8. Both sides of Waters avenue, from Jewett avenue to Livermore avenue; both sides of Willard avenue, from Watchogue road to Indiana avenue; both sides of College avenue, from Jewett avenue to the second proposed street east, and to the extent of half the block at the intersecting streets and avenues.

All persons whose interests are affected by the above named proposed assessments, and who are opposed to the same, or either of them, are requested to present their objections, in writing, to the Secretary of the Board of Assessors, No. 320 Broadway, New York, on or before February 25, 1908, at 11 a. m., at which time and place the said objections will be heard and testimony received in reference thereto.

ANTONIO ZUCCA,
PAUL WEIMANN,
JAMES H. KENNEDY,
Board of Assessors.

WILLIAM H. JASPER,
Secretary,
No. 320 Broadway,
City of New York, Borough of Manhattan,
January 23, 1908.

j23,fi

POLICE DEPARTMENT.

POLICE DEPARTMENT OF THE CITY OF NEW YORK, No. 300 MULBERRY STREET.

SEALED BIDS OR ESTIMATES WILL BE received by the Police Commissioner of the Police Department of The City of New York at the Bookkeeper's Office, Central Department, until 10 o'clock a. m. on

FRIDAY, FEBRUARY 7, 1908.

FOR FURNISHING AND DELIVERING 2,500 TONS (OF 2,240 POUNDS EACH) OF ANTHRACITE COAL, FOR USE IN THE BOROUGH OF BROOKLYN.

The time for the delivery of the articles, materials and supplies and the performance of the contract is during the year 1908.

The amount of security required will be fifty per cent. (50%) of the amount of bid or estimate.

Bidders will state the kind of anthracite coal they propose to furnish by giving the name of its mine or other business appellation.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each item. The bids will be compared and the contract awarded at a lump or aggregate sum.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the Central Office of the Police Department, No. 300 Mulberry street, Borough of Manhattan.

THEODORE A. BINGHAM,
Police Commissioner.

Dated January 25, 1908.

j27,f7

See General Instructions to Bidders on the last page, last column, of the "City Record."

POLICE DEPARTMENT OF THE CITY OF NEW YORK, No. 300 MULBERRY STREET, BOROUGH OF MANHATTAN.

SEALED BIDS OR ESTIMATES WILL BE received by the Police Commissioner of the Police Department of The City of New York at the Bookkeeper's Office, Central Department, until 10 o'clock a. m. on

FRIDAY, FEBRUARY 7, 1908.

No. 1. FOR FURNISHING AND DELIVERING 1,025 TONS (OF 2,240 POUNDS EACH) OF ANTHRACITE COAL, FOR USE IN THE BOROUGH OF THE BRONX.

No. 3. FOR FURNISHING AND DELIVERING 800 TONS (OF 2,240 POUNDS EACH) OF ANTHRACITE COAL, FOR USE IN THE BOROUGH OF QUEENS.

The time for the delivery of the articles, materials and supplies and the performance of the contracts is during the year 1908.

The amount of security required will be fifty per cent. (50%) of the amount of bid or estimate.

Bidders will state the kind of anthracite coal they propose to furnish by giving the name of its mine or other business appellation.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each item. The bids will be compared and the contract awarded at a lump or aggregate sum for each contract.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the Central Office of the Police Department, No. 300 Mulberry street, Borough of Manhattan.

THEODORE A. BINGHAM,
Police Commissioner.

Dated January 25, 1908.

j25,f7

See General Instructions to Bidders on the last page, last column, of the "City Record."

POLICE DEPARTMENT OF THE CITY OF NEW YORK, No. 300 MULBERRY STREET, BOROUGH OF MANHATTAN.

SEALED BIDS OR ESTIMATES WILL BE received by the Police Commissioner of the Police Department of The City of New York at the Bookkeeper's Office, Central Department, until 10 o'clock a. m. on

THURSDAY, FEBRUARY 6, 1908.

No. 1. FOR FURNISHING AND DELIVERING HORSE EQUIPMENTS, HARNESS AND STABLE SUPPLIES.

No. 2. FOR FURNISHING AND DELIVERING FORTY TONS, OF 2,240 POUNDS EACH, OF BEST QUALITY OF ENGLISH CANNEL COAL; ONE HUNDRED CORDS OF VIRGINIA PINE KINDLING WOOD, 10-INCH LENGTHS, SAWED AND SPLIT, AND FIFTEEN CORDS OF HICKORY WOOD, 16-INCH LENGTHS.

The time for the delivery of the articles, materials and supplies and the performance of the contracts is during the year 1908.

The amount of security required is fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each item, and the Police Department reserves the right to award the contract by the entire schedule or to award for each item.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the Central Office of the Police Department, No. 300 Mulberry street, Borough of Manhattan.

THEODORE A. BINGHAM,
Police Commissioner.

Dated January 23, 1908.

j24,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

POLICE DEPARTMENT OF THE CITY OF NEW YORK, No. 300 MULBERRY STREET.

SEALED BIDS OR ESTIMATES WILL BE received by the Police Commissioner of the Police Department of The City of New York at the Bookkeeper's Office, Central Department, until 10 o'clock a. m., on

WEDNESDAY, JANUARY 29, 1908.

No. 1. FOR FURNISHING AND DELIVERING LUMBER AND BUILDING MATERIALS.

No. 2. FOR FURNISHING AND DELIVERING PHOTOGRAPH SUPPLIES.

The time for the delivery of the articles, materials and supplies and the performance of the contract is during the year 1908.

The amount of security required will be fifty per cent. (50%) of the amount of the bid or estimate.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, ton, dozen, gallon, yard or other unit of measure, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read from the total for each item. The Police Department reserves the right to award the contract by the entire schedule or to award for each item.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Blank forms and further information may be obtained at the Central Office of the Police Department, No. 300 Mulberry street, Borough of Manhattan.

THEODORE A. BINGHAM,
Police Commissioner.

Dated January 15, 1908.

j15,29

See General Instructions to Bidders on the last page, last column, of the "City Record."

POLICE DEPARTMENT—CITY OF NEW YORK.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of The City of New York, No. 300 Mulberry street, Room No. 9, for the following property, now in his custody, without claimants: Boots, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc.; also small amount of money taken from prisoners and found by Patrolmen of this Department.

THEODORE A. BINGHAM,
Police Commissioner.

POLICE DEPARTMENT—CITY OF NEW YORK, BOROUGH OF BROOKLYN.

OWNERS WANTED BY THE DEPUTY Property Clerk of the Police Department of The City of New York—Office, No. 209 State street, Borough of Brooklyn—for the following property, now in his custody, without claimants: Boots, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc.; also small amount of money taken from prisoners and found by Patrolmen of this Department.

THEODORE A. BINGHAM,
Police Commissioner.

DEPARTMENT OF BRIDGES.

DEPARTMENT OF BRIDGES, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Bridges at the above office until 2 o'clock p. m. on

THURSDAY, FEBRUARY 6, 1908.

FOR FURNISHING THE DEPARTMENT OF BRIDGES WITH ANTHRACITE AND BLACKSMITH'S COAL FOR THE USE OF THE BRIDGES OVER THE HARLEM RIVER AND IN THE BOROUGH OF MANHATTAN, DURING THE YEAR 1908.

The delivery of coal must be begun by the contractor upon receipt of notice from the Commissioner, and deliveries shall be fully completed by December 31, 1908.

The amount of security to guarantee the faithful performance of the work will be Two Thousand Five Hundred Dollars (\$2,500).

The right is reserved by the Commissioner to reject all the bids should he deem it to the interest of the City so to do.

Blank forms and specifications may be obtained at the office of the Department of Bridges.

JAMES W. STEVENSON,
Commissioner of Bridges.

Dated January 21, 1908.

j23,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

DEPARTMENT OF BRIDGES, NOS. 13 TO 21 PARK ROW, BOROUGH OF MANHATTAN, CITY OF NEW YORK.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Bridges at the above office until 2 o'clock p. m. on

THURSDAY, FEBRUARY 6, 1908.

FOR THE CONSTRUCTION OF ADDITIONAL GIRDER SUPPORTS FOR THE MAIN TOWERS OF THE WILLIAMSBURG (NEW EAST RIVER) BRIDGE OVER THE EAST RIVER, BETWEEN THE BOROUGH OF MANHATTAN AND BROOKLYN.

The contractor will be required to begin work within five days of the date of certification of the contract by the Comptroller, and will be required to complete the entire work to the satisfaction of the Commissioner, and in accordance with the specifications, within five months of the date of said certification.

The amount of security to guarantee the faithful performance of the work will be Eight Thousand Dollars (\$8,000).

The right is reserved by the Commissioner to reject all the bids should he deem it to be to the interest of the City so to do.

Blank forms, plans and specifications may be obtained at the office of the Department of Bridges.

JAMES W. STEVENSON,
Commissioner of Bridges.

Dated January 21, 1908.

j22,f6

See General Instructions to Bidders on the last page, last column, of the "City Record."

SUPREME COURT—FIRST DEPARTMENT.

FIRST DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the opening and extending of BRIGGS AVENUE (although not yet named by proper authority), from the Bronx River to Pelham Bay Park, in the Twenty-fourth Ward, Borough of The Bronx, City of New York.

NOTICE IS HEREBY GIVEN THAT THE supplemental and additional bill of costs, charges and expenses incurred by reason of the proceedings in the above-entitled matter, will be presented for taxation to one of the Justices of the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part I., to be held at the County Court House in the Borough of Manhattan, in The City of New York, on the 10th day of February, 1908, at 10:30 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard thereon; and that the said bill of costs, charges and expenses has been deposited in the office of the Clerk of the County of New York, there to remain for and during the space of ten days, as required by the provisions of section 999 of the Greater New York Charter, as amended by chapter 466 of the Laws of 1907.

Dated Borough of Manhattan, New York, January 28, 1908.

JAMES F. SMITH,
FRANK GASS,
SAM'L McMILLAN,
Commissioners.

JOHN P. DUNN,
Clerk.

j28,f7

FIRST DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title, wherever the same has not been heretofore acquired, to the lands and premises required for the opening and extending of WEST ONE HUNDRED AND SIXTY-SEVENTH STREET (although not yet named by proper authority), from Amsterdam avenue to St. Nicholas avenue, in the Twelfth Ward, Borough of Manhattan, City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our supplemental and amended estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 17th day of February, 1908, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 20th day of February, 1908, at 2 o'clock p. m.

Second—That the abstracts of our said supplemental and amended estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making the same, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said City, there to remain until the 19th day of February, 1908.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of Manhattan, in The City of New York, which, taken together, are bounded and described as follows, viz:

Beginning at a point formed by the intersection of a line parallel to and distant one hundred (100) feet westerly of the westerly line of Broadway with the westerly prolongation of a line parallel to and distant one hundred (100) feet northerly of the northerly line of West One Hundred and Sixty-eighth street; running thence easterly along said westerly prolongation and parallel line and its easterly prolongation to its intersection with a line parallel to and distant one hundred (100) feet easterly of the easterly line of Amsterdam avenue; thence southerly along said last mentioned parallel line to its intersection with a line parallel to and distant one hundred (100) feet east of the easterly line of West One Hundred and Sixty-seventh street; thence southerly along said parallel line to its intersection with the westerly line of Edgecombe avenue; thence easterly on a line radial to Edgecombe avenue to its intersection with a line parallel to and distant one hundred (100) feet easterly of the easterly line of Edgecombe avenue; thence southerly along said parallel line to its intersection with the easterly prolongation of the southerly line of West One Hundred and Sixty-sixth street, between Amsterdam avenue and Edgecombe avenue; thence westerly along said prolongation and southerly line to its intersection with a line parallel to and distant one hundred (100) feet west of the westerly line of West One Hundred and Sixty-seventh street; thence northerly along said parallel line to its intersection with a line parallel to and distant one hundred (100) feet easterly of the easterly line of Amsterdam avenue; thence southerly along said last mentioned parallel line to its intersection with the easterly prolongation of a line parallel to and distant one hundred (100) feet southerly of the southerly line of West One Hundred and Sixty-sixth street; thence westerly along said easterly prolongation and parallel line and its westerly prolongation to its intersection with a line parallel to and distant one hundred (100) feet westerly of the westerly line of Broadway; thence northerly along said last mentioned parallel line to the point or place of beginning; excepting from said area all streets, avenues and roads or portions thereof heretofore legally opened, as such are shown on our benefit maps deposited as aforesaid.

Fourth—That, provided there be no objections filed to either of said supplemental and amended abstracts, our supplemental and amended final report herein will be presented for confirmation to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court House in the Borough of Manhattan, in The City of New York, on the 16th day of April, 1908, at the opening of the Court on that day.

Fifth—In case, however, objections are filed to either of said supplemental and amended abstracts of estimate and assessment, the notice of motion to confirm our supplemental and amended final report herein will stand adjourned to the date to be hereafter specified, and of which notice will be given to all those who have theretofore appeared in this proceeding, as well as by publication in the City Record, pursuant to sections 981 and 984 of the Greater New York Charter, as amended by chapter 658 of the Laws of 1906.

Dated Borough of Manhattan, New York, January 22, 1908.

RICHARD T. LYNCH,
Chairman;
W. J. K. KENNY,
MICHAEL B. STANTON,
Commissioners.

JOHN P. DUNN,
Clerk.

j24,fi4

FIRST DEPARTMENT.

In the matter of the application of The City of New York, relative to acquiring title, wherever the same has not been heretofore acquired for the same purpose, in fee, to the lands, tenements and hereditaments required for the opening and extending of BENSON AVENUE (Madison avenue), from West Farms road to Lane avenue, in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York; OVERING AVENUE (Washington avenue), from West Farms road to Westchester avenue, in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York; ST. PETERS AVENUE (Union avenue), from Westchester avenue to West Farms road, in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York; SEDDON STREET (Tryon row), from St. Raymond avenue (Fourth street) to West Farms road, in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York; ROWLAND STREET (Washington avenue), from Westchester avenue to St. Raymond avenue (Fourth street), in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York; HUBBELL STREET (Washington avenue), from Dorsey street (Carroll lane) to MacLay avenue (Fifth street), in the Twenty-fourth Ward, Borough of The Bronx, in The City of New York.

NOTICE IS HEREBY GIVEN THAT, BY an order of the Supreme Court, hearing date the 29th day of October, 1907, and duly entered in the office of the Clerk of the County of New York, at his office in the Borough of Manhattan, in The City of New York, on the 16th day of December, 1907, a copy of which order was duly filed in the office of the Register of the County of New York, we, Edward D. Dowling, William F. A. Kurz and Francis V. S. Oliver were appointed Commissioners of Estimate for the purpose of making a just and equitable estimate and assessment of the loss and damage to the respective owners, lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening and extending the above-mentioned streets or avenues, the same being particularly set forth and described in the petition of The City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the County of New York on the 16th day of December, 1907, and the said Edward D. Dowling was appointed Commissioner of Assessment for the purpose of making a just and equitable estimate and assessment of the value of the benefit and advantage of the said streets or avenues, so to be opened and extended, to the respective owners, lessees, parties and persons respectively entitled to or interested in the respective lands, tenements, hereditaments and premises situated within the area of assessment adopted by the Board of Estimate and Apportionment, and not required for the purpose of opening and extending the same, but benefited thereby, the said area of assessment being particularly set forth and described in the petition of The City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the County of New York on the 16th day of December, 1907, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 17, title 4, of the Greater New York Charter, as amended, and the acts or parts of acts supplementary thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening and extending the said streets or avenues and affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate, at our office, ninth floor, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, with such affidavit or other proof as the owners or claimants may desire, within ten days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 10th day of February, 1908, at 11 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto; and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto, and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The City of New York.

Dated Borough of Manhattan, City of New York, January 25, 1908.

FRANCIS V. S. OLIVER,
EDWARD D. DOWLING,
WM. F. A. KURZ,
Commissioners.

JOHN P. DUNN,
Clerk.

j25,f6

FIRST DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the opening and extending of a NEW STREET north of Fairview avenue, and

extending from Broadway to first new avenue west of Broadway, in the Twelfth Ward, Borough of Manhattan, City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in the City of New York, on or before the 15th day of February, 1908, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 18th day of February, 1908, at 2 o'clock p. m.

Second—That the abstracts of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making the same, have been deposited in the Bureau of Street Openings, in the Law Department of the City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in the said City, there to remain until the 17th day of February, 1908.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of Manhattan, in the City of New York, which, taken together, are bounded and described as follows, viz:

Beginning at the point of intersection of the westerly prolongation of the middle line of the block between the new street and the unnamed street next south with a line parallel to and distant 100 feet westerly from the westerly line of the first new avenue (Bennett avenue) west of Broadway; running thence northerly along said parallel line to its intersection with the westerly prolongation of the middle line of the block between the new street and Bennett avenue; thence easterly along said middle line and its easterly prolongation to its intersection with a line parallel to and distant 100 feet easterly of the easterly line of Broadway; thence southerly along said parallel line to its intersection with the easterly prolongation of the middle line of the block between the new street and the unnamed street next south; thence westerly along said prolongation and middle line and its westerly prolongation to the point or place of beginning; excepting from said area all streets, avenues and roads, or portions thereof, heretofore legally opened, as such are shown upon our benefit maps deposited as aforesaid.

Fourth—That, provided there be no objections filed to either of said abstracts, our final report herein will be presented for confirmation to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court House, in the Borough of Manhattan, in the City of New York, on the 24th day of April, 1908, at the opening of the Court on that day.

Fifth—In case, however, objections are filed to either of said abstracts of estimate and assessment, the notice of motion to confirm our final report herein will stand adjourned to the date to be hereafter specified, and of which notice will be given to all those who have theretofore appeared in this proceeding, as well as by publication in the City Record, pursuant to sections 981 and 984 of the Greater New York Charter, as amended by chapter 658 of the Laws of 1906.

Dated Borough of Manhattan, New York, January 20, 1908.

JAMES NUGENT,
VITO COUTESSA,
Commissioners.

JOHN P. DUNN,
Clerk.

j24,f11

FIRST DEPARTMENT.

In the matter of the application of the Mayor, Aldermen and Commonalty of The City of New York relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening SPUYTEN DUYVIL ROAD (although not yet named by proper authority), from Spuyten Duyvil parkway, near the Spuyten Duyvil depot, to the junction of Riverdale avenue and West Two Hundred and Thirtieth street, as the same has been heretofore laid out and designated as a first-class street or road in the Twenty-fourth Ward, City of New York.

In re application of Caroline Weigel for damages to old Lot No. 50, new Lot No. 685, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Frank A. Beckman for damages to old Lot No. 71, new Lot No. 713, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward of the Borough of The Bronx, in The City of New York.

In re application of Thomas D. Tighe, as executor, etc., for damages to old Lot No. 73, new Lot No. 714, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Elizabeth M. Tierney, as executrix, etc., for damages to old Lot No. 76, new Lot No. 717, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Julia T. Molloy for damages to old Lot No. 169, new Lot No. 719, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Peter Tarantino for damages to old Lot No. 165, new Lot No. 723, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Elizabeth M. Pryor for damages to old Lot No. 150, new Lot No. 732, and old Lot No. 147, new Lot No. 733, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Nora Leddy for damages to old Lot No. 146, new Lot No. 735, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of

old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Patrick Stafford for damages to Lot No. 725, in Block 3402, caused by the abandonment, discontinuance and closing in front thereof of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York, the aforesaid parcel being described as follows: Being all that certain lot, piece or parcel of land situate, lying and being at Spuyten Duyvil, in the Twenty-fourth Ward of The City of New York, which said lot is bounded and described as follows, viz: Beginning on the easterly line of the road leading from Spuyten Duyvil Station on the Hudson River Railroad to Kingsbridge, as said road is shown on a map accompanying the partition deed made on the 23d day of August, 1865, between David B. Cox and wife and John C. Cameron and wife, at a point 24 feet north of the most northerly corner of a parcel of land heretofore conveyed to Patrick Scanlon by Mary E. Cox by deed dated June 27, 1877, and recorded in the office of the Register of the City and County of New York in Liber 1430 of Conveyances, page 136; thence on a line drawn at right angles to said Kingsbridge road easterly 40 feet, more or less, to the lands of the Spuyten Duyvil and Port Morris Railroad Company; thence along said railroad company's land northerly 185 feet, more or less, to a point where said line would intersect the prolongation of the southerly line of lot last conveyed to James Finnegan by David B. Cox; thence along said prolonged line westerly 5 feet, more or less, to said Kingsbridge road; thence southerly along said Kingsbridge road 190 feet, more or less, to the point or place of beginning.

In re application of Thomas Scanlon, Patrick Scanlon, Mary Scanlon Kenny and Margaret Scanlon, for damages to old Lot No. 210, new Lot No. 766, in Block 3402, caused by the abandonment, discontinuance and closing thereof in front of old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

In re application of Sarah C. Roden, for damages to old Lot No. 459, new Lot No. 200, in Block 3410, caused by the abandonment, discontinuance and closing thereof of Old Kingsbridge road, in the Twenty-fourth Ward, in the Borough of The Bronx, in The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled proceedings, to whom was referred by the Court herein the report heretofore made herein, hereby give notice to all persons interested in these proceedings, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment herein, and that all persons interested in these proceedings, or in any lands, tenements, hereditaments and premises affected thereby, and having objections thereto, do present their said objections, in writing, duly verified, to us, at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in the City of New York, on or before the 13th day of February, 1908; and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said offices on the 14th day of February, 1908, at 4 o'clock p. m.

Second—That the abstracts of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making the same, have been deposited in the Bureau of Street Openings in the Law Department of the City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said City, there to remain until the 24th day of February, 1908.

Third—That the limits of our assessment for benefit include all those lands, tenements, hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, bounded and described as follows:

Beginning at the point of intersection of the northerly line of the Harlem river (ship canal) with the westerly line of the New York Central and Hudson River Railroad; running thence northerly along said westerly line of the railroad to its intersection with a line parallel to and distant 100 feet northerly from the northerly line of West Two Hundred and Thirtieth street; thence easterly along the said line parallel to its intersection with a line parallel to and distant 100 feet easterly from the easterly line of Broadway; thence southerly along said line parallel to Broadway to its intersection with the easterly line of Spuyten Duyvil creek; thence northerly, westerly and southwesterly along the easterly, northerly and northwesterly line of Spuyten Duyvil creek to its intersection with the northerly line of the Harlem river (ship canal); thence in a westerly direction along the northerly line of the Harlem river (ship canal) to the point or place of beginning.

Fourth—That, provided there be no objections filed to either of said abstracts, our final report herein will be presented for confirmation to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court House, in the Borough of Manhattan, in the City of New York, on the 14th day of April, 1908, at the opening of the Court on that day.

Fifth—In case, however, objections are filed to either of said abstracts, the notice of motion to confirm our final report herein will stand adjourned to the date to be hereafter specified, and of which notice will be given to those who have theretofore appeared in this proceeding, as well as by publication in the City Record, pursuant to sections 981 and 984 of the Greater New York Charter, as amended by chapter 658 of the Laws of 1906.

Dated Borough of Manhattan, New York, December 13, 1907.

ERNEST HALL,
JOHN H. KNOEPPPEL,
PIERRE G. CARROLL,
Commissioners.

JOHN P. DUNN,
Clerk.

j23,f11

FIRST JUDICIAL DEPARTMENT.

In the matter of the application of The City of New York, acting by and through the Commissioner of Docks, relative to acquiring right and title to and possession of certain uplands and lands, wharf property, wharfage rights, terms, easements, emoluments and privileges necessary to be taken for the improvement of the waterfront of The City of New York on the North river, between West Fifteenth and West Eighteenth streets, and the easterly side of the marginal street, wharf or place, adopted by the Board of Docks and approved by the Commissioners of the Sinking Fund, and the

North river, pursuant to the plan heretofore adopted by the Board of Docks and approved by the Commissioners of the Sinking Fund.

NOTICE IS HEREBY GIVEN THAT WE, the undersigned, by virtue of an order of the Supreme Court, bearing date the 18th day of December, 1907, and filed and entered in the office of the Clerk of the County of New York on the 10th day of December, 1907, were appointed Commissioners of Estimate and Assessment in the above entitled proceeding, for the purpose of making a just and equitable estimate of the loss and damage to the respective owners, lessees, parties and persons entitled to or interested in the uplands, and lands, wharf property, wharfage rights, terms, easements, emoluments and privileges hereinafter described, and situated in the Borough of Manhattan in The City of New York, taken herein for the improvement of the waterfront on the North river, and which said uplands, and lands, wharf property, wharfage rights, terms, easements, emoluments and privileges are described as follows:

Parcel No. 1.

All the rights of wharfage, incorporeal hereditaments, terms, easements, emoluments, privileges or other appurtenances of any kind whatsoever appurtenant to the bulkhead along the westerly side of Thirteenth avenue, extending from the northerly side of West Fifteenth street to the southerly side of West Sixteenth street.

Parcel No. 2.

All the uplands and lands, terms, easements, emoluments and privileges of and to the uplands and lands, with the buildings and structures thereon, in the block bounded by the northerly side of West Fifteenth street, the southerly side of West Sixteenth street, the easterly side of Eleventh avenue and the easterly side of the marginal street, wharf or place as shown on the map or plan adopted by the Board of Docks on May 20, 1897, and approved by the Commissioners of the Sinking Fund on June 14, 1897, as altered and amended by the Board of Docks on January 14, 1898, and approved by the Commissioners of the Sinking Fund on March 11, 1898, as again altered and amended by the Board of Docks on July 19, 1901, and approved by the Commissioners of the Sinking Fund on July 31, 1901.

Parcel No. 3.

All the rights of wharfage, incorporeal hereditaments, terms, easements, emoluments, privileges or other appurtenances of any kind whatsoever appurtenant to the bulkhead along the westerly side of Thirteenth avenue, extending from the northerly side of West Sixteenth street to the southerly side of West Seventeenth street.

Parcel No. 4.

All the uplands and lands, terms, easements, emoluments and privileges of and to the uplands and lands, with the buildings and structures thereon in the block bounded by the northerly side of West Sixteenth street, the southerly side of West Seventeenth street, the easterly side of Eleventh avenue and the easterly side of Thirteenth avenue.

Parcel No. 5.

All the uplands and lands, terms, easements, emoluments and privileges of and to the uplands and lands, with the buildings and structures thereon, in the block bounded by the northerly side of West Sixteenth street, the southerly side of West Seventeenth street, the easterly side of Eleventh avenue and the easterly side of the marginal street, wharf or place as shown on the map or plan adopted by the Board of Docks on May 20, 1897, and approved by the Commissioners of the Sinking Fund on June 14, 1897, as altered and amended by the Board of Docks on January 14, 1898, and approved by the Commissioners of the Sinking Fund on March 11, 1898, as again altered and amended by the Board of Docks on July 19, 1901, and approved by the Commissioners of the Sinking Fund on July 31, 1901.

Parcel No. 6.

All the rights of wharfage, incorporeal hereditaments, terms, easements, emoluments, privileges or other appurtenances of any kind whatsoever appurtenant to the bulkhead along the westerly side of Thirteenth avenue, extending from the northerly side of West Seventeenth street to the southerly side of West Eighteenth street.

Parcel No. 7.

All the uplands and lands, terms, easements, emoluments and privileges of and to the uplands and lands, with the buildings and structures thereon, in the block bounded by the northerly side of West Seventeenth street, the southerly side of West Eighteenth street, the easterly side of Eleventh avenue and the easterly side of Thirteenth avenue.

Parcel No. 8.

All the uplands and lands, terms, easements, emoluments and privileges of and to the uplands and lands, with the buildings and structures thereon, in the block bounded by the northerly side of West Eighteenth street, the easterly side of Eleventh avenue and the easterly side of the marginal street, wharf or place, as shown on the map or plan adopted by the Board of Docks on May 20, 1897, and approved by the Commissioners of the Sinking Fund on June 14, 1897, as altered and amended by the Board of Docks on January 14, 1898, and approved by the Commissioners of the Sinking Fund on March 11, 1898, as again altered and amended by the Board of Docks on July 19, 1901, and approved by the Commissioners of the Sinking Fund on July 31, 1901.

All parties and persons interested in the said uplands and lands, wharf property, wharfage rights, terms, easements, emoluments and privileges taken or to be taken for the said improvement of the water front of The City of New York, on the North river, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment at our office, Room No. 401, on the fourth floor of the building, No. 258 Broadway, in The City of New York, Borough of Manhattan, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice, and we, the said Commissioners, will be in attendance at our said office, above specified, on the 18th day of February, 1908, at 3 o'clock in the afternoon of that day, to hear the said parties and persons in relation thereto; and at such time and place, or at such other or further times and places as we may appoint, we will hear such owners in relation thereto, and examine the proofs of such claimant or claimants, or such additional proofs or allegations as may be then offered by such owners, or on behalf of The City of New York.

Dated Borough of Manhattan, City of New York, January 22, 1908.

CHAS. N. MORGAN,
ADAM WIENER,
JAMES SHELTON MENG,
Commissioners.

JOSEPH M. SCHENCK,
Clerk.

j22,f18

FIRST DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening WEST FARMS ROAD (although not yet named by proper authority), from the Southern boulevard and Westchester avenue to the Boston road, in the Twenty-third and Twenty-fourth Wards of The City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our supplemental and amended estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, and having objections thereto, do present their said objections, in writing, duly verified, to us at our office, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in The City of New York, on or before the 4th day of February, 1908, and that we, the said Commissioners, will hear parties so objecting, and for that purpose will be in attendance at our said office on the 6th day of February, 1908, at 11 o'clock a. m.

Second—That the abstracts of our said supplemental and amended estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by us in making the same, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, Nos. 90 and 92 West Broadway, in the Borough of Manhattan, in said City, there to remain until the 5th day of February, 1908.

Third—That the limits of our assessment for benefit include all those lands, tenements and hereditaments and premises situate, lying and being in the Borough of The Bronx, in The City of New York, which, taken together, are bounded and described as follows, viz:

Beginning at a point formed by the intersection of the middle line of Westchester avenue and the middle line of Kelly street; running thence northerly along said line of Kelly street to a point in the middle of Intervale avenue; thence westerly from said point perpendicular to the westerly side of Intervale avenue to its intersection with a line parallel to and distant 100 feet westerly from the westerly line of Intervale avenue; running thence northerly along said parallel line to Intervale avenue to its intersection with a line parallel to and distant 100 feet northerly of the northerly line of Freeman street; thence easterly along said parallel line to Freeman street to its intersection with a line midway between Hoe street and Vyse street; thence northerly along said middle line to its intersection with the northerly line of Boston road; thence easterly along said northerly line of Boston road to its intersection with the northerly line of East One Hundred and Seventy-sixth street; thence westerly along said northerly line of East One Hundred and Seventy-sixth street to its intersection with a line midway between Boston road and Daly avenue; thence northerly along said last mentioned line to its intersection with a line midway between Daly avenue and Vyse street; thence northerly along said last mentioned line to its intersection with the northerly line of East One Hundred and Eighty-second street; thence easterly along said northerly line of East One Hundred and Eighty-second street and its easterly prolongation to its intersection with the westerly line of the Bronx river; thence southerly along the westerly line of the Bronx river, with its various windings, to its intersection with the easterly prolongation of a line midway between Guttenberg street and Aldus street; thence westerly along said easterly prolongation and middle line between Guttenberg street and Aldus street to its intersection with the middle line of Bryant street; thence southerly along said middle line of Bryant street to its intersection with the middle line of Aldus street; thence westerly along said middle line of Aldus street and its westerly prolongation to its intersection with the middle line of Westchester avenue; thence southerly along said middle line of Westchester avenue to the point or place of beginning; excepting from said area all streets, avenues and roads, or portions thereof, heretofore legally opened, as such are shown upon our benefit maps deposited as aforesaid.

Fourth—That, provided there be no objections filed to either of said supplemental and amended abstracts, our supplemental and amended final report herein will be presented for confirmation to the Supreme Court of the State of New York, First Department, at a Special Term thereof, Part III., to be held in the County Court House, in the Borough of Manhattan, in The City of New York, on the 27th day of March, 1908, at the opening of the Court on that day.

Fifth—In case, however, objections are filed to either of said supplemental and amended abstracts of motion to confirm our supplemental and amended final report herein will stand adjourned to the date to be hereafter specified, and of which notice will be given to all those who have theretofore appeared in this proceeding, as well as by publication in the City Record, pursuant to sections 981 and 984 of the Greater New York Charter, as amended by chapter 658 of the Laws of 1906.

Dated Borough of Manhattan, New York, January 10, 1908.

WELLESLEY W. GAGE,
Chairman;
MARTIN J. MOORE,
Commissioners.

JOHN P. DUNN,
Clerk.

j13,30

SUPREME COURT—SECOND DEPARTMENT.

SECOND DEPARTMENT.

In the matter of the application of The City of New York, by the Corporation Counsel, for the appointment of Commissioners of Estimate and Assessment to ascertain and determine the compensation which should justly be made for the closing and discontinuance of DE BRUYN'S LANE, between Benson avenue and Cropsey avenue, in the Borough of Brooklyn, City of New York.

NOTICE IS HEREBY GIVEN THAT AN application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, for the hearing of mo-

tions, to be held in and for the County of Kings, in the County Court House in the Borough of Brooklyn, City of New York, on the 31st day of January, 1908, at the opening of the Court on that day, or as soon thereafter as counsel can be heard, for the appointment of Commissioners of Estimate and Assessment in the above entitled proceeding, to ascertain and determine the compensation which should justly be made to the lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises, rights, easements or interests therein taken, affected, damaged, extinguished or destroyed by the discontinuance and closing of De Bruyn's lane, between Benson avenue and Cropsey avenue, in the Borough of Brooklyn, City of New York, as follows:

Parcel "A."

Beginning at a point in the western line of Benson avenue distant 94 feet southerly from the intersection of the western line of Benson avenue and the southern line of Bay Twenty-third street, as the same are laid down on the map of the City;

Thence southerly along the western line of Benson avenue 39 feet;

Thence 93 degrees 22 minutes to the right 52 feet;

Thence 1 degree 12 minutes to the right 422 feet to the eastern line of Bath avenue;

Thence northerly along the eastern line of Bath avenue 35 feet to a point distant 90 feet southerly from the southern line of Bay Twenty-third street;

Thence 94 degrees 59 minutes to the right 288 feet;

Thence 185 feet to the point of beginning.

Parcel "B."

The northern line of De Bruyn's lane, beginning at a point in the western line of Bath avenue at a point distant 90 feet southerly from the southern line of Bay Twenty-third street;

Thence in a straight line 497 feet to a point in the eastern line of Cropsey avenue distant 73 feet southerly from the southern line of Bay Twenty-third street;

The southern line of De Bruyn's lane being 33 feet from and parallel with the above-described line.

Note—These angles and dimensions are approximate.

Said De Bruyn's lane, as closed and discontinued, is shown on a map made at the direction of the Board of Estimate and Apportionment and entitled "Map or plan showing the closing and discontinuing of De Bruyn's lane, from Benson avenue to Cropsey avenue, in the Thirtieth ward, Borough of Brooklyn, City of New York," dated October 16, 1907, and filed in the office of the Corporation Counsel on October 17, 1907.

Dated Borough of Brooklyn, City of New York, the 20th day of January, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
No. 166 Montague street, Brooklyn, N. Y.

j20,30

SECOND DEPARTMENT.

In the matter of the application of The City of New York, relative to acquiring title to VANDERVOORT AVENUE, from Meeker avenue to Maspeth avenue, in the Eighteenth Ward, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT WE, the undersigned, were appointed by an order of the Supreme Court, made and entered herein on the 20th day of May, 1906, and duly filed in the office of the Clerk of Kings County, a copy of which order was filed in the office of the Register of the County of Kings on the 30th day of June, 1906, and indexed in the Index of Conveyances in Section 10, Blocks 2804, 2810, 2811, 2818, 2819, 2835, 2836, 2842, 2843, 2851, 2852, 2860, 2861, 2869, 2870, 2878, 2879, 2887, 2888, 2896 and 2897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate of the loss and damage, if any, to the respective owners, lessees, parties and persons entitled to or interested in the lands and premises to be taken for the purpose of opening the said street or avenue, as particularly described in the petition of The City of New York, filed with said order in the office of the Clerk of Kings County, and for the purpose of making a just and equitable assessment of the benefit of said street or avenue so to be opened to the respective owners, parties and persons respectively entitled to or interested in the lands and premises and not required for the purpose of opening said street or avenue, but benefited thereby, and of ascertaining and defining the district benefited by said assessment, and the extent and boundaries of the respective tracts and parcels of land participating in said benefit, and of performing the trusts and duties required of us by title 4 of chapter 17 of the Charter of The City of New York and the acts or parts of acts supplementary thereto or amendatory thereof.

All parties and persons interested in the lands and premises taken or to be taken for the purpose of opening said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office in the Bureau of Street Openings of the Law Department, No. 166 Montague street, Borough of Brooklyn, in the City of New York, with such affidavits or other proofs as the said owner or claimants may desire, within twenty days after date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 17th day of February, 1908, at 3 o'clock in the afternoon of that day, to hear the said parties and persons in relation thereto; and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto and examine proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The City of New York.

Dated Borough of Brooklyn, The City of New York, January 20, 1908.

WILLIAM G. LAWRENCE,
NOAH TEBBETTS,
ADOLPH PETTENKOFER,
Commissioners.
JAMES F. QUIGLEY,
Clerk.

j20, f11

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to AVENUE L, between Ocean parkway and Ocean avenue, excluding the property of the Brooklyn and Brighton Beach Railroad and of the Long Island Railroad, in the Thirty-first and Thirty-second Wards, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT David F. Manning, Arthur A. Quinn and William E. Phillips were appointed by an order of the Supreme Court, made and entered the 26th day of December, 1907, Commissioners of Estimate, and Arthur A. Quinn Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House in the Borough of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard; and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to AVENUE C, from Gravesend avenue to Coney Island avenue, in the Twenty-ninth Ward, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT E. Lyndsey Bourke, Frederick A. Wells and Matthew V. O'Malley were appointed by an order of the Supreme Court, made and entered the 26th day of December, 1907, Commissioners of Estimate, and E. Lyndsey Bourke Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House in the Borough of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard; and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to THE TRIANGULAR PARCEL OF LAND bounded by Ninety-fourth street, Fourth avenue and Fifth avenue, in the Thirtieth Ward in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT Franklin Taylor, Charles H. Wight and Clarence Kempner were appointed by an order of the Supreme Court, made and entered the 26th day of December, 1907, Commissioners of Estimate, and Franklin Taylor Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House in the Borough of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard; and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to VAN SICKLE AVENUE, from New Lots road to Dumont avenue, in the Twenty-sixth Ward, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT Edward J. Reilly, Frank N. Bruner and Joseph A. Gardiner were appointed, by an order of the Supreme Court made and entered the 26th day of December, 1907, Commissioners of Estimate, and Edward J. Reilly Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House, in the Borough of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard, and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to FOREST STREET, from Central avenue to Flushing avenue, in the Twenty-seventh Ward, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT LUKE O'Reilly, John J. Hagerty and Solon Barbanell were appointed, by an order of the Supreme Court made and entered the 26th day of December, 1907, Commissioners of Estimate, and Solon Barbanell Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House, in the Borough

of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard, and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SECOND DEPARTMENT.

In the matter of the application of The City of New York relative to acquiring title to JUNIUS STREET, from Pitkin avenue to Dumont avenue, in the Twenty-sixth Ward, in the Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT Edward Riegelman, Joseph P. Conway and John C. Fawcett were appointed, by an order of the Supreme Court made and entered the 26th day of December, 1907, Commissioners of Estimate, and Joseph P. Conway Commissioner of Assessment, in the above-entitled proceeding.

Notice is also given that the above-named Commissioners will attend at a Special Term for the hearing of motions, appointed to be held at the Kings County Court House, in the Borough of Brooklyn, The City of New York, on the 30th day of January, 1908, on the opening of the Court on that day, or as soon thereafter as counsel can be heard, and at said time and place, or at such other time and place as the Court may direct, the said Commissioners may be examined under oath as to their qualifications to act, and are subject to challenge by any party or person interested in this proceeding, as provided by section 973 of title 4 of chapter 17 of the Charter of The City of New York.

Dated New York, Borough of Brooklyn, January 18, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel.
j18,29

SUPREME COURT—THIRD JUDICIAL DISTRICT.

THIRD JUDICIAL DISTRICT.

ULSTER COUNTY.

Ashokan Reservoir, Section 6, Town of Hurley, Ulster County.

In the matter of the application and petition of J. Edward Simmons, Charles N. Chadwick and Charles A. Shaw, constituting the Board of Water Supply of The City of New York, to acquire real estate for and on behalf of The City of New York, under chapter 724 of the Laws of 1905, and the acts amendatory thereof, in the town of Hurley, Ulster County, N. Y., for the purpose of providing an additional supply of pure and wholesome water for the use of The City of New York.

PUBLIC NOTICE IS HEREBY GIVEN that the first separate report of Edgar L. Fursman, Edward H. Nicoll and Charles B. Cox, who were appointed Commissioners of Appraisal in the above-entitled matter by an order of this Court, made at a Special Term thereof, held at the Court House, in the City of Kingston, Ulster County, N. Y., June 29, 1907, was filed in the office of the Clerk of the County of Ulster on the 3d day of January, 1908, and affects parcels numbers two hundred and twenty-four (224), two hundred and twenty-six (226), two hundred and twenty-eight (228), two hundred and thirty (230), two hundred and thirty-seven (237), two hundred and forty-seven (247), two hundred and forty-nine (249), two hundred and fifty (250), two hundred and fifty-three (253), two hundred and fifty-six (256) and two hundred and sixty-seven (267), shown on the map in this proceeding.

Notice is further given that an application will be made at a Special Term of the Supreme Court of the State of New York, to be held in and for the Third Judicial District, at the Court House, in the City of Kingston, Ulster County, N. Y., on the 15th day of February, 1908, at 10 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard, for an order confirming said report and for such other and further relief as may be just.

Dated New York, January 20, 1908.
FRANCIS KEY PENDLETON,
Corporation Counsel.
Hall of Records, New York City.
j25, f15

THIRD JUDICIAL DISTRICT.

ULSTER COUNTY.

Ashokan Reservoir, Section No. 7, Towns of Olive and Hurley, Ulster County.

In the matter of the application and petition of J. Edward Simmons, Charles N. Chadwick and Charles A. Shaw, constituting the Board of Water Supply of The City of New York, to acquire real estate for and on behalf of The City of New York, under chapter 724 of the Laws of 1905 and the acts amendatory thereof, in the towns of Olive and Hurley, Ulster County, New York, for the purpose of providing an additional supply of pure and wholesome water for the use of The City of New York.

PUBLIC NOTICE IS HEREBY GIVEN that the first separate report of James Jenkins, Joseph D. Baucus and Peter C. Black, who were appointed Commissioners of Appraisal in the above entitled matter by an order of this Court made at a Special Term thereof, held at the Court House in the City of Kingston, Ulster County, N. Y., June 29, 1907, was filed in the office of the Clerk of the County of Ulster on the 30th day of December, 1907, and affects parcels numbers two hundred and seventy-one A (271A), two hundred and seventy-three (273), two hundred and seventy-nine (279), two hundred and eighty-three (283), two hundred and eighty-four (284), two hundred and eighty-five (285), two hundred and eighty-six (286), two hundred and eighty-seven (287), two hundred and eighty-eight (288), two hundred and ninety (290), two hundred and ninety-one (291), two hundred and ninety-two (292), two hundred and ninety-four (294), two hundred and ninety-five (295), two hundred and ninety-six (296), three hundred (300), three hundred and one (301), three hundred and two (302), three hundred and three (303), three hundred and four (304), three hundred and eight (308), three hundred and twelve (312) and three hundred and thirteen (313), shown on the map in this proceeding.

Notice is further given that an application will be made at a Special Term of the Supreme Court of the State of New York, to be held in and for the Third Judicial District, at the Court House, in the City of Kingston, Ulster County, New York, on the 15th day of February, 1908, at 10 o'clock in the forenoon of that day or as soon thereafter as counsel can be heard, for an order confirming said report and for such other and further relief as may be just.

Dated New York, January 20, 1908.
FRANCIS KEY PENDLETON,
Corporation Counsel.
Hall of Records, New York City.
j25, f15

SUPREME COURT—NINTH JUDICIAL DISTRICT.

NINTH JUDICIAL DISTRICT.

PUTNAM COUNTY.

Catskill Aqueduct.

Section No. 2, Putnam County.

In the matter of the application and petition of J. Edward Simmons, Charles N. Chadwick and Charles A. Shaw, constituting the Board of Water Supply of The City of New York, to acquire real estate for and on behalf of The City of New York, under chapter 724 of the Laws of 1905, and the acts amendatory thereof, in the Town of Phillipstown, Putnam County, N. Y., etc.

PUBLIC NOTICE IS HEREBY GIVEN that the third separate report of John J. Delaney, William Wood and George F. Secor, who were appointed Commissioners of Appraisal in the above-entitled matter, by an order of this Court made at Special Term thereof, held at the Court House in White Plains, N. Y., on January 19, 1907, was filed in the office of the County Clerk of Putnam County on the 5th day of December, 1907.

Said report bears date the 3d day of December, 1907, and affects Parcels Nos. 70, 78, 79, 80, 81, 82, 83, 91 and 92, shown on the map in this proceeding.

Notice is further given that an application will be made at a Special Term of the Supreme Court of the State of New York, to be held in and for the Ninth Judicial District, at the Court House, White Plains, Westchester County, N. Y., on the 1st day of February, 1908, at 10 o'clock in the forenoon of that day, or as soon thereafter as counsel can be heard, for an order confirming said report, and for such other and further relief as may be just.

Dated New York, January 6, 1908.
FRANCIS KEY PENDLETON,
Corporation Counsel.
Hall of Records, New York City.
j11, f1

PROPOSALS FOR BIDS AND ESTIMATES FOR THE CITY OF NEW YORK.

NOTICE TO CONTRACTORS.

GENERAL INSTRUCTIONS TO BIDDERS.

The person or persons making a bid or estimate for any services, work, materials or supplies for The City of New York, or for any of its departments, bureaus or offices, shall furnish the same in a sealed envelope, indorsed with the title of the supplies, materials, work or services for which the bid or estimate is made, with his or their name or names and the date of presentation to the President or Board or to the head of the Department at his or its office, on or before the date and hour named in the advertisement for the same, at which time opened by the President or Board or head of said Department and read, and the award of the contract made according to law as soon thereafter as practicable.

Each bid or estimate shall contain the name and place of residence of the person making the same, and names of all persons interested with him therein, and, if no other person be so interested, it shall distinctly state that fact; also, that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of The City of New York, is, shall be or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in or in the performance of the contract or in the supplies, work or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate that the several matters stated herein are in all respects true.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in The City of New York, or of a guaranty or surety company duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

No bid or estimate will be considered unless, as a condition precedent to the reception or consideration of any proposal, it be accompanied by a certified check upon one of the State or National banks of The City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the bond required, as provided in section 420 of the Greater New York Charter.

The certified check or money should not be inclosed in the envelope containing the bid or estimate, but should be either inclosed in a separate envelope addressed to the head of the Department, President or Board, or submitted personally upon the presentation of the bid or estimate.

For particulars as to the quantity and quality of the supplies, or the nature and extent of the work, reference must be made to the specifications, schedules, plans, etc., on file in the said office of the President, Board or Department.

No bid shall be accepted from or contract awarded to any person who is in arrears to The City of New York upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the City.

The contract must be bid for separately. The right is reserved in each case to reject all bids or estimates if it is deemed to be for the interest of the City so to do.

Bidders will write out the amount of their bids or estimates in addition to inserting the same in figures.

Bidders are requested to make their bids or estimates upon the blank forms prepared and furnished by the City, a copy of which, with the proper envelope in which to inclose the bid, together with a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefor at the office of the Department for which the work is to be done. Plans and drawings of construction work may also be seen there.