

# THE CITY RECORD.

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## THE CITY RECORD.

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JOHN PURROY MITCHEL, Mayor.

LAMAR HARDY, CORPORATION COUNSEL.

WILLIAM A. PRENDERGAST, COMPTROLLER.

DAVID FERGUSON, SUPERVISOR.

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## BOARD OF ALDERMEN.

Hearing by the Committee on Public Letting.

PUBLIC NOTICE IS HEREBY GIVEN that the Committee on Public Letting of the Board of Aldermen will hold a public hearing in the Committee Room, City Hall, Borough of Manhattan, on FRIDAY, MAY 12, 1916, at 1 o'clock p. m., on the following matter:

404—"Request of the President of the Borough of Manhattan for authority to purchase an additional supply of granite curb without public letting." This ordinance may be found in the minutes of the Board of Aldermen printed in the CITY RECORD of April 20, 1916.

All persons interested are invited to attend.

m11,12 P. J. SCULLY, City Clerk and Clerk of the Board of Aldermen.

Hearings by the Committee on General Welfare.

PUBLIC NOTICE IS HEREBY GIVEN that the Committee on General Welfare of the Board of Aldermen will hold a public hearing in the Aldermanic Chamber, City Hall, Borough of Manhattan, at 1.30 o'clock p. m., on FRIDAY, MAY 12, 1916, on the following matter:

342—"An Ordinance to amend Subdivision 1 of Section 240 of Article 17 of Chapter 23 of the Code of Ordinances, relating to 'vaults and cisterns.'" Page 852, Minutes of March 28, 1916. (This ordinance may be found in the minutes of the Board of Aldermen printed in the CITY RECORD of March 30, 1916.)

All persons interested are invited to attend.

m11,12 P. J. SCULLY, City Clerk and Clerk of the Board of Aldermen.

## PUBLIC SERVICE COMMISSION—FIRST DISTRICT.

No. 154 NASSAU STREET, NEW YORK CITY.

Calendar for the Week Commencing May 8, 1916.

Thursday, May 11, 1916—11 a. m.—Room 823—Case No. 2058—New York Railways Company—"Motive power and service on Madison Street and Avenue C lines"—Whole Commission. 3 p. m.—Room 823—Cases Nos. 577 and 2052—New York Edison Company et al—"Uniform system of accounts and form of report for 1915"—Whole Commission.

Regular meeting of the Commission held Thursday at 11 a. m.

Meeting of the Committee of the Whole held Wednesday at 10.30 a. m.

## THE BOARD OF ALDERMEN OF THE CITY OF NEW YORK.

### STATED MEETING.

Tuesday, May 9th, 1916, 1.30 o'clock P. M.

The Board met in the Aldermanic Chamber, City Hall.

Present:

Hon. Frank L. Dowling, President of the Board of Aldermen.

Aldermen

Alexander Bassett.  
William H. Burns.  
Samuel J. Burden.

James J. Browne.  
Lauren Carroll.  
Louis F. Cardani.

Edward Cassidy.  
Charles P. Cole.  
William T. Collins.

William W. Colne.  
Edward W. Cox.  
S. Clinton Crane.  
Frank A. Cunningham.  
Edward W. Curley.  
Henry H. Curran.  
Charles Delaney.  
John Diemer.  
Frank T. Dixon.  
Bernard E. Donnelly.  
Frank Dostal, Jr.  
Charles W. Dunn.  
Alexander S. Drescher.  
John T. Eagan.  
Thomas M. Farley.  
James R. Ferguson.  
August Ferrand.  
Samson Friedlander.  
John S. Gaynor.  
Edward V. Gilmore.

George G. Goetz.  
Isaac Gutman.  
Joseph M. Hannon.  
Charles H. Haubert.  
Harry Heyman.  
George Hilkemeier.  
William P. Kenneally.  
Francis P. Kenney.  
John McCann.  
John F. McCourt.  
William P. McGarry.  
Charles J. McGillick.  
John McKee.  
Thomas W. Martin.  
James J. Molen.  
Charles J. Moore.  
Robert L. Moran.  
Frank Mullen.  
John J. O'Rourke.  
Clarence Y. Palitz.

Charles A. Post.  
William F. Quinn.  
Harry Robitzek.  
John J. Ryan.  
Frank J. Schmitz.  
Peter Schweickert.  
Michael J. Shields.  
Emanuel I. Silberstein.  
Fred Smith.  
Arnon L. Squiers.  
Patrick H. Sullivan.  
Michael Stapleton.  
Frederick H. Stevenson.  
Moritz Tolk.  
Frederick Trau.  
William K. Walsh.  
Louis Wendel, Jr.  
Thomas A. Williams.  
John Wirth.  
Augustus M. Wise.

Calvin D. Van Name, President, Borough of Richmond, by Henry P. Morrison, Commissioner of Public Works.

Maurice E. Connolly, President, Borough of Queens, by James A. Dayton, Commissioner of Public Works.

Douglas Mathewson, President, Borough of The Bronx.

Lewis H. Pounds, President, Borough of Brooklyn, by Edmund W. Voorhies, Commissioner of Public Works.

Marcus M. Marks, President, Borough of Manhattan, by Ralph Folks, Commissioner of Public Works.

The President announced that Alderman Hogan was excused from attendance.

The Clerk proceeded to read the minutes of the stated meeting of May 2nd, 1916. On motion of Alderman Haubert, further reading was dispensed with, and the minutes were approved as printed.

On motion of Alderman Drescher, the privileges of the floor were extended to Mrs. Mathilda C. Ford of the Finance Department.

### PETITIONS AND COMMUNICATIONS.

No. 463.

New York State Conference of Mayors and Other Officials—Invitation to Attend Seventh Annual Conference at Syracuse on May 31 and June 1 and 2, 1916.

State Bureau of Municipal Information of the New York State Conference of Mayors and Other City Officials, New York City, May 4, 1916.

To the Common Council, New York City:

Gentlemen—I desire to call to the attention of your honorable body that the Seventh Annual Conference of Mayors and Other City Officials of this State will be held in Syracuse on May 31 and June 1 and 2. I desire also to urge each member of your honorable body to attend the annual meeting of city officials this year.

The advisory committee, through the secretary, has arranged an excellent programme, the main feature of which will be the discussion of various phases of the problem of municipal finances. The National Comptrollers' Association which will meet in Syracuse at the same time, will hold three joint sessions with the Conference, so that the city officials of this State will get the benefit of the experience of municipal financiers from all parts of the United States.

Among the subjects that will be discussed this year are the following: "The State and the Municipality," by Governor Whitman; "Reducing the City's Army of Unemployed," by Mayor Hoffman, of Elmira, who will present the Conference committee's report and recommendations on this subject; "A Uniform Accounting System for Third Class Cities," by Deputy State Comptroller Fred G. Reusswig; "New York State's Cooperative Plan for Securing Municipal Information," by Mayor Lennon, of Yonkers, who will discuss the activities of the State Bureau of Municipal Information since its organization last September; "Activated Sludge Method of Sewage Disposal," by T. Chalkley Hatton, of the Milwaukee Sewage Commission; "Uniform Municipal Health Budgets," by Deputy State Health Commissioner Williams; "Exemptions of Real and Personal Property from Taxation," by President Martin Saxe, of the State Tax Commission; "The Attitude of the State Department of Education Toward the City Schools," by State Commissioner of Education John Finley; "New York State's Proposed Municipal Bond Law," by Comptroller Edward Osborne, of Rochester; "the 'Pay-as-You-Go' Policy for Cities," by Comptroller William A. Prendergast, of New York City; "The Need of Standard Units for Comparing Municipal Improvements," by A. Prescott Folwell, Chairman of the Committee on Standard Forms of the American Society for Municipal Improvements; "Limiting the Heights of Buildings and Restricting the Use of Property in Cities," by President Lawson Purdy, of the New York City Department of Taxes and Assessments.

You will note that every session will be replete with discussions of interest to you and every other city official.

I hope that I may have the pleasure and honor of greeting every member of your honorable body at Syracuse the last day of this month. Very truly yours,

ROSSLYN M. COX, President.

Which was referred to the Committee on Rules.

No. 464.

New York Letter Carriers' Association—Letter of Thanks to Board of Aldermen for Endorsement of the Penrose-Griffin Leave of Absence Bill.

New York Letter Carriers' Association, Empire Branch, No. 36, N. A. L. C., P. J. Walters, Secretary, 248 Atlantic Avenue, Brooklyn, N. Y., May 4th, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen, N. Y. City:

Dear Sir—At a recent meeting of the New York Letter Carriers Association, the members present were officially informed of the fact that the Board of Aldermen of the City of New York unanimously passed a resolution endorsing the Penrose-Griffin Indefinite Leave of Absence Bill, which is now pending in the United States Congress, and which provides for the retirement of superannuated Post Office employees.

On behalf of the members of the New York Letter Carriers Association it gives me extreme pleasure to inform you that I have been instructed to convey to you and the Honorable members of the Board of Aldermen of the City of New York our sincere thanks and gratitude for the noble spirit that animated our distinguished representatives to assist in the furtherance of, and passage of this worthy act to aid our faithful servants of the United States Government.

Gratefully and sincerely yours,

PETER J. WALTERS, Secretary.

Which was ordered on file.

### COMMUNICATIONS FROM CITY, COUNTY AND BOROUGH OFFICERS.

The President laid before the Board the following communication from the President, Borough of Brooklyn:

No. 465.

President, Borough of Brooklyn—Transmitting Resolution in Relation to the Matter of Public Dock at Canarsie.

The City of New York, Office of the President of the Borough of Brooklyn, Brooklyn, May 5, 1916.

Hon. P. J. SCULLY, City Clerk and Clerk of the Board of Aldermen, City Hall, New York:

Dear Sir—On February 8, 1916, the Board of Aldermen, at its meeting held on that date, adopted a resolution referring to the Local Board of the New Lots District the matter of a public dock at Canarsie, Brooklyn.

The New Lots Local Board met on the 27th day of April and, after considering this communication from the Board of Aldermen, adopted a resolution requesting the Corporation Counsel to institute an action in ejectment against the New York & Rockaway Beach Railroad Company for the recovery of possession of the public dock at the foot of Rockaway Avenue, Canarsie, a copy of which I enclose for your files. Yours very truly,

MARK REARDON, Jr., Borough Secretary.

In the Local Board of the New Lots District.

Whereas, a petition for a local improvement, to wit: Communication from the



Board of Aldermen referring to the Local Board of the New Lots District for consideration the matter of a public dock at or near the foot of East 96th Street, Canarsie Beach, has been received by the President of the Borough of Brooklyn, and

Whereas, he has appointed a time for a meeting of this Local Board, at which meeting the said petition would be submitted by him to the said Local Board, and Whereas, the said petition was duly submitted thereafter to the said Local Board; now, therefore, it is

Resolved, That the Local Board of the New Lots District hereby requests that the Corporation Counsel institute an action in ejectment against the New York & Rockaway Beach Railroad Company or assigns for the recovery of the possession of the public dock at the foot of Rockaway Avenue, and to declare title in The City of New York to the property described in the agreement made between the Town of Flatlands and the Railroad Company entered into on the 21st day of June, 1895.

Adopted by the Local Board of the New Lots District this 27th day of April 1916. Commissioner Voorhies and Aldermen Haubert and Drescher voting in favor thereof.

Attest, MARK REARDON, Jr., Secretary.

Approved on May 4, 1916.

E. W. VOORHIES, Acting President, Borough of Brooklyn.

I hereby certify that the foregoing is a true copy of a resolution adopted by the New Lots Local Board at a meeting of said Board held on

MARK REARDON, Jr., Borough Secretary.

Which was ordered on file.

The President laid before the Board the following communication from the President, Borough of Richmond:

No. 466.

**President, Borough of Richmond—Request for Special Revenue Bonds, \$3,780, to Provide for Certain Wage Increases.**

The City of New York, Office of the President of the Borough of Richmond, Bureau of Street Cleaning, Borough Hall, New Brighton, New York City, May 4, 1916.

Board of Aldermen, City Hall, New York:

Dear Sirs—I would respectfully ask the Board of Aldermen to authorize the issuance of special revenue bonds to the amount of \$3,780 in accordance with the provisions of section 188, subdivision 8, of the Greater New York Charter, to permit of making the following wage increases:

Title.	Number of Employees.	Present Wage.	Proposed Wage.	Amount of Increase from June 1st to Dec. 31st.
Driver .....	46	\$720 00	\$840 00	\$3,220 00
Driver .....	4	780 00	840 00	140 00
Driver .....	1	900 00	960 00	35 00
Hostler .....	11	780 00	840 00	385 00
				\$3,780 00

Yours very truly, CALVIN D. VAN NAME, President of the Borough.

Which was referred to the Committee on Finance.

The President laid before the Board the following communication from the Commissioner of Parks, Manhattan and Richmond:

No. 467.

**Commissioner of Parks, Boroughs of Manhattan and Richmond—Request for Special Revenue Bonds, \$12,500, for Repairing and Painting the Viaduct from 152d Street to 155th Street on Riverside Drive.**

City of New York, Department of Parks, Boroughs of Manhattan and Richmond, Municipal Building, 10th Floor, April 28, 1916.

Hon. FRANK DOWLING, President, Board of Aldermen, City Hall, New York City:

Sir—Request is hereby made for an issue of special revenue bonds to the amount of \$12,500, in accordance with subdivision 8, section 188 of the Greater New York Charter, the proceeds to be used for repairing and painting the viaduct from 152nd Street to 155th Street, on Riverside Drive. With the co-operation of the Bridge Department Engineer a thorough examination of the structure has been made by this department and it was found to be very badly in need of considerable repairs and painting, the cost of which is estimated at \$12,500.

The item of cleaning and painting will amount to approximately \$7,000.

The balance of the work, amounting to \$5,500, consists of replacing all missing anchor bolts on the entire structure, replacing all corroded side bars of roller nests, the replacing with new all the split and broken rail posts and other cast iron members of the railing and the entire repainting of the masonry, together with the concreting of all the wall girders.

Early action on this request is urged because the structure is in very bad condition and immediate repairs are necessary. Respectfully yours,

CABOT WARD, Commissioner of Parks, Manhattan and Richmond.

Which was referred to the Committee on Finance.

The President laid before the Board the following communications from the Board of Estimate and Apportionment:

No. 468.

**Board of Estimate and Apportionment—Request for Special Revenue Bonds, \$30,250, for Purpose of Making Repairs to the Building Known as "Fulton Market."**

City of New York, Board of Estimate and Apportionment, Office of the Secretary, Municipal Building, May 8, 1916.

To the Honorable the Board of Aldermen:

Gentlemen—I transmit herewith certified copy of resolution adopted by the Board of Estimate and Apportionment May 5, 1916, recommending that the Board of Aldermen request the Board of Estimate and Apportionment to authorize the issue of \$30,250 special revenue bonds, pursuant to the provisions of subdivision 8 of section 188 of the Charter, the proceeds thereof to be used for making necessary repairs to the building known as "Fulton Market," under the jurisdiction of the President of the Borough of Manhattan.

I also enclose copy of report of the Comptroller relative thereto.

Respectfully, JOSEPH HAAG, Secretary.

Resolved, That the Board of Estimate and Apportionment hereby recommends that the Board of Aldermen request the Board of Estimate and Apportionment to issue thirty thousand two hundred and fifty dollars (\$30,250), special revenue bonds, pursuant to the provisions of subdivision 8 of section 188 of the Greater New York Charter, the proceeds thereof to be used for making necessary repairs to the building known as the "Fulton Market," located on the block bounded by Fulton, South, Beekman and Front Streets, Borough of Manhattan, under the jurisdiction of the President of the Borough of Manhattan.

A true copy of resolution adopted by the Board of Estimate and Apportionment May 5, 1916. JOSEPH HAAG, Secretary.

The City of New York, Department of Finance, Comptroller's Office, December 13, 1915.

To the Honorable the Board of Estimate and Apportionment:

Gentlemen—The building occupied by the block bounded by Fulton, South, Beekman and Front Streets, in the Borough of Manhattan, formerly used for the purpose of and known as the "Fulton Market," has been abandoned for market purposes, and, by a resolution of the Commissioners of the Sinking Fund adopted at a meeting held October 7, 1914, the Comptroller was authorized to derive such revenue as might be had until the ultimate disposition of the property might be decided upon by the Sub-Committee on Vacant Property.

The dilapidated condition of the building prohibits its rental either in part or in its entirety for any adequate sum or sums, and at present it represents a considerable loss of income, which might be retrieved by the expenditure of the amount necessary to place it in proper repair and rearrange it in such a manner that it may be used for business purposes.

It is proposed to rebuild the upper portion of the building, including the roof, and to replace the present floor, at an estimated expense of approximately \$30,250, as set forth in the attached report of Mr. Chandler Withington, Chief Engineer.

The assessed valuation of the property as at present is \$450,000, to which may be added the amount of the proposed expenditure, making a total of \$480,000, which sum may be considered as a fair valuation of the property for the purpose of determining what amount would represent an adequate return from it as an investment.

At present it shows a return of only \$9,099.60 per annum, but if placed in proper condition and rented, would produce about \$32,760 annually, and when fully occupied by responsible tenants on long term leases, might be advantageously disposed of by the City.

It is proposed to divide the floor space into 18 store spaces, five year leases of which at upset rentals, will be sold with the approval of the Commissioners of the Sinking Fund. Such leases will contain a provision that the lessees shall erect and maintain the required partitions in accordance with certain specifications provided and approved by the City.

There will be nine store spaces fronting on South Street, one 27 feet by 80 feet at each corner of the block, with seven spaces 20 feet by 80 feet between them; four store spaces each fronting on Fulton Street and Beekman Street, the corner spaces being 25 feet by 85 feet, and the interior spaces 20 feet by 85 feet, with an interior store space 30 feet by 80 feet fronting on Front Street.

The estimated rental value of these spaces is as follows:

2 South Street corner spaces.....	\$6,000 per annum.
7 South street interior spaces.....	16,800 per annum.
2 Fulton and Beekman Street corner spaces.....	3,000 per annum.
6 Fulton and Beekman Street interior spaces.....	5,760 per annum.
1 Front Street interior space.....	1,200 per annum.

—making a total of \$32,760 per annum, or a return of 6.82 per cent. per annum upon investment valuation of \$480,000.

Unsuccessful efforts have been made to find a purchaser for the building at a fair price, or a lessee who would pay a fair rental and make the necessary alterations and improvements. It therefore is apparent that the proper solution of the problem is for the City to repair and rent the building for a period of five years, at the end of which time it could probably be sold to advantage.

In order to provide the necessary funds for the above improvement, I recommend the adoption of the attached resolution. Yours respectfully

WM. A. PRENDERGAST, Comptroller.

Which was referred to the Committee on Finance.

No. 469.

**Board of Estimate and Apportionment—Resolution to Establish the Grade of Position of Sheet Metal Worker in the Fire Department.**

City of New York, Board of Estimate and Apportionment, Office of the Secretary, Municipal Building, May 8, 1916.

To the Honorable the Board of Aldermen:

Gentlemen—I transmit herewith certified copy of resolution adopted by the Board of Estimate and Apportionment, May 5, 1916, recommending the establishment of the grade of position of Sheet Metal Worker at \$5.00 per day, for five incumbents, in the Fire Department.

I also enclose copy of report of the Committee on Salaries and Grades relative thereto. Respectfully, JOSEPH HAAG, Secretary.

Resolved, That the Board of Estimate and Apportionment, pursuant to the provisions of section 56 of the Greater New York Charter hereby recommends to the Board of Aldermen the establishment in the Fire Department of the grade of position, in addition to those heretofore established, as follows:

Title.	Rate Per Diem.	Number of Incumbents.
Sheet Metal Worker.....	\$5 00	Five

A true copy of resolution adopted by the Board of Estimate and Apportionment, May 5, 1916. JOSEPH HAAG, Secretary.

The City of New York, Board of Estimate and Apportionment, Municipal Building, Bureau of Contract Supervision, April 18, 1916.

To the Board of Estimate and Apportionment:

Gentlemen—On April 5, 1916, the Fire Commissioner requested modification of Code No. 1671 for 1916. The Bureau of Standards reports thereon as follows:

"Purpose—To eliminate the lines of Tinsmith, 3 at \$5 per day; Tinsmith and Roofer, 1 at \$5 per day, and Roofer, 1 at \$5 per day, 277 days each, and to substitute a line for Sheet Metal Worker, 5 at \$5 per day, 277½ days each.

"Reason—The Municipal Civil Service Commission has changed the title of these five employees to Sheet Metal Workers.

"Finding—The request is proper and necessary. The position should also be established in accordance with Section 56 of the Greater New York Charter."

Recommendation—In view of the above report, the Committee recommends that the request be granted by the adoption of the attached resolutions. Respectfully,

WM. A. PRENDERGAST, Comptroller; FRANK L. DOWLING, President, Board of Aldermen; LEWIS H. POUNDS, President, Borough of Brooklyn; Committee on Salaries and Grades.

Which was referred to the Committee on Salaries and Offices.

The President laid before the Board the following communication from the Commissioner of Charities:

No. 470.

**Commissioner of Public Charities—Request for Authority to Enter Into Contract, Without Public Letting, for All Labor and Material Necessary to Construct Concrete Foundations for the Female Dormitory, Commonly Known as "The Ship," in the Kings County Group of Buildings.**

Department of Public Charities of The City of New York, Municipal Building, Tenth Floor, May 6, 1916.

To the Honorable the Board of Aldermen, City Hall, New York City:

Gentlemen—We request permission of your Honorable Board to enter into a contract without public letting for \$1,958 with Geo. L. Hiltl Co., Inc., 114-116 East 28th Street, for all labor and material necessary to construct concrete foundations for the Female Dormitory, commonly known as "The Ship," in the Kings County Hospital group of buildings, and the moving and erecting of this building upon the foundation in question.

A contract was recently awarded to Mr. Hiltl for the complete construction of a Laundry Building at Kings County Hospital, and the proposed location of this building is in part occupied by this Female Dormitory. It will be necessary to move it westward about 100 feet and turn it at right angles from its present position.

Yours very truly, JOHN A. KINGSBURY, Commissioner.

Which was referred to the Committee on Public Letting.

The President laid before the Board the following communication from the Commissioner of Docks and Ferries:

No. 471.

**Commissioner of Docks—Request for Authority to Purchase Coal Without Public Letting.**

The City of New York, Department of Docks and Ferries, Office of the Commissioner, Pier A, North River, May 5, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen:

Dear Sir—This Department at the present time has sufficient coal to meet the operation of the Municipal Ferries until Sunday next, the 7th inst. In order that there would be no interruption of this ferry service it was necessary to give an order without delay for an additional supply of coal. Bids were received by the Central Purchase Committee on yesterday the 4th inst., for 4,000 tons of coal to meet the requirements until bids can be obtained on an advertised contract. The lowest bid received by the Committee was from Pattison & Bowns at \$3 per ton for mixed coal.

An order has accordingly been issued to Pattison & Bowns for the 4,000 tons of mixed coal at \$3 per ton, a total cost of \$12,000.

I am advised that the amount authorized by the Board of Aldermen in resolution of February 8, 1916, for the purchase of coal without public letting has been exhausted. It is therefore requested that a resolution be adopted by the Board of Aldermen, approving this purchase of 4,000 tons of coal at \$3 per ton without public letting.

Yours very truly, RICHARD C. HARRISON, Acting Commissioner of Docks.

Which was referred to the Committee on Public Letting.

ORDINANCES AND RESOLUTIONS.

No. 472—(G. O. No. 76).

**Resolution Appointing Various Persons Commissioners of Deeds.**

By the President—

Resolved, That the following named persons be and they are hereby appointed Commissioners of Deeds:

By President Dowling—

Frank Boylan, 459 West 23d St., Manhattan.

Endorsed by C. M. Pines and H. R. Mason.



By Alderman Burden—  
Henry Seebeck, 259 Nott Ave., Long Island City, Queens.  
Endorsed by J. W. Friribu and C. Diestel.

By Alderman Burns—  
Harris Levy, 474 Grand Street, Manhattan.  
Endorsed by A. M. Fisch and H. Schulman.  
Benjamin Dembitz, 90 Sheriff St., Manhattan.  
Endorsed by E. Goldberg and C. J. Stahl.

By Alderman Collins—  
Katharine R. McIntyre, 303 East 33d St., Manhattan.  
Endorsed by W. C. Beecher and C. T. Baylis.  
James Francis Duffy, 238 East 27th St., Manhattan.  
Endorsed by J. J. Dooling and J. A. McNamara.  
Dennis D. Barnett, 336 East 25th St., Manhattan.  
Endorsed by J. O'Neil and T. Lang.

By Alderman Colne—  
Arthur Ekroth, 572 Sterling Place, Brooklyn.  
Endorsed by P. V. Hickey and A. T. Hobley.  
Thomas E. Brownlee, 309 Latayette Ave., Brooklyn.  
Endorsed by W. B. Davis and J. R. Howe, Jr.

By Alderman Cox—  
Herman Ringe, 8 Forest Ave., Metropolitan, Queens.  
Endorsed by W. K. Haviland and F. C. Lemmerman.  
Henry C. Wuestefeld, 2551 Gates Ave., Queens.  
Endorsed by R. E. Moffett and I. Buxbaum.  
Eugene Francis Moran, 131 Jewell St., Forest Hills, Queens.  
Endorsed by C. W. Walt and M. T. Fisher.

By Alderman Crane—  
Henry Bermant, 884 Riverside Drive, Manhattan.  
Endorsed by H. Herz and H. I. Perlín.  
Charles H. Mapledoram, 559 West 183d st., Manhattan.  
Endorsed by Wm. Lyttle and J. C. Barr.  
Bernard J. Snow, 248 Wadsworth Ave., Manhattan.  
Endorsed by R. L. Donnell and C. P. Denslow.  
Edwin I. Bloomingdale, 544 West 157th St., Manhattan.  
Endorsed by Max Weinbaum and H. Bendheim.  
Arthur N. Slomon, 515 West 187th St., Manhattan.  
Endorsed by S. Hyman and H. Levy.  
Harry D. Niemetz, 450 Audubon Ave., Manhattan.  
Endorsed by J. A. Lewis and A. N. Slomon.  
John Patrick Walsh, 4260 Broadway, Manhattan.  
Endorsed by F. Henriques and Jas. Lawrence.

By Alderman Curran—  
Mark Alter, 115 West 10th St., Manhattan.  
Endorsed by J. J. Mayes and L. Jacobs.

By Alderman Diemer—  
Jacob S. Demovitch, 168 Hart St., Brooklyn.  
Endorsed by A. L. Feinstein and C. N. Weirfield.  
Mary Schiebel, 1014 DeKalb Ave., Brooklyn.  
Endorsed by M. Todaro and A. F. Hess.  
Anna M. Heidt, 163 Tompkins Ave., Brooklyn.  
Endorsed by J. J. Healy and F. H. Tietjen.

By Alderman Dostal—  
Joseph Sachs, 178 E. 7th St., Manhattan.  
Endorsed by J. Almont and A. L. Ceasar.  
Doris Diamant, 46 East 3d St., Manhattan.  
Endorsed by C. Entmacher and A. J. Arnold.

By Alderman Drescher—  
Abraham W. Slepian, 534 Ralph Ave., Brooklyn.  
Endorsed by S. Nirenblatt and M. M. Shapiro.  
Bernard Besdine, 2048 Pacific St., Brooklyn.  
Endorsed by C. S. Amsel and G. E. Odell.  
Samuel Rubinton, 374 Alabama Ave., Brooklyn.  
Endorsed by A. S. Drescher and C. K. Goldsmith.  
Samuel Rothenberg, 1604 Eastern Parkway, Brooklyn.  
Endorsed by I. E. Wolfe and M. C. Loskowitz.

By Alderman Dunn—  
Oscar Richter, 464 56th St., Brooklyn.  
Endorsed by A. Coblitz and L. Siegel.  
Daniel Sullivan, 1153 74th St., Brooklyn.  
Endorsed by W. P. Lake and W. R. White.

By Alderman Eagan—  
Chas. Brown, 411 East 51st St., Manhattan.  
Endorsed by Benjamin Borowsky and B. Kirschstein.

By Alderman Ferrand—  
Charles B. Little, 411 Sterling Place, Brooklyn.  
Endorsed by J. D. Mason and T. F. Burke.  
William Mead, 14 St. Charles Pl., Brooklyn.  
Endorsed by F. J. Lancaster and B. Norilli.  
Reuben Goldsmith, 394 Park Place, Brooklyn.  
Endorsed by W. J. Wasin, Jr., and H. D. Joost.

By Alderman Friedlander—  
Henry Louis Levinsky, 74 West 119th St., Manhattan.  
Endorsed by B. Borowsky and H. Wendt.  
Isaac Levison, 7 West 120th St., Manhattan.  
Endorsed by H. J. Moskowitz and I. Geussman.  
H. David Frackman, 148 West 111th St., Manhattan.  
Endorsed by L. A. Shapiro and M. M. Alpert.  
Nathan April, 45 W. 116th St., Manhattan.  
Endorsed by J. Jarvis and E. Loewenroff.  
David Sidney Barr, 64 West 118th St., Manhattan.  
Endorsed by A. M. Levy and H. Greenfield.  
Albert Wald, 68 West 117th St., Manhattan.  
Endorsed by A. Gross and H. Hem.

By Alderman Gaynor—  
Isidore Joseph Rose, 169 Hewes St., Brooklyn, N. Y.  
Endorsed by S. C. David and H. Rosenblatt.

By Alderman Gilmore—  
Thomas J. Moore, 409 East 86th St., Manhattan.  
Endorsed by M. Bloch and J. A. Mullen.

By Alderman Gutman—  
Bertha D. Platz, 57 East 96th St., Manhattan.  
Endorsed by J. P. Knapp and J. F. Campbell.  
Moses A. Horowitz, 156 East 94th St., Manhattan.  
Endorsed by H. M. Schaab and H. Gottlieb.

By Alderman Harmon—  
Walter Russell Gledhill, 344 West 14th St., Manhattan.  
Endorsed by E. Hetherington and David F. Yoner.

By Alderman Haubert—  
Frank A. Carroll, 135 Norwood Ave., Brooklyn.  
Endorsed by J. Eschmann and M. J. Trudden.

By Alderman Hilkemeier—  
Samuel Mirrer, 68 Morrell St., Brooklyn.  
Endorsed by S. Starassoler and J. H. Cross.

By Alderman Hogan—  
Lawrence Weisman, 152 Atlantic Ave., Brooklyn.  
Endorsed by M. H. Ring and M. Popper.  
Thomas Grinnell Flaherty, 194 Clinton St., Brooklyn.  
Endorsed by W. I. Taylor and H. C. Turner.

By Alderman McGarry—  
Henry G. Ludder, 161 Meserole Ave., Brooklyn.  
Endorsed by John W. Carpenter and M. T. Howard.

By Alderman McKee—  
May E. Fruauf, 2125 Fifth Ave., Manhattan.  
Endorsed by T. J. Bannon and P. J. Curry.

L. Cleveland Levy, 2051 Fifth Ave., Manhattan.  
Endorsed by S. H. Immergluck and M. Price.  
James William Henry Witherspoon, 2119 Madison Ave., Manhattan.  
Endorsed by W. A. Parker and Rev. F. R. Bell.

By Alderman Martin—  
Frank Hagan, 2019 Grand Ave., Bronx.  
Endorsed by H. F. Donnelly and J. H. McDonald.

By Alderman Moore—  
Philip Lerman, 272 Atkins Ave., Brooklyn.  
Endorsed by R. Freedman and L. E. Girm.  
Samuel D. Rabinowitz, 474 Barbey St., Brooklyn.  
Endorsed by W. H. Lake and T. G. Price.

By Alderman Moien—  
Frances F. Shirk, 698 3rd Ave., Brooklyn.  
Endorsed by O. B. Jarvis and M. V. Theall.

By Alderman Moran—  
Frank A. Zeisler, 2344 Gleason Ave., Unionport, Bronx.  
Endorsed by R. J. Werhan and A. H. Jordan.  
Dorothea Hein, 642 St. Anns Ave., Bronx.  
Endorsed by F. M. Weiss and R. H. Arnold.  
Thomas C. Cokely, 2880 Harrington Ave., Bronx.  
Endorsed by C. R. Voce and J. S. McDonogh.

By Alderman Mullen—  
Ernest W. Leland, 678 St. Nicholas Ave., Manhattan.  
Endorsed by J. Uman and M. Broderick.  
Granville I. Burr, 811 St. Nicholas Ave., Manhattan.  
Endorsed by R. G. Bain and P. K. Deane.

By Alderman Post—  
John Holzhamer, 107 Cypress Ave., Flushing, Queens.  
Endorsed by J. F. Donovan and F. H. Hulbert.  
Isaac E. Bermant, Earl Ave., Flushing, Queens.  
Endorsed by P. Baum and H. I. Perlín.  
Frank F. Greiner, The Oaks, Broadway and 8th St., Bayside, Queens.  
Endorsed by F. W. Hendrickson and G. Sweet.

By Alderman Quinn—  
George Landon, 107 West 70th St., Manhattan.  
Endorsed by J. T. McMahon and H. Brand.  
Jeremiah F. Sullivan, 175 West 81st St., Manhattan.  
Endorsed by W. E. Dunn and J. H. Cross.  
Elizabeth M. Dagenais, 102 West 93d St., Manhattan.  
Endorsed by F. F. Colver and F. L. Kane.

By Alderman Robitzek—  
Max Henry King, 2120 Honeywell Ave., Bronx.  
Endorsed by W. J. Oliver and Lawrence Weisman.  
Martin Greenfield, 853 Stebbins Ave., Bronx.  
Endorsed by W. J. McCormack and J. E. Sheehy.  
Beatrice Beckerman, 1339 Prospect Ave., Bronx.  
Endorsed by I. Walchok and S. Jaffe.  
James T. Donahue, 4630 Matilda Ave., Bronx.  
Endorsed by A. T. Murphy and L. M. Peters.  
Joseph S. Klein, 893 Trinity Ave., Bronx.  
Endorsed by A. J. Griffin and R. Lewenthal.  
Emanuel Alfred Weil, 970 Prospect Ave., Bronx.  
Endorsed by N. Brodie and J. Epter.  
Hannah Rosenbaum, 973 Simpson St., Bronx.  
Endorsed by I. L. Hirscher and A. Jacoby.  
Joseph Patrick Murphy, 459 Tremont Ave., Bronx.  
Endorsed by G. O. Morell and A. J. Laigy.  
Maurice Kleinman, 1226 Vyse Ave., Bronx.  
Endorsed by M. Gotlieb and B. Simon.  
Reuben J. Nittstein, 874 E. 163d St., Bronx.  
Endorsed by S. Molender and H. M. Burnett.  
Maurice E. Sobel, 935 E. 163d St., Bronx.  
Endorsed by S. Sobel and M. Gladstone.  
William S. Kreiner, 1015 E. 163d St., Bronx.  
Endorsed by J. R. Simon & Co. and H. H. Oppenheimer.

By Alderman Ryan—  
Harry Jacobs, 2914 W. 15th St., Brooklyn.  
Endorsed by J. T. Kurtz and F. Zurer.  
Jacob Braun, 3214 Surf Ave., Coney Island, Brooklyn.  
Endorsed by N. Permut and S. A. Cohen.  
Hyman Israel Barnett, 1665 43d St., Brooklyn.  
Endorsed by S. Molander and H. Robitzek.  
A. Ralph Greene, 1564 49th St., Brooklyn.  
Endorsed by A. Trimble and P. Simon.  
Bernard K. Murphy, 1551 55th St., Brooklyn.  
Endorsed by E. D. W. Griemsmann and H. E. French.

By Alderman Schmitz—  
Henry O. E. Rehberg, 10 East Burnside Ave., Corona, Queens.  
Endorsed by B. H. Mindlin and E. G. Klein.

By Alderman Silberstein—  
David I. Freiberg, 29 Clinton St., Manhattan.  
Endorsed by W. Greenfogel and M. J. LeBarker.  
Sol. H. Eisler, 325 East 4th St., Manhattan.  
Endorsed by P. J. Walsh and I. Ringel.

By Alderman Smith—  
Charles H. Streiner, 100a Sumner Ave., Brooklyn.  
Endorsed by Ph. Schwartz and J. H. Waite.

By Alderman Squiers—  
Waldo T. Hunter, 244 Lefferts Ave., Brooklyn.  
Endorsed by F. A. W. Ireland and C. P. Cooney.  
Alexander R. Kellebrew, 354 East 25th St., Brooklyn.  
Endorsed by H. L. Bogert and F. H. Quinby.  
Celia Solomon, 964 Eastern Parkway, Brooklyn.  
Endorsed by D. Greenbaum and L. B. Bingen.  
Arthur E. Schwartz, 1104 Park Place, Brooklyn.  
Endorsed by A. G. Tonkonogy and C. E. Black.

By Alderman Stapleton—  
Louis Belserene, 35 Madison St., Manhattan.  
Endorsed by J. V. Halliman and J. P. Barbieri.

By Alderman Stevenson—  
Thomas E. O'Brien, 561 9th St., Brooklyn.  
Endorsed by C. W. Dunn and F. T. Dixon.

By Alderman Sullivan—  
Samuel Henry Kunstlich, 99 2nd Ave., Manhattan.  
Endorsed by A. J. Rifkind and L. Frankel.  
Charlotte Frances Kunstlich, 99 2nd Ave., Manhattan.  
Endorsed by S. H. Kunstlich and A. J. Rifkind.  
Alex. S. Weinberger, 233 East 12th St., Manhattan.  
Endorsed by H. Brecher and D. J. Woelper.

By Alderman Tolk—  
Rose Sarecky, 173 Henry St., Manhattan.  
Endorsed by L. Jacobson and H. S. Chapiro.

By Alderman Trau—  
Kate Hahn, 179 East 117th St., Manhattan.  
Endorsed by D. Aronson and J. M. Kempler.  
George Joseph Cavalieri, 2333 First Ave., Manhattan.  
Endorsed by J. Henderson and F. X. Mancuso.

By Alderman Walsh—  
George Wm. Kutscher, 418 Richmond Terrace, Richmond.  
Endorsed by J. Schwyer and C. L. Wende.

By Alderman Wirth—  
William Garlick, 184 Decatur St., Brooklyn.  
Endorsed by J. Kurtz and J. J. Hefferman.



By Alderman Wise—  
Joseph T. McMahon, 3440 Broadway, Manhattan.  
Endorsed by W. D. Bruing and Geo. Landon.  
Which was laid over.

No. 473—Ord. No. 66.

**An Ordinance to Amend Subdivision 1 of Section 15 of Article 2 of Chapter 24 of the Code of Ordinances Relating to "Rules of the Road," and Particularly "Right of Way."**

By Alderman Ferrand—

AN ORDINANCE to amend subdivision 1 of section 15 of article 2 of chapter 24 of the Code of Ordinances relating to "rules of the road," and particularly "right of way."

*Be it Ordained, by the Board of Aldermen of The City of New York, as follows:*  
Section 1. Subdivision 1 of section 15 of article 2 of chapter 24 of the Code of Ordinances, relating to "rules of the road" and particularly to "right of way," is hereby amended to read as follows:

§15. Right of way.

1. Direction. [On all streets and public places, all vehicles going in a northerly or southerly direction shall have the right of way over any vehicle going in an easterly or westerly direction.] *Every driver of a vehicle approaching the intersection of a street or public place shall grant the right of way at such intersection to any vehicle approaching from his right; provided, that whenever traffic officers are stationed they shall have full power to regulate traffic.*

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in italics; old matter in brackets [ ], to be omitted.

Which was referred to the Committee on General Welfare.

No. 474.

**Resolution Requesting Heads of City Departments, etc., to Grant Leaves of Absence to City Employees, Members of United Spanish War Veterans, to Attend Annual Encampment at Saratoga Springs.**

By Alderman O'Rourke—

Whereas, A number of the employees of the City of New York are members of the United Spanish War Veterans, a patriotic organization devoted to the support of the Government and defense of the National honor, and

Whereas, the Thirteenth (13th) Encampment of the Department of New York will be held at Saratoga Springs, N. Y., on July 3d, 4th and 5th, 1916; now therefore be it

Resolved, That the heads of departments and bureaus of the City Government be and are hereby requested to grant leave of absence, with pay, to all employees who are members of the United Spanish War Veterans on July 2d, 3d, 4th and 5th to attend the aforesaid encampment, provided, however, that satisfactory evidence of such attendance shall be furnished to the head of department or bureau, as the case may be.

Which was ordered on file.

No. 475—Ord. No. 67.

**An Ordinance to Amend Subdivision 3, Section 2 of Article 1 of Chapter 16 of the Code of Ordinances Relating to the Vacation of Per Diem Employees of the City.**

By Alderman Robitzek—

AN ORDINANCE to amend subdivision 3 §2 of article 1 of chapter 16 of the Code of Ordinances, relating to the vacation of per diem employees of the City.

*Be it Ordained by the Board of Aldermen of The City of New York as follows:*

Section 1. Subdivision 3 of §2 of article 1 of chapter 16 of the Code of Ordinances is hereby amended to read as follows:

3. *Time of vacation.* The heads of the various departments and bureaus may fix the time when vacations shall be given, except that per diem employees, other than those of the board of water supply, department of parks and the department of water supply, gas and electricity shall be given vacations only during the months of June, July, August and September.

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in italics.

Which was referred to the Committee on Codification of Ordinances.

No. 476—Ord. No. 68.

**An Ordinance to Amend Subdivision 2 of Section 37 of Article 2 of Chapter 17 of the Code of Ordinances Relating to Park Streets.**

By the same—

AN ORDINANCE to amend subdivision 2 or § 37 of article 2 of chapter 17 of the Code of Ordinances relating to park streets.

*Be it Ordained by the Board of Aldermen of The City of New York, as follows:*

Section 1. Subdivision 2 of § 37 of article 2 of chapter 17 of the Code of Ordinances is hereby amended to read as follows:

2. *Special.* The delivery of supplies to the residences on [West 72d Street, West End avenue, north of 70th Street, West 86th Street,] Riverside drive, [Cathedral parkway] and Morningside avenue West, in Manhattan, and the Shore road in Brooklyn, will be permitted in the forenoon, but no business vehicles shall enter upon or pass over said parkways after the hour of noon, except by special permit. In passing over any of said streets business vehicles must go directly to the place of delivery and must leave such street without unnecessary delay and by the shortest route—the place of entry, if possible. The park streets specified in this subdivision must not be used to enable business vehicles to reach places exterior to such streets.

Sec. 2. This ordinance shall take effect immediately.

Note—Old matter, in brackets [ ], to be omitted.

Which was referred to the Committee on Codification of Ordinances.

No. 477—Ord. No. 69.

**An Ordinance to Amend Subdivision 1 of Section 39 of Article 2 of Chapter 17 of the Code of Ordinances Relating to Ocean Parkway.**

By the same—

AN ORDINANCE to amend subdivision 1 of §39 of article 2 of chapter 17 of the Code of Ordinances, relating to Ocean Parkway.

*Be it Ordained by the Board of Aldermen of The City of New York, as follows:*

Section 1. Subdivision 1 of §39 of article 2 of chapter 17 of the Code of Ordinances is hereby amended to read as follows:

1. *Business vehicles.* Wagons, trucks, and other business vehicles heavy or light, are prohibited from using the main drive of the Ocean Parkway, and from using Bay parkway between 80th street and Gravesend bay, and must use the west road at all times, and they must use the block pavement, at either side of the main road or the traffic roads of the Eastern parkway.

*It shall be unlawful to drive any vehicle over the easterly road or bridle road of the Ocean parkway, between Prospect Park and the Coney Island Concourse, except as it may be necessary to cart or convey supplies to the residences along said easterly side road, or in case of buildings being erected fronting on said side road, when it shall be lawful to cart building materials thereon. In all cases, however, vehicles must enter said road from the street nearest to said residence or house in course of construction, and must leave the same at the next following intersecting street.*

Sec. 2. This ordinance shall take effect immediately.

Note—new matter in italics.

Which was referred to Committee on Codification of Ordinances.

No. 478—Ord. No. 70.

**An Ordinance to Amend Article 3 of Chapter 17 of the Code of Ordinances Relating to Building and Other Projections on Park Streets.**

By the same—

AN ORDINANCE to amend Article 3 of Chapter 17 of the Code of Ordinances relating to building and other projections on park streets.

*Be it ordained by the Board of Aldermen of the City of New York as follows:*

Section 1. Article 3 of Chapter 17 of the Code of Ordinances is hereby amended by adding thereto a new section, to be §63 thereof, to read as follows:

§63. Ocean Parkway. 1. *Veranda, porch, piazza or portico projections beyond court yard restriction line. All applications for projections of verandas, porches, piazzas, porticos, etc., beyond the 30 foot restriction line of Ocean Parkway shall be accompanied by blueprints of plan of proposed projection, drawn to a scale of 1-4 of an inch to the foot, showing restriction line, lot lines, plan and section or plan and elevation of projection. The projection shall not exceed 15 feet beyond the restriction line at any point, and shall be of open construction, with roof supported by columns or piers.*

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in italics.

Which was referred to the Committee on Codification of Ordinances.

No. 479—Ord. No. 71.

**An Ordinance to Amend Section 12 of Article 1 of Chapter 17 of the Code of Ordinances Relating to Permits for Sales, Exhibitions, Etc., in Parks.**

By the same—

AN ORDINANCE to amend section 12 of article 1 of chapter 17 of the Code of Ordinances, relating to permits for sales, exhibitions, etc., in parks.

*Be it Ordained by the Board of Aldermen of The City of New York as follows:*

Section 1. Section 12 of article 1 of chapter 17 of the Code of Ordinances is hereby amended to read as follows:

Section 12. *No person shall [expose any article for sale or exhibition, nor perform any personal service for hire, nor take any photograph in any park or parkway, except under a permit to be issued by the commissioner] exhibit, sell or offer for sale anything whatsoever, or take any photograph or perform any personal service for hire in any park or parkway, or in any street, square or public place under the jurisdiction of the respective commissioner of parks having jurisdiction or otherwise than in accordance with the terms of such permit, provided, however, that the provisions of this section shall not apply to public hack-stands maintained in streets adjacent to public parks, pursuant to §99, article 8, chapter 14 of the Code of Ordinances.*

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in italics; old matter in brackets [ ], to be omitted.

Which was referred to the Committee on Codification of Ordinances.

No. 480—Ord. No. 72.

**An Ordinance to Amend Section 30 of Article 2 of Chapter 17 of the Code of Ordinances Relating to the Use of Drives and Bridle Paths in Parks.**

By the same—

AN ORDINANCE to amend § 30 of article 2 of chapter 17 of the Code of Ordinances, relating to the use of drives and bridle paths in parks.

*Be it Ordained, by the Board of Aldermen of The City of New York, as follows:*

Section 1. Section 30 of article 2 of chapter 17 of the Code of Ordinances is hereby amended to read as follows:

§ 30. Use of drives and bridle paths.

In all parks and parkways the drives shall be used only by persons in pleasure vehicles, on bicycles or on horseback; the bridle paths only by persons on horseback. Animals to be used on either shall be well broken, and constantly held in such control that they may be easily and quickly turned or stopped [; except as otherwise provided in this article, they shall not be allowed to move at a rate of speed on the drives or bridle paths of more than 8 miles an hour]. *No person shall operate, drive or propel, and no owner thereof riding thereon or therein shall cause or permit to be operated, driven or propelled, on any park drive, parkway or park street, any bicycle, tricycle, velocipede, motor-cycle, motor-tricycle, motor delivery wagon, or motor vehicle, however propelled, or any vehicle drawn by horses or other animals, recklessly or negligently, or at a speed or in a manner so as to endanger, or to be likely to endanger, the life or limb or property of any person. A rate of speed exceeding 15 miles per hour shall constitute prima facie evidence of a prohibited rate of speed and manner of driving, and a violation of the provisions of this section; a rate of speed exceeding 20 miles per hour shall constitute a prohibited rate of speed and manner of driving, and a violation of the provisions of this section; and a rate of speed exceeding 25 miles per hour, on parkways in the outlying sections of the parks of the boroughs of The Bronx, Richmond, and Queens, shall constitute a prohibited rate of speed and manner of driving, and a violation of the provisions of this section.* When an officer on duty shall direct, by gesture or otherwise, that the speed of an animal or vehicle shall be checked, or that it shall be stopped, or its course altered, such direction shall be immediately obeyed. No horse or other beast of burden, nor any automobile, shall be driven or suffered to stand anywhere except on the drive or bridle path. On all driveways and parkways where grass plots divide the way, all vehicles and horsemen must keep to the right-hand drive or bridle path.

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in italics; old matter, in brackets [ ], to be omitted.

Which was referred to the Committee on Codification of Ordinances.

No. 481.

**Resolution to Authorize the Ordinance Clerk to Purchase a Charter and a Set of the Consolidated Laws, with Amendments to Date, for Use of Committees of the Board.**

By the same—

Resolved, That the Ordinance Clerk be and he is hereby authorized to purchase, for the sole use of the several Committees of the Board, a copy of the Greater New York Charter, with amendments to date, and a set of the Consolidated Laws, with amendments to date, the cost of which shall be charged to and paid out of the budgetary appropriation for 1916, entitled "Office Supplies, Board of Aldermen," Code No. 5.

The President put the question whether the Board would agree with said resolution. Which was unanimously decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Cardani, Cassidy, Cole, Collins, Colne, Cox, Curley, Delaney, Diemer, Dixon, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Gaynor, Gilmore, Gutman, Hannon, Haubert, Heyman, Hilkemeier, Kennelly, McCann, McCourt, McGarry, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Schmitz, Schweickert, Shields, Silberstein, Squiers, Stapleton, Stevenson, Tolk, Trau, Wendel, Wirth, Wise; President Van Name, by Henry P. Morrison, Commissioner of Public Works; President Connolly, by James A. Dayton, Commissioner of Public Works; President Pounds, by Edmund W. Voorhies, Commissioner of Public Works; President Marks, by Ralph Folks, Commissioner of Public Works—56.

No. 482.

**Resolution to Appoint Max Goodman a City Surveyor.**

By the same—

Resolved, That Max Goodman, of 1451 Prospect avenue, in the Borough of The Bronx, be and he is hereby appointed a City Surveyor.

Which was referred to the Examining Board of City Surveyors.

No. 483.

**Resolution in Regard to Allotment of Tickets in Grand Stand Erected at 25th Street and Madison Square for Non-Partisan Parade to Be Held Saturday, May 13.**

By Alderman Silberstein—

Whereas, At a prior meeting of this Board of Aldermen, there was appropriated the sum of \$1800 to cover the expenses of the police parade of The City of New York, which sum thus appropriated included the erection of a grand stand at Madison Square and 25th Street; and

Whereas, Such stand is to be maintained at the non-partisan parade to be held Saturday, May 13, 1916; and

Whereas, Such stand was constructed and maintained in pursuance to such appropriation under the supervision of the Police Commissioner of The City of New York, Hon. Arthur Woods; be it

Resolved, That the Committee duly appointed at a prior meeting of this Board of Aldermen, who had full power as to the arrangements of the interest to be taken by the Board of Aldermen in such parade, shall demand from the Police Commissioner or the Committee in charge of such parade an allotment of tickets in the grand stand as erected at 25th Street and Madison Square, and such committee shall deliver to each Alderman for his acquaintances such allotment of tickets so that they may be used on the day of the parade.

Which was referred to the Special Committee on Arrangements for Preparedness Parade.

No. 484.

**Resolution That Proclamation Be Issued Asking That Business Be Suspended on May 13 During Preparedness Parade.**

By the same—

Whereas, The citizens of The City of New York have shown great interest in the Preparedness Parade set for Saturday, May 13, 1916; and

Whereas, All professions and business shall evidence their non-partisan patriotism by representation and appearance in the parade; and

Whereas, The public are interested in the question of preparedness and will, in great multitudes, watch the parade on different thoroughfares and streets of the City of New York; be it

Resolved, That a proclamation be issued recommending to his Honor the Mayor, Hon. John Purroy Mitchell, and endorsed by the Board of Aldermen, such proclamation shall ask the business element of this great city to suspend all business on May 13,



1916; and that all business interests should conduct themselves with their places of business closed and suspended, making the same by conduct, if not so in fact, a legal holiday; be it further

Resolved, That this resolution be sent to the Mayor within two days of its passage by the Honorable Board of Aldermen.

Which was referred to the Special Committee on Arrangements, Preparedness Parade.

No. 485.

**Resolution to Appoint C. R. Woodward a City Surveyor.**

By Alderman Stevenson—

Resolved, That C. R. Woodward, of 951 President street, in the Borough of Brooklyn, be and he is hereby appointed a City Surveyor.

Which was referred to the Examining Board of City Surveyors

No. 486.

**Resolution Requesting That Comptroller Issue Special Revenue Bonds, \$500, to Defray Expenses of Appropriate Exercises on Memorial Sunday, May 28, by Army and Navy Veterans, U. S. A.**

By the same—

Resolved, That, in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of five hundred dollars (\$500), the proceeds whereof to be used by the Army and Navy Veterans, U. S. A., for the purpose of holding appropriate exercises on Memorial Sunday, May 28, 1916, and Decoration Day, May 30, 1916. (Chapter 115, Laws of 1916.)

Which was referred to the Committee on Finance.

No. 487.

**Resolution Requesting Board of Estimate and Apportionment and Heads of Departments to Provide for a \$3 Wage Scale for Per Diem Employees.**

By Alderman Tolk—

Resolved, That, owing to the high cost of living, the Board of Estimate and Apportionment, in the preparation of the Budget for 1917, be and hereby is requested to provide a minimum wage for per diem employees the sum of \$3 per day; be it further

Resolved, That the heads of the several departments of the government of The City of New York be and they are hereby requested to include in their departmental estimates for the year 1917, to be submitted to the Board of Estimate and Apportionment, the minimum sum of \$3 per day as the wage scale for per diem employees.

Which was referred to the Committee on Salaries and Offices.

No. 488.

**An Ordinance to Amend Section 110 of Article 10 of Chapter 23 of the Code of Ordinances Relating to Streets, and Particularly to "House Numbering."**

By the President, Borough of Manhattan, by the Commissioner of Public Works—

AN ORDINANCE to amend section 110 of article 10 of chapter 23 of the Code of Ordinances, relating to streets, and particularly to "house numbering."

*Be it Ordained by the Board of Aldermen of The City of New York, as follows:*

Section 1. Section 110 of article 10 of chapter 23 of the Code of Ordinances, relating to streets, and particularly to "house numbering," is hereby amended to read as follows:

Section 110. General provisions.

1. Requirements. The owner, agent, lessee or other person in charge of each and every residence, or building used for residential purposes in the city shall cause to be placed or affixed on the fanlight, or on the inner door thereof, the proper street number or numbers of the building, and shall have the same kept and retained or renewed thereon, so that the same may at all times be legible; provided, however, that where a residence or building used for residential purposes is set back from the street line more than 25 feet, then such number or numbers may, at the option of the owner, agent, lessee or other person in charge of such residence or building, be so placed or affixed and kept, retained or renewed on a gate, gate-post, fence or other object near the street line of the premises any building in The City of New York, upon a street to which street numbers of buildings have been assigned by the president of the borough in which such building is situate, shall cause the proper street number or numbers of such buildings to be displayed on the fanlight or transom or door or entrance steps or gate or at the nearest practicable point to the entrance of such building, in such manner that the street number or numbers may at all times be plainly legible from the sidewalk in front of such building.

2. Violations. If the owner, lessee, agent or other person in charge of any residence or building used for residential purposes in the city shall fail to provide, place and keep such number or numbers on any such building within 30 days after this ordinance shall take effect, the president of the borough shall forthwith serve him with a copy of this section, and if, after 30 days' service, the owner, lessee, agent or other person in charge of a building shall fail or neglect to comply with the provisions thereof he shall be subject to a penalty of \$10, which shall be sued for and collected in the name of the city. *building in the city upon a street to which street numbers of buildings have been assigned by the president of the borough in which such building is situate, shall fail to display the proper street number of such building, as provided in the foregoing paragraph, within thirty days after this ordinance shall take effect, the president of the borough in which such building is situate shall forthwith serve such person or persons with a copy of this section, and if after thirty days' service, the owner, lessee, agent or other person in charge of such building shall fail or neglect to comply with the provisions thereof, he shall be subject to a penalty of \$25, which shall be sued for and collected in the name of the city.*

Section 2. This ordinance shall take effect on June 1, 1916.

Note—New matter in italics; old matter, in brackets [], to be omitted.

Which was referred to the Committee on Public Thoroughfares.

No. 489.

**An Ordinance to Amend Paragraph 19 of Section 1, Article 1, Chapter 10, Code of Ordinances, City of New York, Defining Garages.**

By Alderman Wendel—

AN ORDINANCE to amend paragraph 19, of Section 1, Article 1, Chapter 10, Code of Ordinances, City of New York, Defining Garages.

*Be it Ordained, by the Board of Aldermen of The City of New York, as follows:*

That Paragraph 19, of Section 1, of Article 1, of Chapter 10, of the Code of Ordinances of the City of New York, be amended to read as follows:

Sec. 1—19. Garage. A building, shed or enclosure, or any portion thereof, in which a motor vehicle [containing volatile inflammable oil in its fuel storage tank, is stored, housed or kept;] *other than one the fuel storage tank of which is empty, is stored, housed or kept;*

Sec. 2. This ordinance shall take effect immediately.

Note—Matter in brackets to be omitted; matter in italics is new.

Which was referred to the Committee on General Welfare.

**REPORTS OF STANDING COMMITTEES.**

Report of the Committee on Codification of Ordinances—

No. 339—(G. O. No. 77).

**Report of the Committee on Codification of Ordinances in Favor of Adopting an Ordinance to Amend Chapter 9 of the Code, known as the "Electrical Code."**

The Committee on Codification of Ordinances, to which was referred on April 11, 1916, (Minutes, p. 73) the ordinance, Int. No. 339, Ord. No. 40, Chapter 9 of the Code of Ordinances, known as the Electrical Code, text of which was printed in the Minutes of March 28, 1916, respectfully.

**REPORTS.**

This ordinance was submitted to the Board of Aldermen by the Commissioner of Water Supply, Gas and Electricity, pursuant to the provisions of Section 523 of the Greater New York Charter. His letter of transmittal is hereto annexed. Subsequently, the Commissioner suggested a number of amendments to the proposed ordinance, in communications which are also hereto annexed.

A public hearing was held upon the ordinance and the suggested modifications thereof, on May 3, 1916, which was attended by numerous representatives of public service corporations, electrical contractors and electrical trades unions. The purpose and effect of the ordinance and the proposed amendments thereof, as explained by H. S. Wynkoop, Engineer in charge of the Division of Electrical Inspection, Department of Water Supply, Gas and Electricity, at the hearing, is to conform the local Electrical Code to the provisions of the General Electrical Code of the Fire Underwriters, as revised and amended to date, and to ameliorate and simplify the requirements thereof.

The changes proposed, all and singular, relate to details of electrical construction and installation which were declared to be entirely acceptable by an who appeared and addressed the committee at the hearing thereon. No objection from any source has been made to the committee to the ordinance or to the proposed amendments thereto. The Committee, therefore, recommends the adoption of the accompanying substitute ordinance, which includes all the amendments submitted by the Commissioner of Water Supply, Gas and Electricity and concurred in by the representatives of the electrical trades and public service corporations who attended the hearing thereon.

HARRY ROBITZKE, SAMSON FRIEDLANDER, THOS. A. WILLIAMS, CLARENCE Y. PALITZ, WILLIAM K. WALSH, ALEXANDER S. DRESCHER, ISAAC GUTMAN, JOHN J. RYAN, HARRY HEYMAN, ALEXANDER, BASSETT, GEORGE G. GOETZ, Committee on Codification of Ordinances.

**SUBSTITUTE.**

AN ORDINANCE to Amend Chapter 9 of the Code of Ordinances by Modifying Articles 2, 3, 4, 5 and 6 Thereof.

*Be it Ordained by the Board of Aldermen of The City of New York, as follows:*

Section 1. The Code of Ordinances of The City of New York is hereby amended by modifying articles 2, 3, 4, 5 and 6 in chapter 9 thereof, to read as follows:

§201. Generators.

a. Generators must be located in a dry place.

b. Generators must never be placed in a room where any hazardous process is carried on, nor in places where they would be exposed to inflammable gases or fumes of combustible materials.

c. Generators must, when operating at a potential in excess of 550 volts, have their base frames permanently and effectively grounded.

Generators must, when operating at a potential of 550 volts or less, [be thoroughly insulated from the ground] *have their base frames permanently and effectively grounded wherever feasible. Where grounding of the frame is impracticable, special permission for its omission may be given in writing, in which case the frame must be permanently and effectively insulated.* Wooden base frames used for this purpose, and wooden floors which are depended upon for insulation where, for any reason, it is necessary to omit the base frames, must be kept filled to prevent absorption of moisture, and must be kept clean and dry.

[Where frame insulation is impracticable, special permission for its omission may be given in writing, in which case the frame must be permanently and effectively grounded.]

d. Constant potential generators, except alternating current machines and their excitors, must be protected from excessive current by safety fuses or equivalent devices of approved design.

For two-wire D. C. generators, single-pole protection will be considered as satisfying the above rule, provided the safety device is so located and connected that the means for opening same is actuated by the entire generator current, and the action thereof will completely open the generator circuit.

[For two-wire D. C. generators used in conjunction with balance sets to obtain a neutral for three-wire systems, a protective device must be installed, which in case of the excessive unbalancing of voltages will operate to disconnect the three-wire system.]

[If a generator, not electrically driven, in a two-wire system has one terminal grounded, the safety device above mentioned must be placed in the grounded lead.]

For three-wire direct-current generators compound or shunt wound, a safety device must be placed in each armature lead, and so connected as to receive the entire current from the armature. Fuses will not be acceptable. The safety device must consist of either: (1) a double pole, double coil, overload circuit breaker, or (2) a four-pole circuit breaker connected in the main and equalizer leads, and tripped by means of two overload devices, one in each armature lead.

The safety devices above required must be so interlocked that no one pole can be opened without simultaneously disconnecting both sides of the armature from the system.

e. Generators must each be provided with a name-plate, giving the maker's name, the capacity in volts and amperes, and the normal speed in revolutions per minute.

1. Terminal blocks when used on generators must be made of approved non-combustible, non-absorptive, insulating material, such as slate, marble or porcelain.

g. The use of soft rubber bushings to protect the lead wires coming through the frames of generators is permitted, except when installed where oils, grease, oil vapors or other substances known to have rapid deleterious effect on rubber are present in such quantities and in such proximity to [motor or dynamo] the generator as may cause such bushings to be liable to rapid destruction. In such cases hard wood, properly filed, or preferably porcelain or micanite bushings must be used.

§202. Conductors from generators to switchboards, rheostats or other instruments, and thence to outside lines.

a. Conductors must be in plain sight or readily accessible. Wires from generator to switchboard may, however, be placed in a run-way in the brick or cement pier on which the generator stands. When protection against moisture is necessary, [lead-covered cable or iron] *cable with grounded lead sheath or grounded conduit must be used.*

b. Conductors must have an approved insulating covering as called for [by rules] in article 4 of this chapter for similar work, except that in central stations, on exposed circuits, the wire which is used must have a heavy braided, non-combustible outer covering. Conductors used as bus bars may be made of bare metal. Wires with inflammable outer braiding, when brought close together, as in the rear of switchboards, must, when required, be each surrounded with a tight, non-combustible outer cover. Flame proofing must be stripped back on all cables a sufficient amount to give the necessary insulation distances for the voltage of the circuit on which the cable is used.

c. Conductors must, where not in a conduit, be kept so rigidly in place that they cannot come in contact.

d. Conductors must in all other respects be installed with the same precautions as required [by rules] in article 4 of this chapter for wires carrying a current of the same volume and potential.

e. In wiring switchboards, the ground detector, voltmeter, pilot lights and potential transformers must be connected to a circuit of not less than No. 14 B. & S. gage wire that is protected by [an] approved fuses[.]. T[h]is circuit is not to carry over 600 watts.

For the protection of instruments and pilot lights on switchboards, approved N. E. Code standard enclosed fuses are preferred, but approved enclosed fuses of other designs of not over two (2) amperes capacity may be used.

§203. Switchboards.

a. Switchboards must be so placed as to reduce to a minimum the danger of communicating fire to adjacent combustible material.

Switchboards must not be built up to the ceiling, a space of three feet being left, if possible, between the ceiling and the board. The space back of the board must be kept clear of rubbish and must not be used for storage purposes.

b. Switchboards must be made of non-combustible material.

c. Switchboards must be accessible from all sides when the connections are on the back, but may be placed against a brick or stone wall when the wiring is entirely on the face.

If the wiring is on the back, there must be a clear space of at least eighteen inches between the wall and the apparatus on the board, and even if the wiring is entirely on the face, it is much better to have the board set out from the wall.

d. Switchboards must be kept free from moisture.

e. Wires with inflammable outer braiding, when brought close together, as in the rear of switchboards, must, when required, be each surrounded with a tight, non-combustible outer cover.

Flame proofing must be stripped back on all cables a sufficient amount to give the necessary insulation distances for the voltage of the circuit on which the cable is used.

§204. Resistance devices.

a. Resistance devices must be placed on a switchboard, or at a distance of at least one foot from combustible material, or separated therefrom by a slab or panel of non-combustible, non-absorptive insulating material such as slate, soapstone or marble, somewhat larger than the rheostat, which must be secured in position independently of the rheostat supports. Bolts for supporting the rheostat shall be countersunk at least 1-8 inch below the surface at the back of the slab and the bolt heads shall be



covered with insulating material. For proper mechanical strength, slab should be of a thickness consistent with the size and weight of the rheostat, [and] but in no case [to be] less than  $\frac{1}{2}$  inch.

If resistance devices are installed in rooms where dust or combustible flyings are liable to accumulate on them, they must be equipped with dust-proof face-plates.

b. Where protective resistances are necessary in connection with automatic rheostats, incandescent lamps may be used, provided that they do not carry or control the main current nor constitute the regulating resistance of the device.

When so used, lamps must be mounted in porcelain receptacles upon non-combustible supports, and must be so arranged that they cannot have impressed upon them a voltage greater than that for which they are rated. They must in all cases be provided with a name-plate, which shall be permanently attached beside the porcelain receptacle or receptacles and stamped with the [candlepower] wattage and voltage of the lamp or lamps to be used in each receptacle.

Under special authorization in writing, given in advance, incandescent lamps may be used for the purpose of resistances in series with other devices when mounted in porcelain receptacles upon non-combustible supports and so arranged that they cannot have impressed upon them a voltage greater than that for which they are rated.

c. Wherever insulated wire is used for connections between resistance elements and the contact device of a rheostat, the insulation must be [non-combustible or slow burning] of approved slow-burning or other heat resisting type. For large [field] rheostats and similar resistances, where the contact devices are not mounted upon them, the connecting wires having slow burning insulation may be so arranged in groups that the maximum difference of potential between any two wires in a group shall not exceed 75 volts. Each group of wires must either be mounted on non-combustible, non-absorptive insulators giving at least  $\frac{1}{2}$  inch separation from surface wired over, or, especially where it is necessary to protect same from mechanical injury, each group of wires may be encased in approved flexible tubing and placed in approved conduit, the flexible tubing to extend at least 1 inch beyond the ends of the conduit. §205. Lightning arresters.

a. Lightning arresters must be attached to each wire of every overhead circuit connected with the station.

b. Lightning arresters must be located in readily accessible places away from combustible materials, and as near as practicable to the point where the wires enter the building.

In all cases, kinks, coils and sharp bends in the wires between the arresters and the outdoor lines must be avoided as far as possible.

c. Lightning arresters must be connected with a thoroughly good and permanent ground connection by metallic strips or wires having a conductivity not less than that of a No. 6 B. & S. gauge copper wire, which must be run as nearly in a straight line as possible from the arresters to the ground connection.

Ground wires for lightning arresters must not be attached to gas pipes within the buildings nor be run inside of iron pipes, unless electrically and mechanically attached to both ends of the pipe.

d. All choke coils or other attachments, inherent to the lightning protection equipment, shall have an insulation from the ground or other conductors equal at least to the insulation demanded at other points of the circuit in the station.

§206. Care and attendance.

a. A competent man must be kept on duty where generators are operating.

b. Oily waste must be kept in approved waste cans and removed daily.

§207. Testing of insulation resistance.

a. All circuits except such as are permanently grounded in accordance with § 315 of this chapter must be provided with reliable ground detectors. Detectors which indicate continuously and give an instant and permanent indication of a ground are preferable. Ground wires from detectors must not be attached to gas pipes within the building.

b. Where continuously indicating detectors are not feasible, the circuits should be tested at least once per day, and preferably oftener.

§208. Motors.

a. Motors must, when operating at a potential in excess of 550 volts, have no exposed live metal parts, and must have their base frames permanently and effectively grounded.

Motors operating at a potential of 550 volts or less must [be thoroughly insulated from the ground] have their base frames permanently and effectively grounded wherever feasible. Where grounding of the frame is impracticable, special permission for its omission may be given in writing, in which case the frame must be permanently and effectively insulated. Wooden base frames used for this purpose, and wooden floors, which are depended upon for insulation where, for any reason, it is necessary to omit the base frames, must be kept filled to prevent absorption of moisture, and must be kept clean and dry. [Where frame insulation is impracticable, special permission, in writing, may be given for its omission, in which case the frame must be permanently and effectively grounded.]

b. Motors operating at a potential of 550 volts or less must be wired with the same precautions as required [by rules in] by article 4 of this chapter, for wires carrying a current of the same volume.

Motors operating at a potential between 550 and 3,500 volts must, except in central or sub-stations, be wired with approved multiple conductor, metal sheathed cable in approved [unlined] metal conduit, [firmly secured in place. The metal sheath must be permanently and effectively grounded, and the construction and installation of the conduit must conform to rules for interior conduits (see § 428 of this chapter), except that at outlets approved outlet bushings shall be used.] All apparatus and wiring connected to the high tension circuit must be completely enclosed in substantial grounded metal shields or casings and the conduit must enter and be properly secured to such casings or to suitable terminal boxes screwed or bolted to the casings.

The insulation of the several conductors for high-potential motors, where leaving the metal sheath [at outlets,] of cables, must be thoroughly protected from moisture and mechanical injury. This may be accomplished by means of a pot head or some equivalent method. The conduit must be substantially bonded to the metal casings of all fittings and apparatus connected to the inside high-tension circuit.

Where outside wires directly enter the motor room, special permission, in writing, must be obtained to install the wires for high-potential motors according to the general rules for high-potential systems.

[The motor leads or branch circuits] Conductors carrying the current of only one motor must be designed to carry a current at least 25 per cent. greater than that for which the motor is rated. Where the wires under this rule would be overfused in order to provide for the starting current, as in the case of many of the alternating current motors, the [wires] conductors must be of such size as to be properly protected by these larger fuses.

The current used in determining the size of the conductor carrying the current of only one varying (or variable) speed [alternating current] motor [leads or branch circuits] must be the percentage of the 30-minute current rating of the motor as given for the several classifications of service in the following table:

Classification of Services.	Percentage of current rating of motor.
Operating valves, raising or lowering rolls [tool heads, etc.].....	200
Rolling tables [pumps].....	[120] 180
Hoists, rolls, ore and coal-handling machines.....	[180] 150
Freight and passenger elevators, shop cranes, tool heads, pumps, etc.....	[160] 120
[Passenger elevators].....	[140]

c. Each motor [and resistance box] with its starting device must be protected by a cut-out and controlled by a switch (see § 419a of this chapter), said switch plainly indicating whether "on" or "off" (except as provided for electric cranes, see § 443c of this chapter). Small motors may be grouped under the protection of a single set of fuses, provided the rated capacity of the fuses does not exceed [6] 10 amperes, and the total wattage of the circuit does not exceed 660. With motors of  $\frac{1}{4}$  horse power or less on circuits where the voltage does not exceed 300, single pole switches may be used as allowed in § 424c of this chapter. The switch and rheostat must be located within sight of the motor, except in cases where special permission [in writing is given] to locate them elsewhere is given in writing.

Where the circuit-breaking [device] attachment on the motor-starting [rheostat]

device disconnects all wires of the circuit, the switch called for in this section may be omitted.

Overload-release [devices] attachments on motor-starting rheostats will not be considered to take the place of the cut-out required by this section.

An automatic circuit-breaker disconnecting all wires of the circuit may serve as both switch and cut-out.

[Where rubber-covered wire is used for the leads or branches of A. C. motors of the types requiring large starting currents, the wire may be protected in accordance with table B of § 418 of this chapter, except when circuit-breakers are installed which are equipped with time-element devices.]

Where a rubber-covered conductor carries the current of only one A. C. motor of a type requiring large starting current it may be protected by a fuse or an automatic circuit breaker without time limit device, rated in accordance with Table B of § 418 of this chapter. The rated continuous current capacity of a time limit circuit breaker protecting a motor of the above type need not be greater than 125 per cent. of the motor current rating, providing the time limit device is capable of preventing the breaker opening during the starting period.

d. Rheostats must be so installed as to comply with all the requirements of § 204 of this chapter. Auto starters must comply with requirements of § 204c of this chapter.

Auto starters, unless equipped with tight casings enclosing all current-carrying parts, in all wet, dusty or linty places, must be enclosed in [dust-tight, fireproof] approved cut-out boxes or cabinets. Where there is any liability of short circuits across their exposed live parts due to accidental contacts, a railing must be erected around them.

e. Motors must not be run in series-multiple or multiple-series, except on constant-potential systems, and then only by special permission.

f. Motors must be covered with a waterproof cover when not in use, and, if deemed necessary, must be enclosed in [an] approved cases.

Such enclosures must be readily accessible, dust-proof and sufficiently ventilated to prevent an excessive rise of temperature. Where practicable the sides should be made largely of glass, so that the motor may be always plainly visible.

The use of enclosed type motors is recommended in dusty places, being preferable to wooden boxing.

Where deemed necessary, motors permanently located on wooden floors must be provided with suitable drip pans.

g. Motors must, when combined with ceiling fans, be hung from insulated hooks, or else there must be an insulator interposed between the motor and its support.]

h. Motors must each be provided with a name-plate, giving the maker's name, the capacity in volts and amperes (or watts), and the normal speed in revolutions per minute.

All varying (or variable) speed [alternating current] motors except those used for railway service must be marked with the maximum current which they can safely carry for 30 minutes, starting cold.

i. Terminal blocks, when used on motors, must be made of approved non-combustible, non-absorptive insulating material, such as slate, marble or porcelain.

j. Adjustable-speed motors, unless of special and appropriate design, if controlled by means of field regulation, must be so arranged and connected that they cannot be started under weakened field.

k. The use of soft rubber bushings to protect the lead wires coming through the frame of motors is permitted, except when installed where oils, grease, oily vapors or other substances known to have rapid deleterious effect on rubber are present in such quantities and in such proximity to motors as may cause such bushings to be liable to rapid destruction. In such cases hardwood properly filled, or preferably porcelain or micanite bushings must be used.

§209. Railway power plants.

a. Each feed wire before it leaves the power plant must be protected by an approved automatic circuit-breaker or other device, which will immediately cut off the current in case of an accidental ground. This device must be mounted on a fireproof base, and in full view and reach of the attendant.

§210. Storage or primary batteries.

a. When current for light and power is taken from primary or secondary batteries, the same general regulations must be observed as apply to similar apparatus fed from generators developing the same difference of potential.

b. Storage battery rooms must be thoroughly ventilated.

c. Special attention is directed to the rules for wiring in rooms where acid fumes exist (see § 426 i, j, of this chapter).

d. All secondary batteries must be mounted on non-absorptive, non-combustible insulators, such as glass or thoroughly vitrified and glazed porcelain.

e. The use of any metal liable to corrosion must be avoided in cell connections of secondary batteries.

§211. Transformers.

a. In central or sub-stations the transformers must be so placed that smoke from the burning out of the coils or the boiling over of the oil (where oil-filled cases are used) can do no harm.

b. In central or sub-stations casings of all transformers must be permanently and effectively grounded.

The cases or frames of Transformers used exclusively to supply current to switchboard instruments [need not] must be grounded, [provided they are thoroughly insulated] unless they are installed and guarded in all respects as required for the higher voltage circuit connected to them.

#### ARTICLE 3.

##### Outside Work.

Section 312. Wires on outside of buildings.

313. Services.

314. Transformers.

315. Grounding low-potential circuits.

§312. Wires on outside of buildings.

a. This article shall not apply to conductors on highways.

b. Wires must, for services of No. 6 B. & S. gauge or smaller, consist of approved rubber covered multiple conductor cable and must enter the building in the manner prescribed by the second paragraph of §312f of this chapter. At the first point of attachment to frame buildings multiple conductor cables must either be secured to strain insulators spaced not less than 1 foot from any adjacent woodwork and in turn secured to pettecoat or strain insulators, or the conductors must be separately attached to pettecoat insulators spaced not less than 6 inches apart. If necessary to carry the service cable [across] upon the face of the building before entering, it may be extended in flexible metal conduit, or a waterproof conduit system must be employed.

c. Wires must be at least [7] 8 feet above the highest point of [flat] roofs [and at least 1 foot above the ridge of pitched roofs] over which they pass or to which they are attached and roof structures must be substantially constructed. Wherever feasible, wires crossing buildings must be supported on poles independent of the buildings. Roof lines will be permitted only under special authorization in writing.

d. Wires extended on the exterior walls of buildings must have a rubber insulating covering, and, if not protected by fuses, must be kept at least 1 foot apart and supported on pettecoat insulators of glass or porcelain placed not more than 15 feet apart, the distance between supports to be shortened if wires are liable to be disturbed.

e. Wires must be so spliced or joined as to be both mechanically and electrically secure without solder. The joints must then be soldered, to insure preservation, and covered with an insulation equal to that on the conductors.

All joints must be soldered unless made with some form of approved splicing device.

f. Wires must, where they enter buildings, have drip loops outside, and the holes through which the conductors pass must be bushed with non-combustible, non-absorptive insulating tubes, slanting upward toward the inside; or the service wires may be brought into buildings through a single iron conduit, in which case the conduit shall be equipped with an approved service-head. The inner end must extend to the service cut-out, and if a cabinet is required by this [article] chapter must properly enter the cabinet.

Metal conduits containing service wires must be insulated from the metal conduit, metal moulding, or armored cable system within the building and all metal work on or in the building or they must have the metal of the conduit permanently and effectively grounded to water piping, gas piping or other suitable grounds, provided that when connections are made to gas piping, they must be on the street side of the meter. This ground connection to be independent of and in addition to any other



ground wire on metal conduit, metal moulding or armored cable systems within the building.

§313. Service.

- a. Each building shall be supplied by a separate service.
- b. Where a row of separate buildings is to receive its supply from an overhead main, one service cable shall be run from the pole to the row, and from the first attachment to the building sub-services or a service main shall extend in conduit along the face of the row. One service cable shall supply not more than five buildings, except under special permission in writing, given in advance.

The same plan of sub-services may be employed in connection with underground services, under the same restrictions.

§314. Transformers.

- a. Transformers must not be attached to any building when the potential exceeds 550 volts, except by special permission, and when attached to buildings must be separated therefrom by substantial supports.

§315. Grounding low-potential circuits.

- a. *Direct-current three-wire systems.* Neutral wire must (except where supplied from private industrial power or lighting plants where the [primary] voltage does not exceed 550 volts) be grounded and the following rules must be complied with:

1. The neutral wire must be permanently and effectively grounded at the central station. The ground connection must include all available underground complete metallic piping systems.

2. In underground systems the neutral wire must also be grounded at each distributing box through the box or on the individual service as provided in paragraphs c to g inclusive of this section.

3. In overhead systems the neutral wire must be grounded every 500 feet, as provided in paragraphs c to g of this section.

- b. *Alternating-current secondary systems.* Transformer secondaries of distributing systems (except where supplied from private industrial power or lighting plants where the primary voltage does not exceed 550 volts) must be grounded, provided the maximum difference of potential between the grounded point and any other point in the circuit does not exceed 320 volts. The following rules must be complied with:

1. The grounding must be made at the neutral point or wire, whenever a neutral point or wire is accessible.

2. When no neutral point or wire is accessible, one side of the secondary circuit must be grounded.

3. The ground connection must be at the transformers or on the individual service as provided in paragraphs c to g of this section, and when transformers feed systems with a neutral wire, the neutral wire must also be grounded at least every 500 feet.

- c. *Ground wire, in buildings.* When the ground connection is inside of any building, or the ground wire is inside of, or attached to any building (except central or sub-stations) the ground wire must be of copper and have an approved rubber insulating covering, National Electrical Code Standard, for from 0 to 600 volts.

- d. *Ground wire, sizes.* The ground wire in direct-current three-wire systems must not at central stations be smaller than the neutral wire and not smaller than No. 6 B. & S. gage elsewhere. The ground wire in alternating current systems must never be less than No. 6 B. & S. gage.

On three-phase systems the ground wire must have a carrying capacity equal to that of any one of the three mains.

- e. *Ground wire, installation.* The ground wire must, except for central stations and transformer sub-stations, be kept outside of buildings as far as practicable, but may be directly attached to the building or pole by cleats or straps or on porcelain knobs. Staples must never be used. The wire must be carried in as nearly a straight line as practicable, avoiding kinks, coils and sharp bends, and must be protected where exposed to mechanical injury.

- f. *Ground connections, central stations.* The ground connections for central stations, transformer sub-stations, and banks of transformers must be permanent and effective and must include all available underground piping systems, including the lead sheaths of underground cables.

- g. *Ground connections, generally.* For individual transformers and building services the ground connection may be made as in paragraph f of this section, or may be made to water piping systems running into buildings.

With overhead service, this connection may be made by carrying the ground wire into the cellar and connecting on the street side of meters, main cocks, etc.

Where the service enters the cellar or basement, this connection may be made by carrying the ground wire through the cellar or basement and connecting as above.

Where the ground wire is run through any part of a building, unless run in approved conduit, it shall be protected by porcelain bushings through walls or partitions and shall be run in approved moulding, except that in basements it may be supported on porcelain.

Connections should not be made to piping systems which have cement joints, but should only be made to complete metallic pipe systems.

ARTICLE 4.

Inside Work.

Section 416. Wires, general.

- 417. Underground conductors.
- 418. Table of allowable carrying capacities of wires.
- 419. Switches, cutouts, circuit-breakers.
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- 436. Transformers, low potential.
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- [442.] 441. Lighting and power from railway wires.
- 443. Electric cranes.
- 444. Wires, high potential systems.
- 445. Transformers, high potential.
- [447. Primary wires.] Wires, extra-high potential.
- [448. Secondary wires.]

§416. Wires, general.

- a. Wires must not be of smaller size than No. 14 B. & S. gage, except as allowed for fixture work and pendant cord.

- b. Conductors of size No. 8 B. & S. gage or over used in connection with solid knobs must be securely tied thereto. If wires are used for tying they must have an insulation of the same type as the conductors they confine. [Solid knobs or strain insulators must be used for all wires at the end of runs where conductors are terminated.] Split knobs or cleats must be used for the support of conductors smaller than No. 8 B. & S. gage [except at the end of runs].

Knobs or cleats which are arranged to grip the wire must be fastened by either screws or nails. If nails are used, they must be long enough to penetrate the wood-work not less than 1/2 the length of the knob and fully the thickness of the cleat, and must be provided with washers which will prevent, under reasonable usage, injury to the knobs or cleats.

- c. Wires must be so spliced or joined as to be both mechanically and electrically secure without solder. The joints must then be soldered unless made with some form of approved splicing device, and covered with an insulation equal to that on the conductors.

Stranded wires (except in flexible cords) must be soldered before being fastened under clamps or binding screws, and whether stranded or solid, when they have a conductivity greater than that of No. 8 B. & S. gage they must be soldered into lugs

for all terminal connections, except where an approved solderless terminal connector is used.

- d. Wires must be separated from contact with walls, floors, timbers or partitions through which they may pass by non-combustible, non-absorptive insulating tubes, such as glass or porcelain, except at outlets where approved flexible tubing is required.

Bushings must be long enough to bush the entire length of the hole in one continuous piece, or else the hole must first be bushed by a continuous waterproof tube. This tube may be a conductor, such as iron pipe, but in that case an insulating bushing must be pushed into each end of it, extending far enough to keep the wire absolutely out of contact with the pipe.

- e. Where not enclosed in approved conduit, moulding or armored cable, and where liable to come in contact with gas, water or other metallic piping or other conducting material, wires must be separated therefrom by some continuous and firmly fixed non-conductor creating a permanent separation. Must not come nearer than 2 inches to any other electric lighting, power or signaling wire, not enclosed as above, without being permanently separated therefrom by some continuous and firmly fixed non-conductor. The non-conductor used as a separator must be in addition to the regular insulation on the wires. Where tubes are used they must be securely fastened at the ends, to prevent them from moving along the wire.

Deviations from this rule may, when necessary, be allowed by special permission.

- f. Wires must be so placed in wet places that an air space will be left between conductors and pipes in crossing, and the former must be run in such a way that they cannot come in contact with the pipe accidentally. Wires should be run over, rather than under, pipes upon which moisture is likely to gather or which, by leaking, might cause trouble on a circuit.

- g. The installation of electrical conductors in [wooden] moulding, or on insulators, in elevator shafts will not be approved, but conductors may be installed in such shafts if encased in approved metal conduits or armored cables.

- h. In three wire (not three-phase) systems, the neutral must be of sufficient capacity to carry the maximum current to which it may be subjected.

§417. Underground conductors.

- a. Underground conductors must be protected against moisture and mechanical injury where brought into a building, and all combustible material must be kept from the immediate vicinity.

- b. Underground conductors must not be so arranged as to shunt the current through a building around any catch-box.

- c. Where underground service enters building through tubes, the tubes shall be tightly closed at outlets with asphaltum or other non-conductor, to prevent gases from entering the building through such channels.

- d. No underground service from a subway to a building and no service from a private generating plant shall supply more than one building, except by special permission, unless the conductors are properly protected by fuses and are carried outside all the buildings but the one served. Where one or more buildings are supplied from another, the conductors are to be carried outside the buildings. Conductors carried under 2 inches of concrete under a building or buried back of 2 inches of concrete or brick within a wall are considered as lying outside the building. These requirements do not apply to factory yards and factory buildings under single occupancy or management.

§418. Table of allowable carrying capacities of wires.

- a. The following table, showing the allowable carrying capacities of copper wires and cables of 98 per cent. conductivity, according to the standard adopted by the American Institute of Electrical Engineers, must be followed in placing interior conductors.

For insulated aluminum wire the safe carrying capacity is 84 per cent. of that given in the following table for copper wire with the same kind of insulation.

B. & S. G.	Table A. Rubber Insulation. Amperes.		Table B. Other Insulations. Amperes.	
	Amperes.	Circular Mils.	Amperes.	Circular Mils.
18.....	3	5	1,624	
16.....	6	10	2,583	
14.....	15	20	4,107	
12.....	20	25	6,530	
10.....	25	30	10,380	
8.....	35	50	16,510	
6.....	50	70	26,250	
4.....	55	80	33,100	
3.....	70	90	41,740	
2.....	80	100	52,630	
1.....	90	125	66,370	
0.....	100	150	83,690	
00.....	125	200	105,500	
000.....	150	225	133,100	
0000.....	175	275	167,800	
0000.....	225	325	211,600	
Circular Mils.				
200,000.....	200	300		
300,000.....	275	400		
400,000.....	325	500		
500,000.....	400	600		
600,000.....	450	680		
700,000.....	500	760		
800,000.....	550	840		
900,000.....	600	920		
1,000,000.....	650	1,000		
1,100,000.....	690	1,080		
1,200,000.....	730	1,150		
1,300,000.....	770	1,220		
1,400,000.....	810	1,290		
1,500,000.....	850	1,360		
1,600,000.....	890	1,430		
1,700,000.....	930	1,490		
1,800,000.....	970	1,550		
1,900,000.....	1,010	1,610		
2,000,000.....	1,050	1,670		

B. & S. Gage Number	Diameter of Solid Wire in Mils.	Area in Circular Mils.	Table A. Rubber Insulation Amperes.		Table B. Other Insulation Amperes.	
			Amperes.	Circular Mils.	Amperes.	Circular Mils.
18.....	40.3	1,624	3	5		
16.....	50.8	2,583	6	10		
14.....	64.1	4,107	15	20		
12.....	80.8	6,530	20	25		
10.....	101.9	10,380	25	30		
8.....	128.5	16,510	35	50		
6.....	162.0	26,250	50	70		
5.....	181.9	33,100	55	80		
4.....	204.3	41,740	70	90		
3.....	229.4	52,630	80	100		
2.....	257.6	66,370	90	125		
1.....	289.3	83,690	100	150		
0.....	325.	105,500	125	200		
00.....	364.8	133,100	150	225		
000.....	409.6	167,800	175	275		
0000.....		200,000	200	300		
0000.....	460.	211,600	225	325		
		300,000	275	400		
		400,000	325	500		
		500,000	400	600		
		600,000	450	680		
		700,000	500	760		
		800,000	550	840		



B. & S. Gage Number.	Diameter of Solid Wire in Mils.	Area in Circular Mils.	Table A. Rubber Insulation Amperes.	Table B. Other Insulation Amperes.
	900,000		600	920
	1,000,000		650	1,000
	1,100,000		690	1,080
	1,200,000		730	1,150
	1,300,000		770	1,220
	1,400,000		810	1,290
	1,500,000		850	1,360
	1,600,000		890	1,430
	1,700,000		930	1,490
	1,800,000		970	1,550
	1,900,000		1,010	1,610
	2,000,000		1,050	1,670

1 Mil. = 0.001 inch.

§419. Switches, cut-outs, circuit-breakers, etc.

a. On constant-potential circuits, all service switches and all switches controlling circuits supplying current to motors or heating devices, and all fuses, unless otherwise provided (for exceptions as to switches see §§ 208c, 425a and 443c of this chapter; for exceptions as to cut-outs see § 423, a b of this chapter) must be so arranged that the fuses will protect and the opening of the switch will disconnect all of the wires; that is, in the two-wire system the two wires, and in the three-wire system the three wires, must be protected by the fuses and disconnected by the operation of the switch.

When installed without other automatic overload protective devices automatic overload circuit breakers must have the poles and trip coils so arranged as to afford complete protection against overloads and short circuits, and if also used in place of the switch must be so arranged that no pole can be opened manually without disconnecting all the wires. In two or three phase three-wire circuits and two-phase four-wire circuits there must be a trip-coil in each of two phases, and in four-wire three-phase circuits there must be a trip-coil in each phase. If a circuit breaker is used in place of a switch it must be so arranged that no one pole can be opened manually without disconnecting all the wires.

This, of course, does not apply to the grounded circuit of street railway systems. [b. Switches, cut-outs, circuit-breakers, etc., must not be placed where exposed to mechanical injury nor in the immediate vicinity of easily ignitable stuff or where exposed to inflammable gases or dust or to flivings of combustible material.

Where the occupancy of a building is such that switches, cut-outs, etc., cannot be located so as not to be exposed as above they must be enclosed in approved dust-proof cabinets with self-closing doors, except oil switches and circuit breakers which have dust-tight casings.

c. Switches, cut-outs, circuit-breakers, etc., must, when exposed to dampness, either be enclosed in a moisture-proof box or mounted on porcelain knobs. The cover of the box must be so made that no moisture which may collect on the top or sides of the box can enter it.

d. Time switches, sign flashers and similar appliances must be of approved design and enclosed in approved cabinets.]

b. Switches, cut-outs and circuit-breakers must, when placed where exposed to mechanical injury or in the immediate vicinity of easily ignitable stuff or where exposed to inflammable gases or dust, or flivings of combustible material, be mounted in approved cut-out boxes or cabinets, except oil switches, circuit breakers and similar devices which have approved casings.

Cabinets and cut-out boxes must be of metal when used with metal conduit, armored cable or metal moulding systems.

In rooms where inflammable gases may exist, particularly in rooms or compartments containing mixing tanks used for the manufacture of inflammable mixtures, in rooms containing wash tanks and in dyeing rooms of dry cleaning and dry dyeing establishments; in rooms, vaults or compartments used for the storage of inflammable motion picture films or other nitro-cellulose products, and in cellars or basements used for storage of drugs, all devices which produce or create sparks or arcs must be placed in approved vapor-proof enclosures.

c. Switches, cut-outs and circuit-breakers must, when located where exposed to moisture as in basements and similar places, be mounted in approved cut-out boxes or cabinets, and when located in wet places or outside of buildings must be mounted in approved weatherproof cut-out boxes or cabinets.

d. Time switches, sign flashers and similar appliances must be of approved design and enclosed in approved cabinets, except sign flashers mounted as described in §583b of this chapter.

e. Switches, cut-outs and circuit-breakers must have the spacing within cabinets or cut-out boxes between the walls of the cabinet or cut-out box and current-carrying parts of devices as specified in §570 of this chapter.

§420. Limitation of potential.

The installation in any building, except a central station, or a sub-station, or a transformer vault, of electric light or power wiring or appliances operating at a potential in excess of 750 volts is prohibited.

§421. Arc lamps.

Arc lamps must be provided at all times with glass globes surrounding the arc and securely fastened in place. Broken or cracked globes must not be used. Globes must be provided with wire netting having a mesh not exceeding 1¼ inches. The netting may be omitted where tight inner globes are employed.

§423. Automatic cut-outs (fuses and circuit-breakers).

a. Automatic cut-outs must be placed on all service wires, either overhead or underground, in the nearest accessible place to the point where they enter the building and inside the walls, and arranged to cut off the entire current from the building. Departure from this rule may be authorized only under special permission in writing.

Where the switch required by § 424a of this chapter is inside the building, the cut-out required by this section must be placed so as to protect it, unless the switch is of the knife-blade type and is enclosed in an approved box or cabinet, under which conditions the switch may be placed between the source of the supply and the cut-out.

Automatic cut-outs must not be placed in any permanently grounded service wire.

[For three-wire (not three-phase) systems the fuse in the neutral wire may be omitted, provided the neutral wire is of equal carrying capacity to the larger of the outside wires, and is grounded as provided for in § 315 of this chapter.]

In risks having private plants, the yard wires running from building to building are not considered as service wires, so that cut-outs would not be required where the wires enter buildings, provided that the next fuse back is small enough to properly protect the wires inside the building in question.

b. Automatic cut-outs must be placed at every point where a change is made in the size of wire, unless the cut-out in the larger wire will protect the smaller (see § 418 of this chapter). This requirement shall not apply to fixture wires and flexible cords connected to branch circuits.

[For three-wire direct current or single phase systems the fuse in the neutral wire, except that called for under paragraph d of this section, may be omitted, provided the neutral wire is grounded as provided for in § 315 of this chapter.]

Automatic cut-outs must not be placed in any permanently grounded wire, except as provided in paragraph d of this section.

c. Automatic cut-outs must be in plain sight or enclosed in an approved cabinet, and readily accessible. They must not be placed in the canopies or shells of fixtures. [Link fuses may be used only when mounted on approved slate or marble bases and must be enclosed in dust-tight, fire-proofed cabinets, except on switchboards.]

Link fuses may be used only when mounted on approved bases which, except on switchboards must be mounted in approved cut-out boxes or cabinets. A space of at least two inches must be provided between the open-link fuses and metal, or metal lined walls or metal, metal lined or glass paneled doors of cabinet or cut-out boxes.

d. Automatic cut-outs must be so placed that no set of small motors, small heating devices or incandescent lamps, whether grouped on one fixture or on several fixtures or pendants (nor more than 16 medium base sockets or 25 candelabra base sockets or lamp receptacles) requiring more than 660 watts will be dependent upon one cut-out.

By special permission, in cases where wiring equal in size and insulation to No. 14 B. & S. gage approved rubber-covered wire is carried direct into kevlless sockets or

receptacles, and where the location of sockets and receptacles is such as to render unlikely the attachment of flexible cords thereto, the circuits may be so arranged that not more than 1,320 watts (or 32 sockets or lamp receptacles) will be dependent upon the final cut-out.

Except for signs and outline lighting, sockets and lamp receptacles will be considered as requiring not less than 40 watts each if of medium size, or 25 watts if of candelabra size.

All wires of all branches or taps which are directly connected to lamp sockets or other translating devices must be protected by proper fuses, except that by special permission in writing fuses may be omitted in grounded wires of such branches or taps [All branches or taps from any three-wire system which are directly connected to lamp sockets or other translating devices, must be run as two-wire circuits if the fuses are omitted in the neutral, or if the difference of potential between the two outside wires is over 250 volts, and both wires of such branch or tap circuits must be protected by proper fuses].

The above shall also apply to motors, except that small motors may be grouped under the protection of a single set of fuses, provided the rated capacity of the fuses does not exceed 10 amperes.

When 1,320 watts are dependent upon one fusible cut-out, as is allowed in theatre wiring, outline lighting, signs and large chandeliers, the fuses may be in accordance with the following table[s]:

125 volts or less.....	20 amperes
125 to 250 volts.....	10 amperes

e. The rated capacity of fuses must not exceed the allowable carrying capacity of the wires as given in § 418 of this chapter. Circuit-breakers must not be set more than 30 per cent. above allowable carrying capacity of the wire, unless a fusible cut-out is also installed on the circuit. [Where rubber covered wire is used for the leads or branches of A. C. motors of the types requiring large starting currents, the wire may be protected in accordance with Table B of § 418 of this chapter, except when circuit breakers are installed which are equipped with time element devices.]

[Fixture wires or flexible cord of No. 18 B. & S. gage will be considered as properly protected by 10 ampere fuses.]

Where a rubber-covered conductor carries the current of only one A. C. motor of a type requiring large starting current, it may be protected by a fuse or an automatic circuit breaker without time limit device, rated in accordance with Table B of §418 of this chapter. The rated continuous current capacity of a time limit circuit breaker protecting a motor of the above type need not be greater than 125 per cent of the motor current rating, provided the time limit device is capable of preventing the breaker opening during the starting period.

For the protection of wires having safe carrying capacities exceeding the rated capacity of the largest approved enclosed type fuses, approved enclosed fuses arranged in multiple may be used, provided as few fuses as possible are used and the fuses are of equal capacity and provided the cut-out terminals are mounted on a single continuous pair of substantial bus bars. The total capacity of the fuses should not exceed the safe carrying capacity of the wires. This does not apply to motor circuits.

f. Each wire of motor circuits except on main switchboard or when otherwise subject to competent supervision, must be protected by an approved fuse whether automatic overload circuit breakers are installed or not. Single-phase motors may have one side protected by an approved automatic overload circuit-breaker only, if the other side is protected by an approved fuse

[For circuits having a maximum capacity greater than that for which enclosed fuses are approved circuit-breakers if used without fuses will be approved.]

Circuit breakers will be approved for circuits having a maximum capacity greater than that for which approved enclosed fuses are rated.

§424. Switches.

a. Switches must be placed on all service wires, either overhead or underground, in the nearest readily accessible place to the point where the wires enter the building, and arranged to cut off the entire current. Departure from this rule may be authorized only under special permission in writing.

Service cut-out and switch must be arranged to cut off current from all devices including meters. Service switches must indicate plainly whether they are open or closed.

In risks having private [plans] plants the yard wires running from building to building are not considered as service wires, so that switches would not be required in each building if there are other switches conveniently located on the mains or if the generators are near at hand.

b. Switches must always be placed in dry, accessible places, and be grouped as far as possible (see § 419c of this chapter). Single-throw knife switches must be so placed that gravity will not tend to close them. Double-throw knife switches may be mounted so that the throw will be either vertical or horizontal as preferred, but if the throw be vertical a locking device must be provided, so constructed as to insure the blades remaining in the open position when so set.

When practicable, switches must be so wired that blades will be "dead" when switch is open.

When switches are used in rooms where combustible flivings would be likely to accumulate around them, they must be enclosed in dust-tight cabinets.

c. Single-pole switches must never be used as service switches, nor for the control of outdoor signs or circuits located in damp places, nor placed in the neutral wire of a three-wire system, except in the two-wire branch or tap circuit supplying not more than 660 watts.

This, of course, does not apply to the grounded circuits of street railway systems.

Three-way switches are considered as single pole switches.

d. Where flush switches or receptacles are used, whether with conduit systems or not, they must be enclosed in an approved box constructed of iron or steel, in addition to the porcelain enclosure of the switch or receptacle. Where [in] at floor outlets, attachment plugs are liable to mechanical injury, or the presence of moisture is probable, floor outlet boxes especially designed for this purpose must be used.

[e. Where possible, at all switch or fixture outlets, unless outlet boxes which will give proper support for fixtures are used, a ¾ inch block must be fastened between studs or floor timbers flush with the back of lathing to hold tubing, and to support switches or fixtures. When this cannot be done, wooden base blocks, not less than ¼ inch in thickness, securely screwed to lathing, must be provided for switches, and also for fixtures which are not attached to gas pipes or conduit.]

[f.] e. Sub-bases of non-combustible, non-absorptive, insulating material, which will separate the wires at least ½ inch from the surface wired over, must be installed under all snap switches used in exposed knob and cleat work. Sub-bases must also be used in moulding work unless the switch is approved for mounting directly on the moulding.

§425. Electric heaters.

a. Each heater of more than 6 amperes or 660 watts capacity must be protected by a cut-out, and controlled by a switch or plug connector plainly indicating whether "on" or "off" and located within sight of the heater. Heaters of 6 amperes or 660 watts capacity, or less, may be grouped under the protection of a single set of fuses, provided the rated capacity of the fuses does not exceed 10 amperes or may be connected individually to lighting circuits when the normal load on the circuit at any time will not exceed 660 watts.

b. Flexible conductors for smoothing irons and sad irons, and for all devices requiring over 250 watts, must have an approved insulation and covering complying with the requirements of § 554[d]l of this chapter.

c. With portable heating devices, approved plug connectors must be used, so arranged that the plug may be pulled out to open the circuit without leaving any live parts so exposed as to render likely accidental contact therewith. The connector may be located at either end of the flexible conductor or inserted in the conductor itself.

d. Smoothing irons, sad irons and other heating devices that are intended to be applied to combustible articles, must be provided with approved stands.

e. Stationary heaters, such as radiators, ranges, plate warmers, etc., must be so located as to furnish ample protection between the device and surrounding combustible material.

f. Electric heaters must each be provided with a name-plate giving the maker's name and the normal capacity in volts and amperes or in volts and watts.

§426. Wires, low potential systems.

1. General Rules.

a. Wires where entering cabinets, cut-out boxes or junction boxes, except where they are in conduit, armored cable or metal moulding, must be protected by approved bushings, which fit tightly the holes in the box and are well secured in place. The



wires should completely fill the holes in the bushings so as to keep out the dust, tape being used to build up the wires if necessary.

*The use of permanently and reliably grounded conductors not complying with the insulation requirements of article 5 of this chapter may be authorized by special permission in writing.*

b. Wires must not be laid in plaster, cement or similar finish, and must never be fastened with staples.

c. Wires must not be fished for any great distance, and only in places where the inspector can satisfy himself that the rules have been complied with.

d. Twin wires must never be used, except in conduits, or where flexible conductors are necessary.

e. Wires must, where exposed to mechanical injury, be suitably protected. When crossing floor timbers in cellars, or in rooms where they might be exposed to injury, wires must be installed in approved conduit or armored cable or be attached by their insulating supports to the under side of a wooden strip, not less than 1/2 inch in thickness, and not less than 3 inches in width. Instead of the running-boards, guard strips on each side of and close to the wires will be accepted, these strips to be not less than 7/8 inch in thickness, and at least as high as the insulators.

Protection on side walls must extend not less than [5] 7 feet from the floor and must consist of substantial boxing, retaining an air space of 1 inch around the conductors, closed at the top (the wires passing through bushed holes) or of approved metal conduit or pipe of equivalent strength.

When metal conduit or pipe is used, the insulation of each wire must be reinforced by approved flexible tubing extending from the insulator next below the pipe to the one next above it, unless the conduit is installed according to § 428 of this chapter, paragraphs c and f thereof excepted, and the wire is approved for conduit use. The two or more wires of a circuit each with its flexible tubing (when required), if carrying alternating current must, or if direct current may, be placed within the same pipe.

*In making open work extensions from concealed conduit or armored cable installations, the outlet boxes must first be set out beyond the finished surface or else an extension collar must be added. This collar must be electrically and mechanically secured to the box.*

*The conductors of the extension must be brought out of the side of the box or collar and must be protected by approved insulating bushings as required in par. "a" of this section.*

f. When run in unfinished attics or roof spaces, wires will be considered as concealed, and when run in close proximity to water tanks or pipes, they will be considered as exposed to moisture.

In unfinished attics or roof spaces wires are considered as exposed to mechanical injury, and must not be run on knobs or upper edge of joists.

#### 2. Open work in dry places.

g. Wires must have an approved rubber (type [letter] R. S.), slow-burning weatherproof (type [letter] S. B. W.), or slow-burning insulation (type [letter] S. B.). Slow-burning insulation may be used only in permanently dry locations and under special permission in writing, given in advance.

h. Wires must be rigidly supported on non-combustible, non-absorptive insulators, which will separate the wires from each other and from the surface wired over in accordance with the following table:

Voltage—0 to 300; distance from surface, 1/2 inch; distance between wires, 2 1/2 inches.

Voltage—301 to 550; distance from surface, 1 inch; distance between wires, 4 inches.

Rigid supporting requires under ordinary conditions, where wiring along flat surfaces, supports at least every 4 1/2 feet. If the wires are liable to be disturbed, the distance between supports must be shortened. In buildings of mill construction, mains of not less than No. 8 B. & S. gage, where not liable to be disturbed, may be separated about 6 inches, and run from timber to timber, not breaking around, and may be supported at each timber only.

Wires must not be "dead-ended" at a rosette, socket or receptacle unless the last support is within 12 inches of the same.

#### 3. Open work in damp places, or buildings specially subject to moisture or to acid or other fumes.

i. Wires must have an approved insulating covering.

For protection against water, rubber insulation must be used. For protection against corrosive vapors, either weatherproof or rubber insulation must be used.

j. Wires must be rigidly supported on non-combustible, non-absorptive insulators, which separate the wire at least 1 inch from the surface wired over, and must be kept apart at least 2 1/2 inches for voltages up to 300, and 4 inches for higher voltages.

Rigid supporting requires under ordinary conditions, where wiring over flat surfaces, supports at least every 4 1/2 feet. If the wires are liable to be disturbed, the distance between supports must be shortened. In buildings of mill construction, mains of not less than No. 8 B. & S. gage, where not liable to be disturbed, may be separated about 6 inches, and run from timber to timber, not breaking around, and may be supported at each timber only.

#### 4. Metal moulding work.

k. Wires must have an approved rubber insulating covering (type [letter] R. S.), and must be in continuous lengths from outlet to outlet, or from fitting to fitting, no joints or taps to be made in moulding. Where branch taps are necessary in moulding work approved fittings for this purpose must be used.

l. Wires must never be placed in moulding in damp locations; must never be placed in moulding in concealed locations or where the difference of potential between any two wires in the same system is over 300 volts. When the electrical construction is being carried out in moulding, permission will be given to extend these mouldings through walls and partitions, if the moulding and capping are in continuous lengths where passing through the walls and partitions. Mouldings must not be used for circuits requiring more than 1,320 watts of energy.

m. Wires must for alternating current systems if in metal moulding have the two or more wires of a circuit installed in the same moulding.

#### 5. Conduit work.

n. Wires must have an approved rubber insulating covering [(type [letter] R. D.)]; and must within the conduit tubing be without splices or taps, and must be provided with a lead covering if the conduit is installed in a damp place and is not watertight. *Wires must be double braided (type R. D.) for twin, twisted pair or multiple conductor cables and for all single conductors of No. 6 B. & S. gage and larger.*

*Slow burning insulation may, however, be used in permanently dry locations where excessive temperatures are present, provided special permission in writing be given in advance.*

o. Wires must not be drawn in until all mechanical work on the building has been, as far as possible, completed.

Conductors in vertical conduit risers must be supported within the conduit system in accordance with the following table:

No. 14 to 0 every 100 feet.  
No. 00 to 0000 every 80 feet.  
0000 to 350,000 C. M. every 60 feet.  
350,000 C. M. to 500,000 C. M. every 50 feet.  
500,000 C. M. to 750,000 C. M. every 40 feet.  
750,000 C. M. every 35 feet.

The following methods of supporting cables are recommended:

1. [A turn of 90 degrees in the conduit system will constitute a satisfactory support.] *Approved clamping devices constructed of or employing insulating wedges inserted in the ends of the conduit.*

2. Junction boxes may be inserted in the conduit system at the required intervals, in which insulating supports of approved type must be installed and secured in a satisfactory manner so as to withstand the weight of the conductors attached thereto, the boxes to be provided with proper covers.

3. Cables may be supported in approved junction boxes on two or more insulating supports so placed that the conductors will be deflected at an angle of not less than 90 degrees, and carried a distance of not less than twice the diameter of the cable from its vertical position. Cables so suspended may be additionally secured to these insulators by tie wires. *Conductors larger than No. 4 B. & S. gage must not be materially deflected where they enter or leave the cabinet, and where terminating in the cabinet must be properly supported at the end of the conduit.*

Other methods may be used, if specially approved.

p. Wires must, for alternating systems, have the two or more wires of a circuit drawn in the same conduit.

Except in the case of stage pocket and border circuits the same conduit must not

contain more than four two-wire, or three three-wire circuits of the same system, except by special permission, and must never contain circuits of different systems.

#### 6. Concealed "knob and tube" work.

q. The installation of concealed knob and tube work is prohibited.

#### 7. Fixture work.

v. Wires must not be smaller than No. 18 B. & S. gage and must have an approved rubber insulating covering (see § 555 of this chapter).

In wiring certain designs of show-case fixtures, ceiling bulls-eyes and similar appliances in which the wiring is exposed to temperatures in excess of 120 degrees Fahrenheit (49 degrees Centigrade), from the heat of the lamps, approved slow-burning wire may be used. All such forms of fixtures must be submitted for examination, test and approval before being introduced for use.

w. Supply conductors, and especially the splices to fixture wires, must be kept clear of the grounded part of gas pipes, and, where shell or outlet boxes are used, they must be made sufficiently large to allow the fulfillment of this requirement.

x. Must, when fixtures are wired outside, be so secured as not to be cut or abraded by the pressure of the fastenings or motion of the fixture.

y. Wires of different systems must never be contained in or attached to the same fixture and under no circumstances must there be a difference of potential of more than 300 volts between wires contained in or attached to the same fixture.)

#### §427. Armored cables.

a. Armored cables must be continuous from outlet to outlet or to junction boxes or cabinets, and the armor of the cable must properly enter and be secured to all fittings, and the entire system must be mechanically secured in position.

In case of service connections and main runs, this involves running such armored cables continuously into a main cut-out cabinet or gutter surrounding the panel board, as the case may be.

b. Armored cables must be equipped at every outlet with an approved outlet box or plate, as required in conduit work.

Outlet plates must not be used where it is practicable to install outlet boxes.

For concealed work in walls and ceilings composed of plaster on wooden joist or stud construction, outlet boxes or plates and also cut-out cabinets must be so installed that the front edge will not be more than 1/4 inch back of the finished surface of the plaster, and if this surface is broken or incomplete it shall be repaired so that it will not show any gaps or open spaces around the edges of the outlet box or plate or of the cut-out cabinet. On wooden walls or ceilings, outlet boxes or plates and cut-out cabinets must be so installed that the front edge will either be flush with the finished surface or project therefrom. This will not apply to concealed work in walls or ceilings composed of concrete, tile or other non-combustible material.

In buildings already constructed where the conditions are such that neither outlet box nor plate can be installed, these appliances may be omitted by special permission, provided the armored cable is firmly and rigidly secured in place.

c. Armored cables must have the metal armor of cables permanently and effectually grounded to water piping, gas piping or other suitable grounds, provided that when connections are made to gas piping they must be on the street side of the meter. If the armored cable system consists of several separate sections, the sections must be bonded to each other, and the system grounded, or each section may be separately grounded, as required above.

The armor of cables and gas pipes must be securely fastened in outlet boxes, junction boxes and cabinets, so as to secure good electrical connection.

If armor of cables and metal of couplings, outlet boxes, junction boxes, cabinets or fittings, having protective coating of non-conducting material, such as enamel, are used, such coating must be thoroughly removed from threads of both couplings and the armor of cables, and from surfaces of the boxes, cabinets and fittings where the armor of cables or ground clamp is secured in order to obtain the requisite good connection. Grounded pipes must be cleaned of rust, scale, etc., at place of attachment of ground clamp.

Connections to grounded pipes and to armor of cables must be exposed to view or [readily] accessible, and must be made by means of approved ground clamps, [to which the ground wires must be soldered].

Ground wires must be of copper, at least No. 10 B. & S. gage (where largest wire contained in cable is not greater than No. 0 B. & S. gage), and need not be greater than No. 4 B. & S. gage (where largest wire contained in cable is greater than No. 0 B. & S. gage). They shall be protected from mechanical injury.

d. When installed in so-called fireproof buildings in course of construction or afterwards if exposed to moisture, or where it is exposed to the weather, or in damp places such as breweries, stables, etc., the cable must have a lead covering placed between the outer braid of the conductors and the steel armor.

The lead covering is not to be required when the cable is run against brick walls or laid in ordinary plaster walls unless same are continuously damp.

e. Where entering junction boxes, and at all other outlets, etc., armored cables must be provided with approved terminal fittings which will protect the insulation of the conductors from abrasion, unless such junction or outlet boxes are specially designed and approved for use with the cable.

f. Junction boxes must always be installed in such a manner as to be accessible.

g. For alternating current systems, armored cables must have the two or more conductors of the circuit enclosed in one metal armor.

h. All bends must be so made that the armor of the cable will not be injured. The radius of the curve of the inner edge of any bend shall not be less than 1 1/2 inches.

#### §428. Interior conduits.

a. No conduit smaller than 1/2 inch, electrical trade size, shall be used. [Measurements are to be taken inside of metal conduits.]

b. Interior conduits must be continuous from outlet to outlet or to junction boxes or cabinets, and the conduit must properly enter, and be secured to all fittings and the entire system must be mechanically secured in position.

In case of service connections and main runs, this involves running each conduit continuously into a main cut-out cabinet or gutter surrounding the panel board, as the case may be. Departure from this rule may be authorized in case of underground services by special permission.

c. Interior conduits must be first installed as a complete conduit system, without the conductors.

d. Interior conduits must be equipped at every outlet with an approved outlet box or plate. At exposed ends of conduit (but not at fixture outlets) where wires pass from the conduit system without splice, joint or tap, an approved fitting having separately bushed holes for each conductor must be used. Departure from this rule may be authorized by special permission.

Outlet plates must not be used where it is practicable to install outlet boxes.

For concealed work in walls and ceilings composed of plaster on wooden joist or stud construction, outlet boxes or plates and also cut-out cabinets must be so installed that the front edge will not be more than 1/4 inch back of the finished surface of the plaster, and if this surface is broken or incomplete it shall be repaired so that it will not show any gaps or open spaces around the edges of the outlet box or plate or of the cut-out cabinet. On wooden walls or ceilings, outlet boxes or plates and cut-out cabinets must be so installed that the front edge will either be flush with the finished surface or project therefrom. This will not apply to concealed work in walls or ceilings composed of concrete, tile or other non-combustible material.

In buildings already constructed where the conditions are such that neither outlet box nor plate can be installed, these appliances may be omitted providing the conduit ends are bushed and secured.

e. Metal conduits where they enter junction boxes, and at all other outlets, etc., must be provided with approved bushings or fastening plates fitted so as to protect wire from abrasion, except when such protection is obtained by the use of approved nipples, properly fitted in boxes or devices.

f. Interior conduits must have the metal of the conduit permanently and effectually grounded to water piping, gas piping or other suitable grounds, provided that when connections are made to gas piping, they must be on the street side of the meter. If the conduit system consists of several separate sections, the sections must be bonded to each other, and the system grounded, or each section may be separately grounded, as required above. Where short sections of conduit (or pipe of equivalent strength) is used for the protection of exposed wiring on side walls, and such conduit or pipe and wiring is installed as required by § 426e of this chapter, the conduit or pipe need not be grounded.

Conduits and gas pipes must be securely fastened in outlet boxes, junction boxes and cabinets, so as to secure good electrical connections.

If conduit couplings, outlet boxes, junction boxes, cabinets or fittings, having pro-



ective coating of non-conducting material such as enamel are used, such coating must be thoroughly removed from threads of both couplings and conduit, and such surfaces of boxes, cabinets and fittings where the conduit or ground clamp is secured in order to obtain the requisite good connection. Grounded pipes should be cleaned of rust, scale, etc., at place of attachment of ground clamp.

Connections to grounded pipes and to conduit must be exposed to view or [readily] accessible, and must be made by means of approved ground clamps [to which the ground wires must be soldered].

Ground wires must be of copper at least No. 10 B. & S. gage (where largest wire contained in conduit is not greater than No. 0 B. & S. gage), and need not be greater than No. 4 B. & S. gage (where largest wire contained in conduit is greater than No. 0 B. & S. gage). They shall be protected from mechanical injury.

g. Junction boxes must always be installed in such a manner as to be accessible. Such boxes are considered to be accessible when installed in an attic that has sufficient head room, but which is reached only by a portable ladder and permanent hatch.

h. All elbows or bends must be so made that the conduit will not be injured. The radius of the curve of the inner edge of any elbow shall not be less than  $3\frac{3}{4}$  inches. There must be not more than the equivalent of 4 quarter bends from outlet to outlet, the bends at the outlets not being counted.

i. Conduit sizes for various numbers, gauges and types of conductors must conform to the following table:

Size of Conduits for the Installation of Wires and Cables—Number of Conductors.

Size B. & S.	One Conductor in a Conduit. Size Conduit, In. Electrical Trade Size.	Two Conductors in a Conduit. Size Conduit, In. Electrical Trade Size.	Three Conductors in a Conduit. Size Conduit, In. Electrical Trade Size.	Four Conductors in a Conduit. Size Conduit, In. Electrical Trade Size.
14.....	1/2	1/2	1/2	3/4
12.....	1/2	3/4	3/4	3/4
10.....	1/2	3/4	3/4	1
8.....	1/2	1	1	1
6.....	1/2	1	1 1/4	1 1/4
5.....	3/4	1 1/4	1 1/4	1 1/4
4.....	3/4	1 1/4	1 1/4	1 1/2
3.....	3/4	1 1/4	1 1/4	1 1/2
2.....	3/4	1 1/4	1 1/2	1 1/2
1.....	3/4	1 1/2	1 1/2	2
00.....	1	1 1/2	2	2
00.....	1	2	2	2 1/2
000.....	1	2	2	2 1/2
0000.....	1 1/4	2	2 1/2	2 1/2
C. M.				
200000.....	1 1/4	2	2 1/2	2 1/2
250000.....	1 1/4	2 1/2	2 1/2	3
300000.....	1 1/4	2 1/2	2 1/2	3
400000.....	1 1/4	3	3	3 1/2
500000.....	1 1/2	3	3	3 1/2
600000.....	1 1/2	3	3 1/2	
700000.....	2	3 1/2	3 1/2	
800000.....	2	3 1/2	4	
900000.....	2	3 1/2	4	
1000000.....	2	4	4	
1250000.....	2 1/2	4 1/2	4 1/2	
1500000.....	2 1/2	4 1/2	5	
1750000.....	3	5	5	
2000000.....	3	5	6	
	Twin Conductor.			
14.....	1/2	3/4	1	1
12.....	1/2	3/4	1	1 1/4
10.....	3/4	1	1 1/4	1 1/4

3 Conductor Convertible System.

Size of Conductors.		Size Conduit, In. Electrical Trade Size.
2-Conductor. Size B. & S.	1-Conductor. Size B. & S.	
14	10	3/4
12	8	3/4
10	6	1
8	4	1
6	2	1 1/4
5	1	1 1/4
4	0	1 1/2
3	00	1 1/2
2	000	1 1/2
1	0000	2
0	250000	2
00	350000	2 1/2
000	400000	2 1/2
0000	550000	3
250000	600000	3
300000	800000	3
400000	1000000	3 1/2
500000	1250000	4
600000	1500000	4
700000	1750000	4 1/2
800000	2000000	4 1/2

Single Conductor Combination.

Note—Where special permission has been given in accordance with §426 of this chapter the following table to apply:

No. of Wires.	Size Conduit, In. Electrical Trade Size.
3 No. 14 R.C. solid.....	1/2
5 No. 14 R.C. solid.....	3/4
10 No. 14 R.C. solid.....	1
18 No. 14 R.C. solid.....	1 1/4
24 No. 14 R.C. solid.....	1 1/2
40 No. 14 R.C. solid.....	2
74 No. 14 R.C. solid.....	2 1/2
90 No. 14 R.C. solid.....	3

§429. Metal mouldings.

a. Metal moulding must be continuous from outlet to outlet, to junction boxes, or approved fittings designed especially for use with metal mouldings, and must at all outlets be provided with approved terminal fittings which will protect the insulation of conductors from abrasion, unless such protection is afforded by the construction of the boxes or fittings.

b. Such moulding where passing through a floor must be carried through an iron pipe extending from the ceiling below to a point 5 feet above the floor, which will serve as an additional mechanical protection and exclude the presence of moisture often prevalent in such locations.

Where the mechanical strength of the moulding itself is adequate, this ruling may

be modified to require the protecting piping from the ceiling below to a point at least 3 inches above the flooring.

Where such mouldings pass through a partition the iron pipe required for passing through floors may be omitted and the moulding passed directly through, providing the partition is dry and the moulding is in a continuous length with no joint or couplings within the partition.

c. Backing must be secured in position by screws or bolts, the heads of which must be flush with the metal.

d. Metal moulding must be permanently and effectively grounded to water piping, gas piping, or other suitable grounds, provided that when connections are made to gas piping, they must be on the street side of the meter. If the metal moulding system consists of several separate sections, the sections must be bonded to each other and the system grounded, or each section may be separately grounded, as required above.

Metal mouldings and gas pipes must be securely fastened to outlet boxes, junction boxes and cabinets, so as to secure a good electrical connection. Moulding must be so installed that adjacent lengths of moulding will be mechanically and electrically secured at all points.

If metal moulding, couplings, outlet boxes, junction boxes, cabinets or fittings having protective coating of non-conducting material such as enamel are used, such coating must be thoroughly removed from threads of couplings and metal mouldings, and from the surfaces of boxes, cabinets and fittings, where the metal moulding or ground clamp is secured in order to obtain the requisite good connection. Grounded pipes should be cleaned of rust, scale, etc., at the place of attachment of the ground clamp.

Connection to grounded pipes and to metal mouldings must be exposed to view, or [readily] accessible, and must be made by means of approved ground clamps [to which the wires must be soldered].

Ground wires must be of copper, at least No. 10 B. & S. gage. They shall be protected from mechanical injury.

e. Must be installed so that for alternating systems the two or more wires of a circuit will be in the same metal moulding.

§430. Fixtures.

[a. When supported at outlets in metal conduit, armored cable or metal moulding systems, or from gas piping or any grounded metal work, or when installed on metal walls or ceilings, or on plaster walls or ceilings containing metal lath, or on walls or ceilings in fireproof buildings, fixtures must be insulated from such supports by approved insulating joints placed as close as possible to the ceilings or walls. The insulating joint may be omitted in conduit, armored cable or metal moulding systems with straight electric fixtures in which the insulation of conductors is the equivalent of insulation in other parts of the system, and provided that approved sockets, receptacles or wireless clusters are used, of a type having porcelain or equivalent insulation between live metal parts and outer metal shells, if any.

Gas pipes must be protected above the insulating joint by approved insulating tubing, and where outlet tubes are used they must be of sufficient length to extend below the insulating joint, and must be so secured that they will not be pushed back when the canopy is put in place.

Where insulating joints are required, fixture canopies of metal must be thoroughly and permanently insulated from walls or ceilings, or from plaster walls or ceilings on metal lathing, and from outlet boxes.

Canopy insulators must be securely fastened in place, so as to separate the canopies thoroughly and permanently from the surfaces and outlet boxes from which they are designed to be insulated.

Fixtures having so-called flat canopies, tops or backs will not be approved for installation except where outlet boxes are used.

b. Fixtures must, when installed out doors, be of watertight construction.

c. Fixtures must not, when wired on the outside, be used in show windows or in the immediate vicinity of especially inflammable stuff.

d. Fixtures must be free from short circuits between conductors and from contacts between conductors and metal parts of fixtures, and must be tested for such conditions before being connected to supply conductors.]

a. Fixtures must, except as specified in paragraph b hereof, be insulated from their supports by approved insulating joints placed as close as possible to the ceilings or walls. Where insulating joints are required, fixture canopies of metal must be thoroughly and permanently insulated from metal walls or ceilings or from plaster walls or ceilings on metal lathing and from outlet boxes. Canopy insulators must be securely fastened in place so as to separate the canopies thoroughly and permanently from the surface and outlet boxes from which they are designed to be insulated. Gas pipes must be protected above the insulating joints by approved insulating tubing, and where outlet tubes are used, they must be of sufficient length to extend below the insulating joint and must be so secured that they will not be pushed back when the canopy is put in place.

b. Insulating joints and canopy insulators may be omitted in the following cases:

1. Straight electric fixtures metallically connected in a permanent and effective manner to metal conduit, armored cable or metal molding systems or to gas piping, provided such gas piping is grounded in the manner prescribed for conduit in § 428 of this chapter.

2. Straight electric fixtures connected to knob and tube, wooden molding or open work, except on metal ceilings or on plaster walls or ceilings containing metal lathing.

3. Straight electric fixtures which are permanently and effectively grounded to a separate ground wire not smaller than No. 14 B. & S. gage.

4. By special permission in writing, straight electric fixtures may be grounded by connecting them by an approved means to one of the supply wires of the fixture, provided such wire is permanently and effectively grounded and if there is no fuse, circuit breaker or switch in that side of the circuit between the fixture and the ground connection.

5. Combination fixtures in which all wires have an approved rubber insulation not less than 3-64 inch in thickness and where gas piping is grounded, as in subdivision 1 above.

c. For fixtures which are not attached to gas pipes or conduit unless outlet boxes or other approved fittings which will give proper support for fixtures are used, a seven-eighths inch block must be fastened between studs or floor timbers flush with the back of lathing to hold tubing and to support fixtures. When this cannot be done, wooden base blocks, not less than  $\frac{3}{4}$  inch in thickness, securely screwed to lathing, must be provided.

Fixtures having so-called flat canopies, tops or backs, will not be approved for installation, except where outlet boxes are used.

d. When installed out of doors, fixtures must be of water-tight construction.

e. Fixture wires must be not smaller than No. 18 B. & S. gage, and must have an approved insulating covering (see § 552 of this chapter).

In wiring certain designs of show-case fixtures, ceiling bulls-eyes and similar appliances in which the wiring is exposed to temperatures in excess of 120 degrees Fahrenheit (49 degrees Centigrade), from the heat of the lamps, conductors having approved slow-burning or other heat-resisting coverings must be used. All such forms of fixtures must be submitted for examination, test and approval before being introduced for use.

f. Supply conductors, and especially the splices to fixture wires, must be kept clear of the grounded part of gas pipes, and, where shells or outlet boxes are used, they must be made sufficiently large to allow the fulfilment of this requirement.

g. Fixtures must, when wired on the outside, have the conductors so secured as not to be cut or abraded by the pressure of the fastenings or motion of the fixture.

Chain fixtures must be wired with flexible conductors.

h. Wires of different systems must never be contained in or attached to the same fixture, and under no circumstances must there be a difference of potential of more than 300 volts between wires contained in or attached to the same fixtures.

i. Fixtures must be free from short circuits between conductors and from contacts between conductors and metal parts of fixtures, and must be tested for such conditions before being connected to supply conductors.

§431. Sockets.

a. In rooms where inflammable gases may exist (see §419b of this chapter), the incandescent lamp and socket must be enclosed in a vapor-tight globe, and supported on a pipe-hanger, wired with approved rubber-covered wire soldered directly to the circuit.

b. In damp or wet places, or where exposed to corrosive vapors, weatherproof sockets especially approved for the location must be used. Unless made up on fixtures



they must be hung by [separate] stranded rubber-covered [wires] conductors not smaller than No. 14 B. & S. gage, which should preferably be twisted together when the pendant is over 3 feet long.

These wires must be soldered direct to the circuit wires but supported independently of them.

c. Key sockets will not be approved if installed over specially inflammable stuff, or where exposed to flyings of combustible material.

§432. Flexible cord.

a. Flexible cord must have an approved insulation and covering.

b. Flexible cord must not be used where the difference of potential between the two wires is over 300 volts.

c. Flexible cord must not be used as a support for clusters.

d. Flexible cord must not be used except for pendants, wiring of fixtures, portable lamps or motors, [and] portable heating apparatus or other portable devices.

For all portable work, including those pendants which are liable to be moved about sufficiently to come in contact with surrounding objects, flexible wires and cables especially designed to withstand this severe service must be used.

When necessary to prevent portable lamps from coming in contact with inflammable materials, or to protect them from breakage, they must be surrounded with a substantial [wire] guard.

e. Unless provided with approved metal armor, [F]flexible cord must not be used in show windows or show cases, except [when provided with an approved metal armor. Departure from this rule, in the case of chain fixtures, may be authorized only under special permission in writing] that approved portable cord may be used for the purpose of supplying current to portable lamps and other devices for exhibition purposes.

f. Flexible cord must be protected by [insulating] approved bushings where the cord enters the socket, unless the socket is so constructed that no bushing is required.

g. [Flexible cord must be so suspended that the entire weight of the socket and lamp will be borne by some approved method under the bushing in the socket, and above the point where the cord comes through the ceiling block or rosette, in order that the strain may be taken from the joints and binding screws.] Must be so connected to all fittings that strain is taken from the joints and binding screws.

h. Must where passing through covers of outlet boxes be protected by approved bushings especially designed for this purpose. So-called hard rubber composition bushings threaded into box covers must not be used.

§433. Arc lamps on constant-potential circuits.

a. There must be a cut-out (see §419 of this chapter) for each lamp or each series of lamps.

The branch conductors must have a carrying capacity about 50 per cent. in excess of the normal current required by the lamp.

b. Arc lamps must be furnished only with such resistances or regulators as are enclosed in non-combustible material, such resistances being treated as sources of heat. Incandescent lamps must not be used for this purpose.

c. Arc lamps must be supplied with globes and protected by spark arresters and wire netting around the globe, as in the case of series arc lamps (see § 421 of this chapter).

Outside arc lamps must be suspended at least 8 feet above sidewalks. Inside arc lamps must be placed out of reach or suitably protected.

d. Arc lamps, when arranged to be raised and lowered, either for carboning or other purposes, shall be connected up with stranded conductors from the last point of support to the lamp, when such conductor is larger than No. 14 B. & S. gage.

e. Economy and compensator coils for arc lamps must be mounted on non-combustible, non-absorptive, insulating supports, such as glass or porcelain, allowing an air space of at least one inch between frame and support, and must in general be treated as sources of heat.

§434. Vapor lamps.

1. Enclosed mercury vapor lamps.

a. Enclosed mercury vapor lamps must have a cut-out for each lamp or series of lamps except when contained in a single frame and lighted by a single operation in which case not more than 5 lamps should be dependent upon a single cut-out.

b. Enclosed mercury vapor lamps must be furnished only with such resistances or regulators as are enclosed in non-combustible cases, such resistances to be treated as sources of heat. In locations where these resistances or regulators are subject to flyings of lint or combustible material, all openings through cases must be protected by fine wire gauze.

2. High-potential vacuum tube systems.

c. The tube must be so installed as to be free from mechanical injury or liability to contact with inflammable material.

d. High-potential coils and regulating apparatus must be installed in approved steel cabinet not less than 1/10 inch in thickness; same to be well ventilated in such a manner as to prevent the escape of any flame or sparks, in case of burnout in the various coils. All apparatus in this box must be mounted on slate base and the enclosing case positively grounded. Supplying conductors leading into this high-potential case are to be installed in accordance with the standard requirements governing low-potential systems, where such wires do not carry a potential of over 300 volts.

§435. [Economy coils.

a. Economy and compensator coils for arc lamps must be mounted on non-combustible, non-absorptive, insulating supports, such as glass or porcelain, allowing an air space of at least 1 inch between frame and support, and must in general be treated as sources of heat.]

Gas Filled Incandescent Lamps.

a. Must be so grouped that not more than 660 watts (nor more than 16 sockets or receptacles) will be dependent on one cutout except that in cases where wiring equal in size to No. 14 B. & S. gage is carried directly into keyless sockets or receptacles, the location of which is such as to render unlikely the attachment of flexible cords thereto, the circuits may be so arranged that not more than 1,320 watts (or 32 sockets or receptacles) will be dependent on the final cutout. Where a single socket or receptacle is used on a circuit the limitation of watts permissible on the final cutout shall be the maximum capacity for which such socket or receptacle is approved.

b. Must not be used in show windows or in other locations where inflammable material is liable to come in contact with lamp equipment except where used in connection with approved fixtures where temperature of any exposed portion of same does not exceed 200 degrees Fahr. (93 degrees Centigrade).

c. Must not be used in connection with medium-base sockets or receptacles if of above 250 watts nominal capacity nor with Mogul base sockets or receptacles if of above 1,500 watts capacity.

d. Fixtures within buildings must be wired with conductors having approved slow-burning or other heat-resisting coverings where the temperature to which wire is subjected at any point exceeds 120 degrees Fahr. (49 degrees Centigrade). Where fixtures are placed outside of buildings approved rubber insulated wire is required.

§436. Transformers, low potential.

1. Oil transformers.

a. Must not be placed inside [of] any building except central stations[,] or sub-stations, unless in [and] transformer vaults [except] and by special permission.

2. Air cooled transformers.

b. Air cooled transformers must not be placed inside of any building excepting central stations or sub-stations [and transformer vaults] if the highest voltage of either primary or secondary exceeds 550 volts, unless installed in approved transformer vaults.

c. Air cooled transformers must, with the exception of bell-ringing and other signaling transformers, be so mounted that the case shall be at a distance of at least 1 foot from combustible material or separated therefrom by a slab or panel of non-combustible, non-absorptive, insulating material, such as slate, marble or soapstone. [this will require the use of a slab or panel somewhat larger than the transformer.]

§437. Decorative lighting systems.

a. Special permission in writing may be given for the temporary installation of approved systems of decorative lighting, provided the difference of potential between the wires of any circuit shall not be over 150 volts and also provided that no group of lamps requiring more than 1,320 watts shall be dependent on one cut-out.

§438. Theatre and moving picture establishment wiring.

All wiring, apparatus, etc., not specifically covered by this section must conform to the general requirements of this chapter, and the term "theater" shall mean a building, or that part of a building regularly or frequently used for dramatic, operatic,

moving picture or other performances or shows or which has a stage for such performances used with scenery or other stage appliances.

a. Services.

Where supply may be obtained from 2 separate street mains, 2 separate and distinct services must be installed, one service to be of sufficient capacity to supply current for the entire equipment of theater, while the other service must be at least of sufficient capacity to supply current for all emergency lights. Where supply cannot be obtained from 2 separate sources, the feed for emergency lights must be taken from a point on the street side of main service fuses. By "emergency lights" are meant exit lights and all lights in lobbies, stairways, corridors, and other portions of theater to which the public have access, which are normally kept lighted during the performance.

Where source of supply is an isolated plant within the same building, an auxiliary service of at least sufficient capacity to supply all emergency lights must be installed from some outside source, or a suitable storage battery within the premises may be considered the equivalent of such service.

b. Stage.

All permanent construction on stage side of proscenium wall, except as hereinafter provided, must be approved conduit or armored cable.

c. Switchboards must be of the dead front type and made of non-combustible, non-absorptive insulating material, plans of each board to be approved before installation. Dimmers must be dead when the switch controlling circuit of which dimmer forms a part is open.

d. Footlights must be wired in approved conduit or armored cable, each lamp receptacle being enclosed within an approved outlet box, or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gage, treated to prevent oxidation, so constructed as to enclose all the wires and providing at least one-half inch separation between the metal of the box and receptacle terminals; wires to be soldered to lugs of receptacles.

Footlights must be so wired that no set of lamps requiring more than 1,320 watts nor more than 32 receptacles shall be dependent upon one cut-out.

e. Borders and proscenium sidelights.

1. Borders and proscenium sidelights must be constructed of steel of a thickness not less than No. 20 U. S. sheet metal gage, treated to prevent oxidation, be suitably stayed and supported, and so designed that flanges of reflectors will protect lamps.

2. Borders and proscenium sidelights must be so wired that no set of lamps requiring more than 1,320 watts nor more than 32 receptacles shall be dependent upon one cut-out.

3. Borders and proscenium sidelights must be wired in approved conduit or armored cable, each lamp receptacle to be enclosed within an approved outlet box, or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gage, treated to prevent oxidation, so constructed as to enclose all wires and providing at least one-half inch separation between the metal of the box and receptacle terminals; the wires to be soldered to lugs of receptacles.

4. Borders and proscenium sidelights must be provided with suitable guards to prevent scenery or other combustible material coming in contact with lamps.

5. Cables for borders must be of approved type and suitably supported; conduit construction must be used from switchboard to point where cables must be flexible to permit of the raising and lowering of border.

6. For the wiring of the border proper, wire with approved slow-burning insulation must be used.

7. Borders must be suitably suspended, and if a wire rope is used same must be insulated by at least one strain insulator inserted at the border.

f. Stage and gallery pockets must be of approved type, insulated from ground and controlled from switchboard, each receptacle to be not less than 35 amperes rating for arc lamps nor 15 amperes for incandescent lamps, and each receptacle to be wired to its full capacity. Arc pockets must be wired with wire not smaller than No. 6 B. & S. gage and incandescent pockets with not less than No. 12 B. & S. gage. Plugs for arc and incandescent pockets must not be interchangeable.

g. Scene docks.

Where lamps are installed in scene docks, they must be so located and installed that they will not be liable to mechanical injury.

h. Curtain motors must be of [ironclad] enclosed type and installed so as to conform to the requirements of § 208 this chapter (see § 208).

i. Control for stage flues.

In cases where dampers are released by an electric device, the electric circuit operating same must be normally closed.

Magnet operating damper must be wound to take full voltage of circuit by which it is supplied, using no resistance device, and must not heat more than normal for apparatus of similar construction. It must be located in loft above scenery and be installed in a suitable iron box with a tight self-closing door.

Such dampers must be controlled by at least 2 standard single pole switches mounted within approved iron boxes provided with self-closing doors, without lock or latch, and located, one at the electrician's station and others as designated.

j. Dressing rooms must be wired in approved conduit or armored cable.

All pendant lights must be equipped with approved reinforced cord, armored cable or steel armored flexible cord.

All lamps must be provided with approved guards which are sealed or locked in place.

k. Portable equipment.

Arc lamps used for stage effects must conform to the following requirements:

1. Must be constructed entirely of metal of a thickness not less than No. 20 U. S. sheet metal gage except where the use of approved insulating material is necessary.

2. Must be substantially constructed, and so designed as to provide for proper ventilation, and to prevent sparks being emitted from lamps when same are in operation, and mica must be used for frame insulation.

3. Front opening must be provided with a self-closing hinged door frame, in which wire gauze or glass must be inserted, except in the case of lens lamps, where the front may be stationary, and a solid door be provided on back or side.

4. Must be so constructed that neither carbons nor live parts will be brought into contact with metal of hood during operation, and arc lamp frames and standards must be so installed and protected as to prevent the liability of their being grounded.

5. Switch on standard must be so constructed that accidental contact with any live portion of same will be impossible.

6. All stranded connections in lamps and at switch and rheostat must be provided with approved lugs.

7. Rheostats must be plainly marked with their rated capacity in volts and amperes, and, if mounted on standards, must be raised to a height of at least 3 inches above floor. Resistance must be enclosed in a substantial and properly ventilated metal case which affords a clearance of at least 1 inch between case and resistance element.

8. A competent operator must be in charge of each arc lamp, except that 1 operator may have charge of 2 lamps when they are not more than 10 feet apart, and are so located that he can properly watch and care for both lamps.

1. Bunches must be substantially constructed of metal and must not contain any exposed wiring; cable feeding bunches must be bushed in an approved manner where passing through the metal, and must be properly secured to prevent any mechanical strain from coming on the connection.

m. Strips must be constructed of steel of a thickness not less than No. 20 U. S. sheet metal gage, treated to prevent oxidation, and suitably stayed and supported and so designed that flanges will protect lamps. Cable must be bushed in a suitable manner where passing through the metal, and must be properly secured to prevent serious mechanical strain from coming on the connections. Strips must be wired in approved conduit or armored cable, each lamp receptacle being enclosed within an approved outlet box or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gage, treated to prevent oxidation, so constructed as to enclose all wires, the wires to be soldered to lugs of receptacles.

n. Portable plugging boxes must be so constructed that no current carrying part will be exposed, and each receptacle must be protected by approved fuses mounted on slate or marble bases and enclosed in a fireproof cabinet equipped with self-closing doors. Each receptacle must be constructed to carry 30 amperes without undue heating, and the busbars must have a carrying capacity equivalent to the current required



for the total number of receptacles, and approved lugs must be provided for the connection of the master cable.

o. Pin plug connectors must be of an approved type, so installed that the female part of plug will be on live end of cable, and must be so constructed that tension on the cable will not cause [any] serious mechanical strain on the connections.

p. Portable [conductors. Flexible] conductors used [for] from receptacles to arc lamps, bunches and other portable equipments must be approved stage cable, except that for the purpose of feeding a stand lamp under conditions where conductors are not liable to severe mechanical injury an approved reinforced cord may be used, provided cut-out designed to protect same is not fused over [6] 10 amperes capacity.

q. [Lights on scenery. Where b]Brackets [are] used on scenery [they] must be wired entirely on the inside, fixture stem must come through to the back of the scenery and end of stem be properly bushed. *Fixtures must be securely fastened in place.*

r. String or festooned light wiring must be of approved type, joints to be properly made, soldered and taped, and staggered where practicable.

Where lamps are used in lanterns or similar devices, approved guards must be employed.

s. Special electrical effects. Where devices are used for producing special effects such as lightning, waterfalls, etc., the apparatus must be so constructed and located that flames, sparks, etc., resulting from the operation cannot come in contact with combustible material.

t. Auditorium wiring must be installed in approved conduit, metal moulding or armored cable. Where receptacles are used, they must be enclosed in approved boxes.

Exit lights must not have more than 1 set of fuses between same and service fuses. Exit lights and all lights in halls, corridors or any other part of the building used by audience, except the general auditorium lighting, must be fed independently of the stage lighting, and must be controlled only from the lobby or other convenient place in front of the house. All fuses must be enclosed in approved cabinets.

u. Moving picture equipments other than those of approved miniature type.

1. The arc lamp used as a part of a moving picture machine must be constructed, so far as practicable, similar to arc lamps of theatres, and wiring to same must not be of less capacity than No. 6 B. & S. gage. The leads to the lamp and its rheostat or equivalent device must be protected by a plug cutout or open link fuses, the latter enclosed in an approved cabinet with self-closing door. Cartridge fuses will not be permitted.

2. Rheostats, transforming devices or any substitute therefor must be of types expressly designed and approved for the purpose. Their installation and location must be subject to approval as parts of the moving picture machine.

3. Top and bottom reels must be enclosed in steel boxes or magazines, each with an opening of approved construction at bottom or top, so arranged as not to permit entrance of flame to magazine. No solder is to be used in the construction of these magazines. The front side of each magazine must consist of a door swinging horizontally and be provided with a substantial latch.

4. An automatic shutter must be provided and must be so constructed as to shield the film from the beam of light whenever the film is not running at operating speed. Shutter must be permanently attached to the gate frame.

5. Extra films must be kept in individual metal boxes equipped with tight-fitting covers.

6. Machine operation must be of an approved type. If driven by a motor, the latter must be of a type expressly designed and approved for such operations, and when so approved, motor driven machines, when in charge of a skilled operator, may be authorized under special permission in writing, given in advance.

7. Machine must be placed in an enclosure or house made of suitable fireproof material; must be properly ventilated, properly lighted and large enough for operator to walk freely on either side of or back of machine. All openings into this booth must be arranged so as to be entirely closed by doors or shutters constructed of the same or equally good fire-resisting material as the booth itself. Doors or covers must be arranged so as to be held normally closed by spring hinges or equivalent devices.

8. Reels containing films under examination or in process of rewinding must be enclosed in magazines or approved metal boxes, similar to those required for films in operation, and not more than 2 feet of film shall be exposed in booth.

v. Moving picture equipments of approved miniature type for home, lecture and similar purposes.

[1. Arc lamp used as a part of machine must be constructed so far as practicable similar to arc lamps of theatres, and must not require more than 350 watts to operate same.

2. The rheostat or other current controlling device must conform to the requirements for similar devices for theatre work, and must be attached to and form a part of the machine.

3. Films must be of the non-inflammable type.

4. Such miniature machine shall be operated in an approved box of fireproof material constructed with a fusible link or other approved releasing device to close instantaneously and completely in case of combustion within the box. The light in said miniature machine shall be completely enclosed in a metal lantern box covered with an unremovable roof.]

1. *All equipments must be expressly approved, and such approval must cover the entire machine including all attachments, current-controlling devices and other parts employed, including also the film.*

2. *The entire equipment must consume not more than 660 watts.*

3. *Arc lamps must be constructed so far as practicable in accordance with the requirements of § 438 k, 1, 2, 3, 4 and 6 of this chapter, and incandescent lamps must be suitably enclosed.*

4. *Rheostats, transformers, switches and other similar current-controlling devices must be attached to and form a part of the machine, must have no live parts exposed, and must comply with the requirements of § 565 and § 578 or § 581 a, b, of this chapter.*

5. *Films must be of an approved slow-burning type having a permanent distinctive marker.*

6. *Machines must be so constructed that they cannot be used with films employed on the full-sized commercial moving picture machine. This may be accomplished by using a film of special width or with special perforations or by any other approved means.*

7. *Machines must be marked with the name or trade-mark of the maker, and with the voltage and current rating for which they are designed, and be plainly marked, "For use with slow-burning films only."*

§ 439. Outline lighting.

a. Outline lighting must be connected only to low-potential systems.

b. Open or conduit work or metal trough construction may be used, but moulding will not be permitted.

c. Where flexible tubing is required, the ends must be sealed and painted with moisture repellent and kept at least  $\frac{1}{4}$  1-2 inch from surface wired over.

d. Wires for use in rigid or flexible steel conduit must comply with requirements for conduit work. Where armored cable is used, the conductors must be protected from moisture by lead sheath between armor and insulation.

e. Outline lighting must be protected by its own cut-out, and controlled by its own switch; single pole switches must not be used. Cut-outs, switches, flashers and similar appliances must be of approved types and be installed as required by this chapter for such appliances, and, if outside the building, must, with the exception of transformers of weatherproof type, be installed in approved weatherproof cabinets.

f. Circuits must be so arranged that not more than 1,320 watts will be dependent upon one cut-out.

g. Sockets and receptacles must be of the keyless porcelain type and wires must be soldered to lugs on same. Miniature receptacles will not be approved for outdoor work.

h. For open work, wires must be approved rubber covered, not less than No. 14 B. & S. gage and must be rigidly supported on non-combustible, non-absorptive insulators, which separate the wires at least 1 inch from the surface wired over. Rigid supporting requires, under ordinary conditions where wiring over flat surfaces, supports at least every 4½ feet. If the wires are liable to be disturbed, the distance between supports should be shortened. In those parts of circuits where wires are connected to approved receptacles which hold them at least 1 inch from surface wired over, and which are placed not over 1 foot apart, such receptacles will be considered to afford the necessary support and spacing of the wires. Between receptacles more than 1 foot, but less than 2 feet, apart an additional non-combustible, non-absorptive insulator maintaining a separation and spacing equivalent to the

receptacles must be used. Except as above specified, wires must be kept apart at least 2½ inches for voltages up to 300, and 4 inches for higher voltages.

i. For metal trough construction, the troughs and other details must comply with the requirements of § 583 a to f, hereof.

§ 442.] § 441. Lighting and power from railway wires.

Lighting and power from railway wires must not be permitted, under any pretense, in the same circuit with trolley wires with a ground return, except in electric railway cars, electric car houses, power houses, passenger and freight stations connected with the operation of electric railways.

§ 439a.] § 442. Garages.

1. *Definition.* A garage is that portion of a building in which any automobile carrying volatile inflammable liquid is kept, whether such automobile be kept for use, for sale, for rental, for exhibition or for demonstrating purposes; and all that portion of a building that is on or below the floor or floors on which an automobile carrying volatile inflammable liquid is kept and is not separated therefrom by tight unpierced fire walls and floors.

2. *Wiring and appliances.* [a. Approved metal conduit or approved armored cable must be employed, except in offices and show rooms, where approved metal moulding may be used.

b. Cutouts, switches, receptacles and sockets which are permanently located must be placed at least 4 feet above the floor.

c. Switchboards and charging panels, if not placed 4 feet above the floor must be located in a fireproof enclosure provided with a self-closing door.

d. For portable lights, flexible cable designed for rough usage must be employed, this cable carrying the male end of a pin plug connector or equivalent of at least 3 amperes capacity, the female end being of such design or so hung that the connector will break apart readily at any position of the cable. The connector must be kept at least 4 feet above the floor. For all portable lights, keyless molded-mica or metal sheathed porcelain sockets equipped with handle, hook and guard must be employed.

e. For charging, theater stage cable must be employed, this cable carrying the female end of a pin plug connector or equivalent of a capacity of at least 50 amperes, the male end being of such design or so hung that the connector will break apart readily at any position of the cable. The connector must be kept at least 4 feet above the floor, and the male end, if not located on a switchboard or charging panel, must be shielded against accidental contact.

f. Motors, if not located at least 4 feet above the floor, must be of the fully enclosed type.] a. *All conductors except those required for pendant lamps or portable connections must be installed in approved metal conduit or approved armored cable, except that approved metal moulding may be used only in offices and show-rooms. Metal conduit, armored cable or metal moulding must be so installed that all outlet and junction boxes shall be located at least four feet above the floor.*

b. *Flexible cord for pendant lights must be approved reinforced cord.*

c. *Flexible cords for portable lamps, motors or other apparatus must be approved cord designed for rough usage. The portable cord must carry the male end of an approved pin plug connector or equivalent, the female end being of such design or so hung that the connector will break apart readily at any position of the cable. The connector must be kept at least four feet above the floor.*

d. *Flexible cable for charging must be of approved theatre stage type, this cable carrying parts of approved connectors of at least fifty amperes capacity. The connectors must be of such design or so hung that at least one will break apart readily at any position of the cable. Current-carrying parts of connectors must be shielded to prevent accidental contact. The fixed, or wall connector, must be kept at least four feet above the floor, and if not located on switchboard or charging panel, must be protected against accidental contact.*

e. *Cut-outs, switches, key sockets and receptacles must be placed at least four feet above the floor, except as provided in paragraph g below.*

f. *All portable lights must be equipped with approved keyless sockets of moulded composition or metal-sheathed porcelain type. These sockets must be equipped with handle, hook and substantial guard.*

g. *Switchboards and charging panels, at or upon which are mounted devices which in operation may produce a spark, must be located in a room or enclosure provided for the purpose unless all such spark producing devices are at least four feet above the floor or surrounded by vapor proof enclosures.*

h. *Motors or dynamos, not actually a part of a vehicle, if not located at least four feet above the floor must be of the fully enclosed type. Motors located four feet or more above the floor, if not of the fully enclosed type, must be provided with wire screen of not less than No. 14 mesh over openings at commutator end.*

§ 443. Electric cranes.

All wiring, apparatus, etc., not specifically covered by special rules herein given, must conform to the general requirements of this [\*Code,] chapter except that the switch required by § 208c of this chapter for each motor may be omitted.

a. Wiring.

1. All wires except bare collector wires, those between resistances and contact plates of rheostats and those subjected to severe external heat, must be approved rubber-covered and not smaller in size than No. 12 B. & S. gage. Insulation on wires between resistances and contact plates of rheostats must conform to paragraph d hereof, while wires subjected to severe external heat must have approved slow-burning insulation.

2. All wires excepting collector wires and those run in metal conduit or approved flexible cable must be supported by knobs or cleats which separate them at least 1 inch from the surface wired over, but in dry places, where space is limited and the distance between wires as required by § 426h of this chapter cannot be obtained, each wire must be separately encased in approved flexible tubing securely fastened in place.

Collector wires must be supported by approved insulators so mounted that even with the extreme movement permitted the wires will be separated at all times at least 1½ inches from the surface wired over. Collector wires must be held at the ends by approved strain insulators.

3. Main collector wires carried along the runways must be rigidly and securely attached to their insulating supports at least every 20 feet, and separated at least 6 inches when run in a horizontal plane; if not run in a horizontal plane, they must be separated at least 8 inches. If spans longer than 20 feet are necessary the distance between wires must be increased proportionately, but in no case shall the span exceed 40 feet.

4. Where bridge collector wires are over 80 feet long, insulating supports on which the wires may loosely lie must be provided at least every 50 feet.

Bridge collector wires must be kept at least 2½ inches apart, but a greater spacing should be used whenever it may be obtained.

5. Collector wires must not be smaller in size than specified in the following table for the various spans:

Distance between rigid supports, feet.	Size wire required B. & S.
0 to 30.....	6
31 to 60.....	4
Over 60.....	2

b. Collectors must be so designed that sparking between them and collector wires will be reduced to a minimum.

c. Switches and cut-outs.

1. The main collector wires must be protected by a cut-out and the circuit controlled by a switch. Cut-out and switch shall be so located as to be easy of access from the floor.

2. Cranes operated from cabs must have a cut-out and switch connected into the leads from the main collector wires and so located in the cab as to be readily accessible to the operator.

3. Where there is more than one motor on a single crane, each motor lead must be protected by a cut-out located in the cab if there is one.

d. Controllers must be installed according to § 204 of this chapter, except that if the crane is located out doors the insulation on wires between resistances and contact plates of rheostats must be rubber where the wires are exposed to moisture and insulation is necessary and also where they are grouped. If the crane operates over readily combustible material the resistances must be placed in an enclosure made of non-combustible material, thoroughly ventilated and so constructed that it will not permit any flame or molten metal to escape in the event of burning out the resistances. If



the resistances are located in the cab, this result may be obtained by constructing the cab of non-combustible material and providing sides which enclose the cab from its floor to a height of at least 6 inches above the top of the resistances.

e. The motor frames, the entire frame of the crane and the tracks must be permanently and effectively grounded.

§444. Wires, high potential systems in central stations, substations and transformer vaults.

[a. High potential wires must have an approved rubber-insulating covering.  
b. High potential wires must be always in plain sight and never encased, except as provided for in § 208b of this chapter, or where specially required.

c. High potential wires must, except as provided for in § 208 of this chapter, be rigidly supported on glass or porcelain insulators, which raise the wire at least 1 inch from the surface wired over, and must be kept about 8 inches apart.

Rigid supporting requires, under ordinary conditions, where wiring along flat surfaces, supports at least about every 4½ feet. If the wires are unusually liable to be disturbed, the distance between supports must be shortened.

In buildings of mill construction, mains of not less than No. 8 B. & S. gage, where not liable to be disturbed, may be separated about 10 inches and run from timber to timber, not breaking around, and may be supported at each timber only.

d. High potential wires must be protected on side walls from mechanical injury by a substantial boxing, retaining an air space of 1 inch around the conductors, closed at the top (the wires passing through bushed holes) and extending not less than 7 feet from the floor. When crossing floor timbers, in cellars, or in rooms where they might be exposed to injury, wires must be attached by their insulating supports to the under side of a wooden strip not less than ½ inch in thickness.]

Special permission in writing may be given for the installation of wires of high potential systems under such restrictions as the commissioner may prescribe.

§445. Transformers, high potential.

a. Transformers must [not be placed inside buildings without special permission, and must] be located as near as possible to the point at which the primary wires enter the building.

b. Transformers must be placed in an enclosure constructed of [fire-resisting] fire proof material the enclosure to be used only for this purpose, and to be kept securely locked, and access to the same allowed only to responsible parties. The enclosure shall have no opening to the building except through an approved tight-fitting fire door. It shall be ventilated in some approved manner, be used only to contain the transformers and other high potential regulating devices, and be kept securely locked to prevent access by other than responsible persons. Suitable oil drains and guard sills shall be provided, as may be required by the commissioner.

c. The transformer case must be permanently and effectually grounded. [and the enclosure in which the transformers are placed must be practically air-tight, except that it must be thoroughly ventilated to the outdoor air, if possible, through a chimney or flue. There should be at least 6 inches air space on all sides of the transformer.]

§447. [Primary w]Wires, extra high potential.

a. Primary wires must not be brought into or over buildings, except power stations, sub-stations and transformer vaults.

[§448. Secondary wires.]

b. Secondary wires must be installed under rules for high-potential systems when their immediate primary wires carry a current at a potential of over 3,500 volts, unless the primary wires are installed in accordance with the requirements of article 3 of this chapter or are entirely underground.

ARTICLE 5.

Fittings, Materials and Details of Construction.

Section 548. Fittings, materials and details of construction.

- 549. Wires, general.
- 550. Rubber covered wires.
- 551. Flexible cords.
- 552. Fixture wire.
- 553. Conduit wire.
- 554. Armored cable and cord.
- 555. Slow burning weatherproof wire.
- 556. Slow burning wire.
- 557. Weatherproof wire.
- 558. Metal conduits.
- 559. Outlets, junction and flush switch boxes.
- 560. Metal moulding.
- 561. Tubes and bushings.
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- 563. Flexible tubing.
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- 566. Circuit breakers.
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- 569. Panel boards.
- 570. Cabinet and cut-out boxes.
- 571. Rosettes.
- 572. Sockets, including lamp receptacles.
- 573.
- 574. Arc lamps.
- 575. Spark arresters.
- 576. Insulating joints.
- 577. Fixtures.
- 578. Rheostats, resistance boxes and equalizers.
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- 580. Re-active coils and condensers.
- 581. Transformers, low potential.
- 582. Lightning arresters.
- 583. Electric signs (for low potential systems only).
- 584.

[Section

- 549. Insulated wires, general rules.
- 550. Rubber-covered wire.
- 551. Slowburning weatherproof wire.
- 552. Slowburning wire.
- 553. Weatherproof wire.
- 554. Flexible cords.
- 555. Fixture wire.
- 556. Conduit wire.
- 557. Armored cable and cord.
- 558. Metal conduits.
- 559. Outlet, junction and flush switch boxes
- 560. Metal mouldings.
- 561. Tubes and bushings.
- 562. Cleats.
- 563. Flexible tubing.
- 564. Knobs.
- 565. Switches.
- 566. Circuit breakers
- 567. Cut-outs.
- 568. Fuses.
- 569. Panel boards.
- 570. Cabinets.
- 571. Rosettes.
- 572. Sockets.
- 573.
- 574. Arc lamps.
- 575. Spark arresters.
- 576. Insulating joints.
- 577. Fixtures.
- 578. Rheostats, resistance boxes and equalizers.
- 579. Auto-starters.
- 580. Reactive coils and condensers.
- 581. Transformers.
- 582. Lightning arresters.
- 583. Electric signs (for low potential systems only).
- 584]

§548. Fittings, materials and details of construction.

The requirements and provisions of this article prescribe the general characteristics and classifications of fittings, materials and details of construction. Specifications for performance of fittings and materials, both under test and in service, shall be as prescribed from time to time by the commissioner. All fittings, materials and details of construction must be approved by the commissioner before being placed in service.

[§549. Insulated wires, general rules.

a. Copper for insulated solid conductors of No. 4 B. & S. gage and smaller must not vary in diameter more than .002 inch from the standard. On solid sizes larger than No. 4 B. & S. gage the diameter shall not vary more than 1 per cent. from the specified standard. The conductivity of solid conductors shall not be less than 97 per cent. of that of pure copper of the specified size. In all stranded conductors the sum of the circular mils of the individual wires shall not be less than the nominal circular mils of the strand by more than 1½ per cent. The conductivity of the individual wires in a strand shall not be less than is given in the following table, which applies to tinned conductors (B. & S. gage):

No. 14 B. & S. gage and larger.....	97.0 per cent.
No. 15.....	96.8 per cent.
No. 16.....	96.6 per cent.
No. 17.....	96.4 per cent.
No. 18.....	96.2 per cent.
No. 19.....	96.0 per cent.
No. 20.....	95.8 per cent.
No. 21.....	95.6 per cent.
No. 22.....	95.4 per cent.
No. 23.....	95.2 per cent.
No. 24.....	95.0 per cent.
No. 25.....	94.8 per cent.
No. 26.....	94.6 per cent.
No. 27.....	94.4 per cent.
No. 28.....	94.2 per cent.
No. 29.....	94.0 per cent.
No. 30.....	93.8 per cent.

The standard for diameters and milages shall be that adopted by the American Institute of Electrical Engineers. If splices are made in solid conductors or in the individual wires of stranded conductors, they must be made in a workmanlike manner and so as not to increase the diameter of the conductor or individual wire or lessen the mechanical strength thereof. Joints or splices in stranded conductors, as a whole, must be made only by separately joining each individual wire as described above, and the overall diameter of the entire stranded conductor must not be increased thereby.

b. Wires and cables of all kinds designed to meet the following specifications must have a distinctive marking the entire length of the coil so that they may be readily identified in the field. They must also be plainly tagged or marked as follows:

- 1. The maximum voltage at which the wire is designed to be used;
- 2. The words "National Electrical Code Standard";
- 3. Name of the manufacturing company and, if desired, trade name of the wire;
- 4. Month and year when manufactured;
- 5. The proper type letter for the particular style of wire or cable as given for each type of insulation in §§ 550 to 557 of this chapter, inclusive.

Wires described under § 553 of this chapter need not have the distinctive marking, but are to be tagged.]

§549. Wires, general.

a. Wires, cables and cords of all kinds designed to meet the following specifications must have a distinctive marking the entire length of the coil so that they may be readily identified in the field. They must also be plainly tagged or marked as follows: Wires described under §557 of this chapter need not have the distinctive marking but are to be tagged.

- 1. The maximum working pressure or voltage for which the wire was tested or approved. This may be omitted for the wires described under §§555, 556 and 557 of this chapter.
- 2. The words "National Electrical Code Standard."
- 3. Name of the manufacturing company and, if desired, trade name of the wire.
- 4. Month and year when manufactured.
- 5. The proper type letter for the particular style of wire or cable as given in the following schedule for each type of insulation.

RS—Rubber coated single braided for voltage.....	0-600
RS-15—Rubber covered single braided for maximum voltage.....	1500
RS-25—Rubber covered single braided for maximum voltage.....	2500
RS-35—Rubber covered single braided for maximum voltage.....	3500
RS-50—Rubber covered single braided for maximum voltage.....	5000
RS-70—Rubber covered single braided for maximum voltage.....	7000
RD, RD-15—Rubber covered double braided, etc.	
RS L—Rubber covered, single braided, leaded.	
RD L—Rubber covered, double braided, leaded.	
AC—Wires for use in armored cable.	
AC L—Leaded wires for use in armored cable.	

b. Conductors or the strands of conductors must not vary in either diameter or in conductivity more than an approved per cent. from the standards adopted by the American Institute of Electrical Engineers.

[§550. Rubber-covered wire.

a. Copper for conductors must be thoroughly tinned.  
b. The insulation must consist of a rubber compound, homogeneous in character, adhering to the conductor or to the separator, if one is used, and of a thickness not less than that given in the tables of paragraphs e and f of this section. Measurements of insulating wall are to be made at the thinnest portion of the dielectric.

c. Any 1 foot sample of completed covering must show a dielectric strength sufficient to resist throughout 5 minutes the application of an electro-motive force proportionate to the thickness of insulation in accordance with the following table:

Thickness in 64ths inch.	Breakdown test on 1 foot.
1.....	3,000 volts A. C.
2.....	6,000 volts A. C.
3.....	9,000 volts A. C.
4.....	11,000 volts A. C.
5.....	13,000 volts A. C.
6.....	15,000 volts A. C.
7.....	16,500 volts A. C.
8.....	18,000 volts A. C.
10.....	21,000 volts A. C.
12.....	23,500 volts A. C.
14.....	26,000 volts A. C.
16.....	28,000 volts A. C.

The source of alternating electro-motive force shall be a transformer of at least 1 kilowatt capacity. The application of the electro-motive force shall first be made at 3,000 volts for 5 minutes, then the voltage increased by steps of not over 3,000 volts, each held for 5 minutes, until the rupture of the insulation occurs. The tests for dielectric strength shall be made on a sample wire which has been immersed in water for 72 hours. One foot of the wire under test is to be submerged in a conducting liquid held in a metal trough, one of the transformer terminals being connected to the copper of the wire and the other to the metal of the trough.

d. Every length of completed wire or cable must be tested after not less than 12 hours, immersion in water and while still immersed by the application for 1 minute of an alternating current voltage derived from apparatus of ample capacity, the test voltages to be those given in the tables of paragraphs e and f of this section.

After this voltage test every length of completed wire or cable while still immersed must show an insulation resistance after 1 minute electrification not less than the values given in paragraphs e and f of this section.

Any length of completed wire or cable may be tested during 30 days' immersion in water and must show not less than 50 per cent. of the insulation resistance required after the 12 hours' immersion.

The results of insulation test at different temperatures to be reduced to a basis of 60 degrees F. (15.5 degrees C.) by using the multipliers in the following table:



Temp., degs. Fahr.	Multiplier.
50-52	.63
53-55	.75
56-58	.86
59-61	1.00
62-64	1.16
65-67	1.34
68-70	1.55
71-73	1.80
74-76	2.08
77-79	2.40
80-82	2.78
83-85	3.22

e. Thickness of insulation, voltage tests and minimum insulation resistance to be in accordance with the following tables. The voltage tests are to be for 1 minute. The insulation resistances are after 1 minute electrification and at 60 degrees Fahr. (15.5C.).

Tests on completed lengths 0 to 600 volt classes. Type letters R. S.

Size.	Thickness in 64ths inch.	Megohms per mile after 12 hrs. immersion.	Voltage test, one minute.
14	3-64	300	1,500
12	3-64	250	"
10	3-64	225	"
8	3-64	200	"
6	1-16	200	2,000
4	1-16	150	"
2	1-16	125	"
1	5-64	150	2,500
0	5-64	125	"
00	5-64	125	"
000	5-64	100	"
225,000 c. m.	3-32	100	3,000
0000	5-64	100	"
300,000	3-32	100	"
400,000	3-32	100	"
500,000	3-32	100	"
600,000	7-64	100	3,500
700,000	7-64	100	"
800,000	7-64	100	"
900,000	7-64	100	"
1,000,000	7-64	100	"
1,250,000	1-8	100	"
1,500,000	1-8	75	"
1,750,000	1-8	60	"
2,000,000	1-8	50	"

f. Tests on completed lengths, 601 to 7,000 volt classes.

Max. operating voltage, 1,500. Type letters R. S.—15.

Size.	Thick. ins.	Ins. res. meg.	Volts test.
B. & S. gage.			
14-8	1-16	600	4,000
7-2	5-64	300	"
1-0000	3-32	200	"
C.M.			
225,000-500,000	7-64	175	"
525,000-1,000,000	1-8	150	"
Over 1,000,000	9-64	100	"

Max. operating voltage, 2,500. Type letters R. S.—25.

Size.	Thick. ins.	Ins. res. meg.	Volts test.
B. & S. gage.			
14-8	3-32	700	6,250
7-2	3-32	350	"
1-0000	7-64	250	"
C.M.			
225,000-500,000	1-8	200	"
525,000-1,000,000	9-64	175	"
Over 1,000,000	10-64	125	"

Max. operating voltage, 3,500. Type letter R. S.—35.

Size.	Thick. ins.	Ins. res. meg.	Volts test.
B. & S. gage.			
14-8	4-32	850	8,750
7-2	4-32	450	"
1-0000	4-32	300	"
C.M.			
225,000-500,000	9-64	225	"
525,000-1,000,000	10-64	200	"
Over 1,000,000	11-64	150	"

Max. operating voltage, 5,000. Type letter R. S.—50.

Size.	Thick. ins.	Ins. res. meg.	Volts test.
B. & S. gage.			
14-8	6-32	1,000	12,500
7-2	6-32	650	"
1-0000	6-32	450	"
C.M.			
225,000-500,000	6-32	300	"
525,000-1,000,000	6-32	225	"
Over 1,000,000	7-32	175	"

Max. operating voltage, 7,000. Type letter R. S.—70.

Size.	Thick. ins.	Ins. res. meg.	Volts test.
B. & S. gage.			
14-8	8-32	1,200	17,500
7-2	8-32	800	"
1-0000	8-32	550	"
C.M.			
225,000-500,000	8-32	400	"
525,000-1,000,000	8-32	275	"
Over 1,000,000	9-32	200	"

g. All physical tests to be made at a temperature between 60 degrees and 90 degrees Fahrenheit. All test samples to be kept at a temperature within this range for at least 2 hours before the tests are made.

1. The rubber compound or other approved insulation must be sufficiently elastic to comply with a test made as follows:

A sample of wire about 20 inches long shall have the braid and insulation removed for about 2 inches at each end, leaving the braid and insulation on balance of sample. One end of the bare copper should be fastened to a clamp on a shaft of the diameter given below, and a weight as given below attached to the other end of the bare cop-

per wire. The shaft shall then be revolved 10 times in 10 seconds, wrapping the sample in a close wind around the shaft. With the tension left on the sample, it should then be immersed in water for 24 hours, immediately after which it should, while still immersed, be subjected to 1,500 volts alternating current for 1 minute.

	B. & S.	Mils.	Lbs.
Diam. of shaft	No. 14 wire	170	weight 10
"	12 "	190	" 10
"	10 "	275	" 12
"	8 "	375	" 15

2. Any rubber compound used as insulation shall be tested for permanent set, elongation and tensile strength as follows:

New wire.—A test piece taken from the wire, having insulation less than 5-64 inch thick, shall have marks placed 2 inches apart, and shall be stretched longitudinally at the rate of 12 inches per minute till the marks are 5 inches apart, and then be immediately released and a measurement taken 30 seconds thereafter, when the distance between the marks must not exceed 2.5 inches. The test piece shall then be stretched until the marks are 6 inches apart before rupture. The tensile strength shall not be less than 400 lbs. per square inch, calculated upon the original cross section of the test piece before stretching. Test pieces from wire having insulation 5-64 inch thick or over shall be tested in a similar manner, but shall be stretched to 4 inches instead of 5 inches, and must not break until stretched 5 inches, and shall have a tensile strength of 400 lbs. per square inch.

Wire tested at any time up to one year from date of manufacture or to time of installation.—A test piece taken from wire having insulation less than 5-64 inch thick shall have marks placed 2 inches apart, and shall be stretched longitudinally at the rate of 12 inches per minute till the marks are 4 inches apart, and then be immediately released and a measurement taken 30 seconds thereafter, when the distance between the marks must not exceed 2.5 inches. Test pieces from wire having insulation 5-64 inch or over shall be stretched to 3½ inches instead of four inches.

h. All of the above insulations must be protected by a substantial braided covering, properly saturated with a preservative compound. This covering must be sufficiently strong to withstand all the abrasions likely to be met with in practice, and all wire must substantially conform to approved samples submitted by the manufacturer.

j. Lead covered wires and cables for interior work only. (Type letters R. S. L.) Except for armored cables. (Type letter A. C.) The thickness of insulating wall of lead sheath rubber insulated conductors, 0-600 volts, to be the same as for braided cables, all cables to be covered with a compound filled tape or braid over the insulating wall. There shall be a tape or braid over the bunched conductors except where the conductors are laid parallel and not twisted. If braid is used, it shall be of such a thickness as to increase the required diameter over the insulating wall by at least 1-32 inch, and must comply with the requirements for braid on braided conductors.

If tape is used it must not be less than 1-64 inch thick and must lap at least ¼ of its width. The width of the tape used should not exceed twice the square root of the diameter of the conductor over the insulating wall; i. e., 500,000 c. m. 3-32 rubber, tape not to exceed 2 inches in width; No. 14, 3-64 rubber, tape should not exceed 0.8 inch in width.

The lead on single conductor cables, 0-600 volt class, sizes 2 B. & S. and smaller, both solid and stranded, to be not less than the thickness of rubber called for by paragraph e of this section. On larger sizes the thickness of lead to be not less than the thickness of insulating wall called for, less 1-64 inch; i. e., thickness of lead on No. 2, 1-16 inch; on 1,000,000 c. m., 3-32 inch. On multiple conductor cables, thickness of lead to be that called for by single conductor, having same diameter over the insulation as the multiple conductor cable has over the bunched insulated conductors.

Rubber insulated and lead sheathed cables, 601 to 7,000 volt classes inclusive (Type letters R. S. L. 15, R. S. L. 25, etc.) shall comply with paragraph f of this section and the lead sheath shall be the same as called for in 0-600 volt class, having same diameter under the lead as 601-7,000 volt conductor. The electrical test on finished cables shall be the same as on braided cables.]

§550. Rubber-covered wire.

a. Conductors.

No individual conductor, whether solid or stranded, shall be less than No. 14 B. & S. gage in nominal size.

All conductors and the individual wires of stranded conductors shall be tinned.

b. Insulation.

Conductors shall be insulated for their entire length with a properly applied and properly vulcanized rubber compound.

The insulation must be of the nominal thickness given in the following table, the requirements of which vary according to the sizes of conductors and the maximum working pressure.

Table of Thickness of Rubber Insulation for Rubber-Covered Wires and Cables in 64th Inches.

Size of Conductor.	Type Letters.					
	RS.	RS-15.	RS-25.	RS-35.	RS-50.	RS-70.
	For Working Pressures Not Over					
	600 Volts.	1500 Volts.	2500 Volts.	3500 Volts.	5000 Volts.	7000 Volts.
American or B. & S. Gage—						
14 to 8	3	4	6	8	12	16
7 to 2	4	5	6	8	12	16
1 to 0000 C. M.	5	6	7	8	12	16
225,000 to 500,000	6	7	8	9	12	16
525,000 to 1,000,000	7	8	9	10	12	16
Over 1,000,000	8	9	10	11	14	18

c. Coverings.

All single conductor rubber-insulated wires and cables must have a covering of fibrous material applied directly to the surface of the insulating wall.

For any single conductor wire there shall be at least one braid for sizes from No. 14 to and including No. 8. For all single conductor cables larger than No. 8 there must be at least two braids or a tape and a braid.

For twin wires and twisted pair wires and for all multiple conductor cables there shall be a fibrous covering on each individual wire and in addition a braid enclosing the bunched conductors.

For certain special service conditions, one or more additional coverings of fibrous material or of lead are required.

Fibrous coverings may be either braid or tape, but tape shall not be used for the outer covering. All braids must be impregnated with a moisture-proof compound.

Lead coverings may be applied to single or multiple conductors. Lead covered multiple conductor cable with more than two conductors must, in all cases, have the conductors spirally laid.

In all cases, the individual conductors in lead covered cable must have a fibrous covering and, except for two conductor cables, with conductors parallel, there must be a fibrous covering over bunched conductors.

The thickness of lead covering shall, in all cases, be that specified for cables for the various sizes and forms.

[§551. Slow-burning waterproof wire. (Type letters, S. B. W.)

a. The insulation must consist of two coatings, one to be fireproof in character and the other to be weatherproof. The fireproof coating must be on the outside and must comprise about 6-10 of the total thickness of the wall. The completed covering must be of a thickness not less than that given in the following table:—

B. & S. Gage.	Thickness.
14 to 8	3-64 inch.
7 to 2	1-16 "
1 to 0000	5-64 "
Circular Mils.	
250,000 to 500,000	3-32 "
500,000 to 1,000,000	7-64 "
Over 1,000,000	1-8 "



Measurements of insulating wall are to be made at the thinnest portion.

b. The fireproof coating shall be of the same kind as that required for slow-burning wire, and must be finished with a hard, smooth surface.

c. The weatherproof coating shall consist of a stout braid, applied and treated as required for weatherproof wire.]

§ 551. Flexible cords—for pendant lamps and for portable use, including elevator lighting and control cables, and theatre stage and border-light cables.

a. These cords and cables must comply with the requirements of § 549 a and b of this chapter.

b. Conductors.

Each conductor must have a carrying capacity not less than that of a No. 18 B. & S. gauge wire and be built up from wires of approved sizes.

c. Insulation.

The insulation must consist of properly applied and properly vulcanized rubber compound complying with approved physical and chemical tests.

The insulation must be of the nominal thickness given in the following table:

	Thickness Inches
B. & S. Gage 18 and 16.....	1/32
B. & S. Gage, 14 to 8.....	3/64

For exception see Type PS below (§ 551f, of this chapter).

d. Coverings.

Each conductor must be covered with a tight, close wind of fine cotton or some other method must be employed to prevent a broken strand puncturing the insulation.

Cords of the several types must comply with the specifications of the following table with respect to their outer protective coverings, and the special rules indicated in the last column of the table.

Use.	Type	Trade name.	Braid on each conductor.	Reinforcement or filler.	Outer cover.	For additional rules see
Pendants—Dry places .....	C	Lamp cord .....	Glazed cotton or silk.....	.....	.....	551e
Pendants—Damp places .....	CB	Brewery cord .....	Cotton Wp. ....	.....	.....	551e
	CC	Canvasite cord .....	Cotton Wp. ....	.....	Cotton Wp.....	551e
Portable—Dry places .....	P	Reinforced cord .....	Cotton .....	Rubber jacket.	Glazed cotton or silk.....	551f
	PO	Parallel cord .....	Cotton .....	.....	Glazed cotton or silk.....	551f
	PS	Special reinf. cord .....	Cotton .....	Rubber jacket.	Glazed cotton or silk.....	551f
	CA	Armored cord .....	Cotton .....	.....	Armor.....	.....
	PA	Armored reinf. cord .....	Cotton .....	Rubber jacket.	Glazed cotton and armor.....	.....
Portable—Damp places .....	PWp	Reinforced cord Wp.....	Cotton .....	Rubber jacket.	Cotton Wp.....	.....
	PkWp	Packinhouse cord .....	Cotton .....	Filler .....	2 cotton both Wp.....	551g
	PAWp	Armored reinf. cord Wp.....	Cotton .....	Rubber jacket.	Cotton Wp. and armor.....	.....
Theatre stages .....	T	Stage cable .....	Cotton Wp. ....	Filler .....	2 cotton both Wp.....	551g&h
Theatre borders .....	B	Border light cable .....	Cotton Wp. ....	.....	2 cotton both Wp.....	551g&i
Elevator lighting and control.....	E	Elevator cable .....	Cotton .....	Rubber jacket.	1 or more cotton, both Wp.....	551g&j
				and or	3 cotton, outer one Wp.....	.....

e. (Types C, CB and CC.) In these classes are included flexible cords which under usual conditions hang freely in air.

f. (Types PO and PS.) These cords are for use only in offices, dwellings or similar places where not liable to rough usage.

For Type PO the conductors may be either laid parallel or twisted together.

Type PS cord may be made only with conductors of No. 18 or No. 16 B. & S. gage and may have insulation only one-sixty-fourth inch in thickness.

g. In the outer cover tape may be substituted for an inner braid.

h. (Type T.) Shall consist of not more than three conductors, each not exceeding No. 4 B. & S. gage, twisted together and with a filler. The insulation on each conductor of No. 6 to No. 4 B. & S. gage shall be one-sixteenth inch in thickness.

i. (Type B.) The conductors must be cabled.

j. (Type E.) Conductors for elevator lighting cables shall not be smaller than No. 14 and for elevator control cables not smaller than No. 16 B. & S. gage.

k. For portable heating apparatus (Type H.):

This cord is for use with all smoothing and sad irons and with other heating devices requiring over 250 watts.

1. Must comply with the requirements of § 549 a, b and § 551 b, of this chapter.

2. The covering may consist of a layer of rubber or other approved material at least one-sixty-fourth inch thick (the rubber is not subject to the tests specified for other rubber compounds), a braided covering of asbestos one-thirty-second inch thick and of approved quality, an outer braid one-sixty-fourth inch thick enclosing either all the conductors as a whole or each conductor separately.

§ 552. Slow-burning wire. (Type letters, S. B.)

a. The insulation must consist of 3 braids of cotton or other thread, all the interstices of which must be filled with the fireproofing compound or with material having equivalent resisting and insulating properties. The outer braid must be specially designed to withstand abrasion, and its surface must be finished smooth and hard. The compound covering must be of a thickness not less than given in the table in § 551a of this chapter.]

3. Other types of covering must be submitted for special examination and approval before being used.

§ 552. Fixture wire.

a. Fixtures may be wired with approved flexible cord or approved rubber-covered wire.

In wiring certain fixtures (see §§ 430d and 435d of this chapter) conductors having approved slow-burning or other heat-resisting coverings must be used.

b. Other wires for use in fixtures (Types F-64 and F-32) must comply with the requirements of § 549 a and b of this chapter, and with the requirements of paragraphs c to e inclusive of this section.

c. Conductors.

May be either solid or stranded in an approved manner and must not be smaller than No. 18 B. & S. gage.

If stranded conductor is used each conductor must be covered with a tight close wind of fine cotton or some other method must be used to prevent a broken strand puncturing the insulation. Solid conductors must be tinned.

d. Insulation.

The insulation must consist of properly applied and properly vulcanized rubber compound complying with approved physical and chemical tests.

The thickness of insulation shall not be less than one-sixty-fourth inch for No. 18 B. & S. gage wire and not less than one-thirty-second inch for No. 16 B. & S. gage.

e. Coverings.

Must be a braid which if of cotton must be at least one-sixty-fourth inch in thickness.

§ 553. Weatherproof wire. (Type letters, W. P.)

a. The insulating covering shall consist of at least 3 braids, all of which must be thoroughly saturated with a dense moisture-proof compound, applied in such a manner as to drive any atmospheric moisture from the cotton braiding, thereby securing a covering to a great degree waterproof and of high insulating power. This compound must not drip at 160 degrees Fahrenheit (71 degrees Centigrade). The thickness of insulation must not be less than that given in the table in § 551a of this chapter, and the outer surface must be thoroughly slicked down.]

§ 553. Conduit wire.

For conduit work wires of either Types RS (No. 14 to No. 8, incl.), RD, RSL or RDL must be used.

§ 554. Flexible cords.

a. Cords for pendant lamps and for portable use, including elevator, lighting and control cables, and theater stage and border cable, must be made of copper conductors, each built up from wires not larger than No. 26, or smaller than No. 36 B. & S. gage. Each conductor must have a carrying capacity not less than that of a No. 18 B. & S. gage wire, and must be covered by an approved insulation and protected from mechanical injury according to the specifications of paragraph c of this section, for the several types of cord or cable. Each conductor must be covered with a tight, close wind of fine cotton, or some other approved method must be employed to prevent a broken strand puncturing the insulation, and must comply with the requirements of § 549 of this chapter.

b. The insulating covering on each conductor must be of a rubber compound, homogeneous in character, and must comply with § 550, c and g of this chapter and must have a thickness of wall not less than that given in the following table:—

B. & S. gage.	Thickness in inches.
18 and 16.....	1-32
14 .....	3-64

For exception for special reinforced cord (Type letters P. S.) see paragraph f of this section.

The completed cord shall be subject to a 1 minute test between conductors of 1,000 volts for 1-64 inch insulation, 2,000 volts for 1-32 inch insulation and 2,500 volts for 3-64 inch insulation.

The insulating coverings in the above tests shall be sufficient to resist puncture or breakdown. The source of electro-motive force shall be the same as that specified in § 550 c of this chapter.]

[c. Cords of the several types must comply with the specifications of the following table with respect to their outer protective coverings and must comply with the special rules indicated in the last column of the table.

Use.	Type letter.	Trade name.	Braid on each conductor.	Reinforcement or filler.	Outer cover.	For additional rules in this chapter see
Pendants—dry places .....	C	Lamp cord .....	Glazed cotton or silk.....	.....	.....	§ 554d
Pendants—damp places .....	CB	Brewery cord .....	Cotton Wp. ....	.....	.....	§ 554d
Portable—dry places .....	CC	Canvasite cord .....	Cotton Wp. ....	.....	Cotton Wp.....	§ 554d
	P	Reinforced cord .....	Cotton .....	Rubber jacket.	Glazed cotton or silk.....	§ 554e
	PO	Parallel cord .....	Cotton .....	.....	Glazed cotton or silk.....	§ 554e
	PS	Special reinf. cord .....	Cotton .....	Rubber jacket.	Glazed cotton or silk.....	§ 554f
	CA	Armored cord .....	Cotton .....	.....	Armor.....	§ 554g
	PA	Armored reinf. cord .....	Cotton .....	Rubber jacket.	Glazed cotton and armor.....	§ 554g
Portable—damp places .....	PWp	Reinforced cord Wp.....	Cotton .....	Rubber jacket.	Cotton Wp.....	.....
	PkWp	Packinhouse cord .....	Cotton .....	Filler .....	2 Cotton, both Wp.....	§ 554h
	PAWp	Armored reinf. cord Wp.....	Cotton .....	Rubber jacket.	Cotton Wp. and armor.....	§ 554g
Theatre stages .....	T	Stage cable .....	Cotton Wp. ....	Filler .....	2 Cotton, both Wp.....	§ 554i
Theatre borders .....	B	Border light cable .....	Cotton Wp. ....	.....	2 Cotton, both Wp.....	§ 554j
Elevator lighting and control.....	E	Elevator cable .....	Cotton .....	Rubber jacket.	1 or more cotton, both Wp.....	§ 554k
				and or	3 Cotton, outer one Wp.....	.....

d. (Type letters C, CB and CC.) In these classes are to be included all flexible cords, which under usual conditions hang freely, and which are not likely to be moved sufficiently to come in contact with surrounding objects.

It should be noted that pendant lamps provided with long cords so that they can be carried about or hung over nails, or on machinery, etc. are not included in this class, even though they are usually allowed to hang freely in air.

e. (Type letters PO.) These cords are for use only in offices, dwellings or similar places, where cord is not liable to rough usage and where appearance is an essential feature.

The conductors may be either laid parallel or twisted together.

f. (Type letters PS.) These cords are for use only in offices, dwellings or similar places, where cord is not liable to rough usage and where appearance is an essential feature.

These cords may be made only with conductors of No. 18 or No. 16 B. & S. gage and may have the insulating covering on each conductor not less than 1-64 inch in thickness.

g. (Type letters CA, PA, PAWp.) For the construction of the armor see § 557 of this chapter.

h. (Type letters PkWp.) In the outer cover tape may be substituted for the inner braid.

i. (Type letter T.) Theatre cables shall consist of not more than 3 conductors, each of a capacity not exceeding No. 4 B. & S. gage. These conductors must be twisted together and a filler of approved material must be used to make the cable round and to act as a cushion.

In the outer covering tape may be substituted for the inner braid.

The insulating covering on each conductor of No. 6 to No. 4 B. & S. gage must be not less than 1-16 inch in thickness.

The completed cable must be of such a flexible nature as to be readily handled and, when laid on the floor, must align itself to the floor level.

i. (Type letter B.) In the outer cover tape may be substituted for the inner braid.

The conductors must be cabled together.

k. (Type letter E.) Conductors for elevator lighting cables shall not be smaller than No. 14 B. & S. gage and for elevator control cables not smaller than No. 16 B. & S. gage.

In the outer cover tape may be substituted for one of the inner braids.

L. For portable heating apparatus.—(Type letter H.) Applies to all smoothing and sad irons and to any other heating device requiring over 250 watts. The flexible conductors must be made up as follows:

1. Conductors must comply with paragraph a of this section, or may be of braided



copper. If braided, each wire to be not larger than No. 30 or smaller than No. 36 B. & S. gage, except for conductors having a greater carrying capacity than No. 12 B. & S. gage, when each wire may be as large as No. 28 B. & S. gage.

2. An insulating covering of rubber or other approved material not less than 1-64 inch in thickness.

3. A braided covering not less than 1-32 inch thick, composed of long fibre asbestos and having not over 10 per cent. of carbon by weight.

4. An outer reinforcing covering not less than 1-64 inch thick, especially designed to resist abrasion, must enclose either all the conductors as a whole or each conductor separately.

5. The completed cord shall be subjected to a 1 minute test between conductors of 1,500 volts, and must resist puncture or breakdown when so tested, the source of electro-motive force to be the same as that specified in § 550 of this chapter.

g. Elevator lighting and control cables (Type letter E).—Must comply with the requirements for theatre cable as regards insulation proper and the construction and covering of the individual conductors, except that none of these conductors shall be smaller than No. 14 B. & S. gage for elevator lighting cables, or No. 16 for elevator control cables. The outer covering shall consist either of 3 braids or of an extra layer of rubber and one or more outer braids. All braids must be properly treated with a preservative compound.]

§554. Armored cable and cord.

a. The armored cable or cord must comply with approved tests for flexibility and for resistance to withdrawal of the conductors from the armor. The armor must comply with approved tests for weight, tensile strength and elongation.

b. Strips if used in forming the armor must be of approved thickness and if of steel must be protected against corrosion in an approved manner.

c. The conductors must comply with the requirements for rubber-covered wires or cords of the specified types and construction.

d. The cable or cord must have a distinctive marker its entire length.

§555. Fixture wire.

a. Fixtures may be wired with approved flexible cord (see § 554, a to c, of this chapter) or with approved rubber covered wire No. 14 B. & S. gage, or larger (see § 550 of this chapter).

In wiring certain designs of show-case fixtures, ceiling bulls-eyes and similar appliances in which the wiring is exposed to temperatures in excess of 120 degrees Fahrenheit (49 degrees Centigrade) from the heat of the lamps, slow-burning wire must be used (see § 552 of this chapter). All such forms of fixtures must be submitted for examination, test and approval before being introduced for use.

For other wires for use in fixtures the following rules apply (Type letters F-64 and F-32):

b. Copper may be made of solid or stranded conductors, with no strands smaller than No. 30 B. & S. gage, and must have a carrying capacity not less than that of a No. 18 B. & S. gage wire.

c. Solid conductors must be thoroughly tinned. If a stranded conductor is used, it must be covered by a tight, close wind of fine cotton, or some other approved method must be employed to prevent a broken strand puncturing the insulation, and must comply with the requirements of § 549 of this chapter.

d. The insulation on each conductor must consist of a rubber compound, homogeneous in character, adhering to the conductor or to the separator, if one is used, and not less than 1-64 inch in thickness for No. 18 B. & S. gage wire and not less than 1-32 inch for No. 16 B. & S. gage.

e. The insulation must be protected with a covering or braid at least 1-64 inch in thickness, sufficiently tenacious to withstand the abrasion of being pulled into the fixture, and sufficiently elastic to permit the wire to be bent around a cylinder of twice the diameter of the wire without injury to the braid.

f. Fixture wire must successfully withstand the tests specified in § 550, c and g, of this chapter.]

§555. Slow-burning weatherproof wire.

a. The insulation must consist of two coatings, one to be fireproof and the other weather-proof. The fireproof coating must be on the outside and must comprise about six-tenths of the total thickness of the wall.

The thickness of the completed covering shall be not less than that specified for rubber insulation of 0-600 volt rubber-covered wires. (See §550b of this chapter.)

b. Must comply with the requirements of §549 a and b of this chapter.

§556. Conduit wire. (Type letters R. D.)

a. Single wire for conduits must comply with the requirements of § 550 of this chapter (except that tape may be substituted for braid), and in addition there must be a second outer fibrous covering at least 1-32 inch in thickness for wires larger than No. 10 B. & S. gage and at least 1-64 inch in thickness for wires No. 10 B. & S. gage or less in size; this fibrous covering to be sufficiently tenacious to withstand the abrasion of being hauled through the metal conduit.

b. For twin or duplex wires in conduit, each conductor must comply with the requirements of § 550 of this chapter (except that tape may be substituted for braid), and in addition there must be a second outer fibrous covering, at least 1-32 of an inch in thickness for wires larger than No. 10 B. & S. gage and at least 1-64 of an inch in thickness for wires No. 10 B. & S. gage or less in size; this fibrous covering to be sufficiently tenacious to withstand the abrasion of being hauled through the metal conduit.

c. For concentric wire, the inner conductor must comply with the requirements of § 550 of this chapter (except that tape may be substituted for braid), and there must be outside the outer conductor the same insulation as on the inner, the whole to be covered with a substantial braid, which must be at least 1-32 of an inch in thickness and sufficiently tenacious to withstand the abrasion of being hauled through the metal conduit.

d. The braids or tapes called for in paragraphs a, b and c of this section must be properly saturated with a preservative compound.]

§556. Slow-burning wire.

a. The insulation must consist of three braids of cotton or other thread, all the interstices of which must be filled with the fireproofing compound or with material having equivalent fire resisting and insulating properties. The outer braid must be specially designed to withstand abrasion, and its surface must be finished smooth and hard.

The thickness of the completed covering shall be not less than that specified for the rubber insulation of 0-600 volt rubber-covered wires. (See §550b of this chapter.)

b. Must comply with requirements of §549 a and b of this chapter.

c. Slow-burning wires especially designed and approved for use in fixtures (see §552 of this chapter) need not necessarily comply with the requirements of paragraphs a and b of this section.

§557. Armored cable and cord. (Type letters AC, CA, PA and PAWp.)

a. The armored cable or cord must be so flexible that it may be bent in a curve, the inner edge of which has a radius equal to 4 times the outside diameter of the armor, without injury to the cable or cord contained therein, and without opening up the armor at any point sufficiently to expose the cable or cord.

The armored cable or cord must be of such design that after a 3-foot sample has been subjected to a tension of 100 pounds for 1 minute the armor will not be permanently elongated more than 3 inches, and after a 3-foot sample with conductor removed has been subjected to a tension of 150 pounds for 1 minute the armor will not be opened up at any point.

Strips, if used in forming the armor, must have a thickness at least as great as is given in the following table. For armors of other forms an equivalent wall construction must be provided.

Thickness of strip	Type letter of wire.	Size of conductors B and S gage.			Test voltage.
		Single cond. cable.	Double cond. cable.	Triple cond. cable.	
Armored cord—					
.025.....	C	.....	18 16 14	.....	500
.025.....	P or PWp	.....	18 16	.....	
.034.....	P or PWp	.....	14	.....	

Thickness of strip.	Type letter of wire.	Size of conductors B and S gage.			Test voltage.
		Single cond. cable.	Double cond. cable.	Triple cond. cable.	
Armored cable—					
.025.....	RD	14, 12, 10, 8	.....	.....	1000
	RSL	14, 12, 10, 8	.....	.....	
.034.....	RD	6, 4, 2	14, 12, 10	14, 12, 10	1000
	RSL	6, 4	14, 12	14	
.040.....	RD	1	8, 6, 4	8, 6	1000
	RSL	2, 1	10, 8, 6	12, 10, 8	

The weight of the single strip armor, if of steel, must be not less than 87 per cent. of the weight of a solid-walled steel tube of the same internal diameter and of a wall thickness equal to twice the thickness of the strip. The weight of double strip armor must be at least 10 per cent. greater than that of single strip. For other types of armor an equivalent construction must be provided.

b. If of steel, the metal of armor must be thoroughly galvanized or coated with an approved rust preventive.

The internal diameter of the armor must be such that it will not be materially embedded in the cable or cord coverings. It must not be possible to withdraw the cable from the armor of a 15-foot sample of armored cable by the application of a force of 90 pounds, or from the armor of a 10-foot sample of armored cord by the application of a force of 25 pounds. Interior surfaces of the armor must be free from burrs or sharp edges which might cause abrasion of the cable or cord coverings.

c. The cable in the armor must have an insulating covering as required by § 550j or § 556 of this chapter, excepting that the lead covering may be only 1-32 inch thick. If multiple conductor cable (not lead covered) is used the conductors must be twisted together. The cord in the armor must have an insulating covering as required by § 554 of this chapter.

d. Every coil of completed armored cable or cord must be tested by the application of an alternating current voltage, derived from apparatus of not less than 1,500 watts capacity, the test voltages to be those given in the table of paragraph a of this section. Tests to be made between each conductor and every conductor comprising the cable or cord and between the several conductors and the armor.

e. There must be a distinctive marker the entire length, so that the armored cable or cord may be readily identified in the field. Coils of armored cable or cord must also be plainly tagged or marked as follows:

1. The maximum voltage at which the wire is designed to be used.
2. The words "National Electrical Code Standard."
3. Name or trade mark of the manufacturing company.
4. Month and year when manufactured.
5. The proper type letters for the particular style of material as given for each type in §554 and §557 of this chapter.]

§557. Weatherproof wire.

a. The insulating covering shall consist of at least three braids, all of which must be thoroughly saturated with a dense moisture-proof compound.

The thickness of the completed covering shall be not less than that specified for the rubber insulation of 0-600 volt rubber-covered wires. (See §550b of this chapter.)

b. Must comply with requirements of §549 a and b of this chapter.

§558. Metal conduits.

a. Each length of conduit must have the maker's name or initials stamped in the metal or attached thereto in a satisfactory manner, so that inspectors can readily see the same.

1. Rigid conduit.

b. The tube used in the manufacture of rigid conduit must be of mild steel; and must be of sufficiently true, circular section to admit of cutting true, clean threads; it must be very closely the same in wall thickness at all points. Welds must be thoroughly well made.

c. The tube must be thoroughly cleaned to remove all scale and rust from both the inside and the outside surfaces by some process, mechanical or otherwise, which will permit the protecting coating to take a smooth finish and which will not reduce the weight of the tube sufficiently to cause the finished rigid conduit to weigh less than is given in paragraph i of this section. The surface of the tube intended for enameled conduit must be thoroughly washed or otherwise treated to remove all acid left by the pickling solutions, if they are used as a part of the cleaning process.

d. All surfaces of the tube must be protected against corrosion by one of the methods prescribed in sub-divisions 2 and 3 of this section or by some other approved methods.

2. Enameled conduit.

e. The enamel coating on either the inside or the outside surface of the finished conduit must not soften at ordinary temperatures; it must have an even and smooth appearance and must be of a uniform quality at all points of the length of the tube. It must be of sufficient weight and toughness to resist smashing or flaking and must be of sufficient elasticity to prevent its cracking or flaking at any time up to 1 year from month of manufacture when 1/2-inch conduit is bent in a curve, the inner edge of which has a radius of 3 1/2 inches. The enamel coating must not be seriously affected by soaking at 70 degrees Fahrenheit for 24 hours in any of the following aqueous solutions:

1. Sulphuric acid of 1.3 specific gravity containing 40 per cent. by weight of anhydrous sulphuric acid.
2. Commercial strong hydrochloric acid containing 20 per cent. by weight of anhydrous hydrochloric acid.
3. Acetic acid containing 20 per cent. by weight of anhydrous acetic acid.
4. Saturated solution of carbonate of soda, containing 20 per cent. by weight of anhydrous carbonate of soda.

3. Conduit with metallic coatings.

f. The metallic coating on either the inside or the outside surface of the finished conduit must not soften at ordinary temperatures, and must be of uniform quality at all points of the length of the tube. It must be of sufficient elasticity to prevent its cracking or flaking at any time up to one year from the month of manufacture when 1/2-inch conduit is bent in a curve, the inner edge of which has a radius of 3 1/2 inches.

All metallic protective coatings on either interior or exterior surfaces must be of an approved weight and quality to afford protection against corrosion. If the interior surface is not given a metallic protective coating it must be coated with an approved enamel.

g. Elbows, bends and similar fittings must be made of full-weight material, such as is specified for the conduit proper, and must be treated, coated, threaded, etc., in every way corresponding to the specifications for conduit so far as they apply.

h. Threads upon conduits, couplings, elbows and bends must be full and clean cut. Their pitch and form must conform to the Briggs' standard for pipe threads. The taper of threads on conduit must not exceed 1/4 inch per foot. The perfect thread must be tapered for its entire length. Couplings must be tapped straight. If threads are cut after the protective coatings are applied they must be treated to prevent corrosion taking place before the conduit is actually installed. The number of threads and the length of the threaded portion must be approximately in accordance with the following table:

Electrical trade size, inches.	Number of threads per inch.	Length of perfect thread, inches.	Total length of thread, inches.
1-4 .....	18	0.29	0.57
3-8 .....	18	0.30	0.57
1-2 .....	14	0.39	0.75
3-4 .....	14	0.40	0.76



Electrical trade size, inches.	Number of threads per inch.	Length of perfect thread, inches.	Total length of thread, inches.
1	11 1-2	0.51	0.94
1 1-4	11 1-2	0.53	0.97
1 1-2	11 1-2	0.55	0.98
2	11 1-2	0.58	1.12
2 1-2	8	0.89	1.51
3	8	0.95	1.57
3 1-2	8	1.00	1.62
4	8	1.05	1.67
4 1-2	8	1.10	1.72
5	8	1.16	1.78
6	8	1.26	1.89

i. The finished conduit as shipped must be in 10-foot lengths, with each end reamed and threaded. For each length at least 1 coupling must be furnished. The finished conduit with coupling must not weigh less than is given in the following table. All finished conduit must be inspected visually, both inside and out, for poor coatings, hard scale or other similar defects. It must have an approved interior coating of a character and appearance which will readily distinguish it from ordinary commercial pipe commonly used for other than electrical purposes.

Electrical trade size, inches.	Minimum weight of finished conduit ten, 10 foot lengths with couplings.
1-4	38.5 pounds
3-8	51.5 pounds
1-2	79.0 pounds
3-4	105 pounds
1	153 pounds
1 1-4	201 pounds
1 1-2	249 pounds
2	334 pounds
2 1-2	527 pounds
3	690 pounds
3 1-2	831 pounds
4	982 pounds
4 1-2	1150 pounds
5	1344 pounds
6	1770 pounds

#### 4. Flexible conduit.

j. Flexible conduit must be so flexible that the conduit may be bent in a curve, the inner edge of which has a radius equal to that specified in the following table, without opening up the tube at any point.

k. Flexible conduit must be of such design that after a 3-foot sample has been subjected to a tension of 200 lbs. for 1 minute, the conduit will not be opened up at any point.

l. For steel conduits the internal diameter, the thickness of the strip and the weight of the finished conduit must be not less than the values given in the following table. For flexible conduit of other than the strip type an equivalent construction must be provided.

Electrical trade size, inches.	Internal diameter, inches.	Thickness of strip, inches.	Weight in pounds per 100 feet.		Radius of curvature, inches.
			Single strip.	Double strip.	
5-16	5-16	.025	17 3-4	20 1-2	2 1-4
3-8	3-8	.034	29	33 1-2	2 1-2
1-2	5-8	.040	54	62	3 1-2
3-4	13-16	.040	68	78 1-2	4 1-2
1	1	.055	108	129 1-2	5
1 1-4	1 1-4	.055	132	158	5 1-2
1 1-2	1 1-2	.060	171	205	6
2	2	.060	224	269	8
2 1-2	2 1-2	.060	277	332	10 1-2

m. If of steel, the metal of the flexible conduit must be thoroughly galvanized or coated with an approved rust preventive. Interior surfaces of the conduit must be free from burrs or sharp edges which might cause abrasion of the wire coverings.

n. Flexible conduit must have a distinctive marking its entire length so that it may be readily identified in the field. Coils must also be plainly tagged or marked with the name or trade mark of the manufacturing company.]

#### §558. Metal conduits.

##### 1. Rigid conduit.

a. Each length of conduit must have the maker's name or initials stamped in the metal or attached thereto in a satisfactory manner, so that inspectors can readily see the same.

##### Rigid.

b. The tube used in the manufacture of the conduit must be of mild steel; and must be of sufficiently true, circular section to admit of cutting true, clean threads; it must be very closely the same in wall thickness at all points. Welds must be thoroughly well made.

c. The tube must be thoroughly cleaned to remove all scale and rust from both inside and the outside surfaces by some process, mechanical or otherwise, which will permit the protecting coating to take a smooth finish and which will not reduce the weight of the tube sufficiently to cause the finished conduit to weigh less than is given in §558i, of this chapter.

d. All surfaces of the tube must be protected against corrosion by an approved method.

e. Elbows, bends and similar fittings must be made of full-weight material, such as is specified for the conduit proper, and must be treated, coated, threaded, etc., in every way corresponding to the specifications for conduit so far as they apply.

f. Threads upon conduits, couplings, elbows and bends must be full and clean cut. Their pitch and form must conform to the Briggs' standard for pipe threads.

The taper of threads on conduit must not exceed three-quarter inches per foot. The perfect thread must be tapered for its entire length. Couplings must be tapped straight. If threads are cut after the protective coatings are applied they must be treated to prevent corrosion taking place before the conduit is actually installed.

g. The finished conduit as shipped must be in ten-foot lengths, with each end reamed and threaded. For each length at least one coupling must be furnished. The finished conduit with coupling must not weigh less than is given in the following table. All finished conduit must be inspected visually, both inside and out, for poor coatings, hard scale or other similar defects. It must have an approved interior coating of a character and appearance which will readily distinguish it from ordinary commercial pipe commonly used for other than electrical purposes.

Electrical Trade Size.	Minimum Weight of 10-foot Lengths of Finished Conduit with Couplings.
Inches.	Pounds.
1/4	38.5
3/8	51.5
1/2	79.0
3/4	105
1	153

Electrical Trade Size.	Minimum Weight of 10-foot Lengths of Finished Conduit with Couplings.
1 1/4	201
1 1/2	249
2	334
2 1/2	527
3	690
3 1/2	831
4	982
4 1/2	1150
5	1344
6	1770

#### 2. Flexible conduit.

h. Must be so flexible that the conduit may be bent in a curve, the inner edge of which has a radius equal to that specified in the following table, without opening up the tube at any point.

Electrical Trade Size, Inches.	Internal Diameter, Inches.	Thickness of Strip, Inches.	Weight in Pounds Per 100 Feet.		Radius of Curvatures, Inches.
			Single Strip.	Double Strip.	
5/16	5/16	.025	17 3/4	20 1/2	2 1/4
3/8	3/8	.034	29	33 1/2	2 1/2
1/2	5/8	.040	54	62	3 1/2
3/4	13/16	.040	68	78 1/2	4 1/2
1	1	.055	108	129 1/2	5
1 1/4	1 1/4	.055	132	158	5 1/2
1 1/2	1 1/2	.060	171	205	6
2	2	.060	224	269	8
2 1/2	2 1/2	.060	277	332	10 1/2

i. Must be of such design that after a 3-foot sample has been subjected to a tension of 200 lbs. for one minute, the conduit will not be opened up at any point.

j. For steel conduits the internal diameter, the thickness of the strip and the weight of the finished conduit must be not less than the values given in the following table. For flexible conduit of other than the strip type an equivalent construction must be provided.

k. If of steel the metal must be thoroughly galvanized or coated with an approved rust preventive. Interior surfaces of the conduit must be free from burrs or sharp edges which might cause abrasion of the wire coverings.

l. Must have a distinctive marking its entire length so that the flexible conduit may be readily identified in the field. Coils must also be plainly tagged or marked with the name or trade mark of the manufacturing company.

#### §559. Outlet, junction and flush switch boxes.

a. Boxes must be of pressed steel having wall thickness of not less than .078 inch (No. 14 U. S. metal gage), or of cast metal having wall thickness not less than 1-8 inch. Junction boxes of larger sizes must comply with requirements of § 570 of this chapter, but must in all cases be of metal.

b. Boxes must be well galvanized, enameled or otherwise properly coated, inside and out, to prevent oxidation.

c. Boxes must be so made that all openings not in use will be effectively closed by metal which will afford protection substantially equivalent to the walls of the box. [Fittings which are designed for bringing conductors from metal conduits to exposed wiring must be provided with non-absorptive, non-combustible, insulating bushings, which, except with flexible cord, must separately insulate each conductor.]

Fittings which are designed for bringing conductors other than flexible cords from metal conduits to exposed wiring must be provided with non-absorptive, non-combustible insulating bushings which must separately insulate each conductor. For flexible cords, such fittings, including covers of outlet boxes, must either be provided with approved bushings or have smooth, well-rounded surfaces for the cord to bear upon.

d. Boxes must be plainly marked, where the marking may readily be seen when installed, with the name or trade mark of the manufacturer.

e. Boxes must, in case of combination gas and electric outlets, be so arranged that connection with gas pipe at outlet may be made by means of an approved device. Fixture studs, where not a part of the box, must be made of malleable iron or other approved material. Boxes must be arranged to secure in position the conduit or flexible tubing protecting the wire.

f. Switch and outlet boxes must be so arranged that they can be securely fastened in place independently of the support afforded by the conduit piping, except that when entirely exposed, approved boxes, which are threaded so as to be firmly supported by screwing on to the conduit, may be used.

g. Switch and receptacle boxes must completely enclose the switch or receptacle on sides and back, and must provide a thoroughly substantial support for it. The retaining screws for the box must not be used to secure the switch in position. Boxes for floor outlets shall be designed to completely enclose the receptacle and attachment plugs, if any, to protect them from mechanical injury and to exclude moisture.

h. Covers for outlet boxes if made of metal must be equal in thickness to that specified for the walls of the box, or must be of metal lined with an insulating material not less than 1-32 inch in thickness, firmly and permanently secured to the metal. Covers may also be made of porcelain or other approved material, provided they are of such form and thickness as to afford suitable protection and strength.

#### §560. Metal moulding.

##### a.

b. The installation of wooden moulding is prohibited.

c. Each length of metal moulding must have maker's name or trade mark stamped in the metal, or in some manner permanently attached thereto, in order that it may be readily identified in the field.

d. Metal moulding must be constructed of iron or steel with backing at least .050 inch in thickness, and with capping not less than .040 inch in thickness, and so constructed that when in place the raceway will be entirely closed; must be thoroughly galvanized or coated with an approved rust preventative both inside and out to prevent oxidation.

e. Elbows, couplings and all other similar fittings must be constructed of at least the same thickness and quality of metal as the moulding itself, and so designed that they will both electrically and mechanically secure the different sections together and maintain the continuity of the raceway. The interior surfaces must be free from burrs or sharp corners which might cause abrasion of the wire coverings.

f. Metal moulding must at all outlets be so arranged that the conductors cannot come in contact with the edges of the metal, either of capping or backing. Specially designed fittings which will interpose substantial barriers between conductors and the edges of metal are recommended.

g. When backing is secured in position by screws or bolts from the inside of the raceway, depressions must be provided to render the heads of the fastenings flush with the moulding.

h. Metal mouldings must be used for exposed work only and must be so constructed as to form an open raceway to be closed by the capping or cover after the wires are laid in.

#### §561. Tubes and bushings.

a. Tubes and bushings must be made straight and free from checks or rough projections, with ends smooth and rounded to facilitate the drawing in of the wire and prevent abrasion of its covering.

b. Tubes and bushings must be made of approved non-combustible, non-absorptive insulating material, [which when broken and submerged for 100 hours in pure water at 70 degrees Fahrenheit (21 degrees Centigrade), will not absorb over 1/2 of one per cent. of its weight.]

c. Tubes and bushings must have the name, initials or trade-mark of the manufacturer stamped in the ware.



d. Dimensions of walls and heads of tubes and bushings must be at least as great as those given in the following table:

Diameter of hole.	External diameter.	Thickness of wall.	External diameter of head.	Length of head.
5-16 in.....	9-16 in.	1-8 in.	13-16 in.	1-2 in.
3-8 .....	11-16	5-32	15-16	1-2
1-2 .....	13-16	5-32	1 3-16	1-2
5-8 .....	15-16	5-32	1 5-16	1-2
3-4 .....	1 3-16	7-32	1 11-16	5-8
1 .....	1 7-16	7-32	1 15-16	5-8
1 1-4 .....	1 13-16	9-32	2 5-16	5-8
1 1-2 .....	2 3-16	11-32	2 11-16	3-4
1 3-4 .....	2 9-16	13-32	3 1-16	3-4
2 .....	2 15-16	15-32	3 7-16	3-4
2 1-4 .....	3 5-16	17-32	3 13-16	1
2 1-2 .....	3 11-16	19-32	4 3-16	1

An allowance of 1-64 inch for variation in manufacturing will be permitted, except in the thickness of the wall.

§562. Cleats.

a. Cleats must hold the wire firmly in place without injury to its covering.  
b. Bearing points on the surface of cleats must be made by ridges or rings about the holes for supporting screws, in order to avoid cracking and breaking when screwed tight.

c. Cleats must be made of approved non-combustible, non-absorptive insulating material [which, when broken and submerged for 100 hours in pure water at 70 degrees Fahrenheit (21 degrees Centigrade), will not absorb over 1/2 of one per cent. of its weight.

d. Cleats must have the name, initials or trade-mark of the manufacturer stamped in the ware.]

e. Cleats must conform to the spacings given in the following table:  
Voltage, 0-300. Distance from wire to surface, 1/2 inch. Distance between wires, 2 1/2 inches.

§563. Flexible tubing.

a. Flexible tubing must have a sufficiently smooth interior surface to allow the ready introduction of the wire.

b. Flexible tubing must be constructed of or treated with materials which will serve as moisture repellents.

c. The tube must be so designed that it will withstand all the abrasion likely to be met with in practice.

d. The linings, if any, must not be removable in lengths of over 3 feet.

e. [The 1/4-inch tube must be so flexible that it will not crack or break when bent in a circle with 6-inch radius at 50 degrees Fahrenheit (10 degrees Centigrade), and the covering must be thoroughly saturated with a dense moisture-proof compound which will not slide at 150 degrees Fahrenheit (65 degrees Centigrade). Other sizes must be as well made.

f. Flexible tubing must not convey fire on the application of a flame from Bunsen burner to the exterior of the tube when held in a vertical position.

g. Flexible tubing must be sufficiently tough and tenacious to withstand severe tension without injury; the interior diameter must not be diminished or the tube opened up at any point by the application of a reasonable stretching force.]

[h.] Flexible tubing must not close to prevent the insertion of the wire after the tube has been kinked or flattened and straightened out.

f. [i.] Flexible tubing must have a distinctive marking the entire length of the tube, so that the tubing may be readily identified in the field.

§564. Knobs.

a. Split knobs must be constructed in 2 parts, a base and a cap, arranged to hold the wire firmly in place without injury to its covering. Sharp edges must be avoided. Solid knobs must be constructed with smooth groove, to contain wire.

b. Bearing points on the surface of knobs must be made by a ring or by ridges on the outside edge of the base, to provide for stability. At least 1/4 inch surface separation must be maintained between the supporting screw or nail and the conductor, and the knob must be so constructed that the supporting screw or nail cannot come in contact with the conductor. For wires larger than No. 4 B. & S. gage, split knobs (or single wire cleats) must be so constructed as to require the use of 2 supporting screws.

c. Knobs must be made of approved non-combustible, non-absorptive insulating material, [which, when broken, and submerged for 100 hours in pure water at 70 degrees Fahrenheit (21 degrees Centigrade) will not absorb over 1/2 of 1 per cent. of its weight.

d. Knobs must have the name, initials or trade-mark of the manufacturer stamped in the ware.]

e. Knobs must be so constructed as to separate the wire at least 1 inch from the surface wired over [and also conform to the following minimum dimensions:

Sizes of wire, inclusive.	Size of base, inches.			Solid knobs, groove, inches.		Split knobs, thickness of cap, inches from top of wire groove.
	Circular knobs, diameter.	Square knobs or single wire cleats, Width.	Length.	Depth.	Diameter.	
14-10 .....	1 1-8	3-4	1 3-4	3-16	1-4	3-8
8-4 .....	1 1-2	7-8	2	5-16	5-16	5-8
2-00 .....	2	1	2 1-4	7-16	5-8	5-8
000-300,000 c. m.....	2 1-2	1 1-8	2 3-4	7-16	25-32	7-8
400,000-1,000,000 c. m.	3	1 3-8	3 3-4	5-8	1 1-4	1]

§565. Switches.

1. General Rules.

a. Switches must, when used for service switches, indicate, on inspection, whether the current be "on" or "off."

b. [Switches must, for constant-current systems, close the main circuit and disconnect the branch wires when turned "off"; must be so constructed that they shall be automatic in action, not stopping between points when started and must prevent an arc between the points under all circumstances. They must indicate whether the current be "on" or "off."]

2. Knife switches.

c. Knife switches must be mounted on non-combustible, non-absorptive, insulating bases. Other materials than slate, marble or porcelain must be submitted for special examination before being used. Bases with an area of over 25 square inches must have at least 4 supporting screws. Holes for the supporting screws must be so located or countersunk that there will be at least 1/2 inch space measured over the surface, between the head of the screw or washer and the nearest live metal part, and in all cases when between parts of opposite polarity must be countersunk.

d. Pieces carrying the contact jaws and hinge clips must be secured to the base by at least 2 screws, or else made with a square shoulder, or provided with dowel pins, to prevent possible turnings, and the nuts or screw-heads on the under side of the base must be countersunk not less than 1/4 inch and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).

e. Hinges of knife switches must not be used to carry current unless they are equipped with spring washers, held by lock-nuts or pins, or their equivalent, so arranged that a firm and secure connection will be maintained at all positions of the switch blades.

f. All switches must have ample metal for stiffness and to prevent rise in temperature of any part of over 50 degrees Fahrenheit (28 degrees Centigrade) at full load, the contacts being arranged so that a thoroughly good bearing at every point is obtained with contact surfaces advised for pure copper blades of about 1 square inch for each 75 amperes; the whole device must be mechanically well made throughout.

g. All cross-bars less than 3 inches in length must be made of insulating material. Bars of 3 inches and over, which are made of metal to insure greater mechanical strength, must be sufficiently separated from the jaws of the switch to prevent arcs following from the contacts to the bar on the opening of the switch under any circumstances. Metal bars should preferably be covered with insulating material. To

prevent possible turning or twisting the cross-bar must be secured to each blade by 2 screws, or the joints made with square shoulders or provided with dowel-pins.

h. Switches for currents of over 30 amperes must be equipped with lugs, firmly screwed or bolted to the switch, and into which the conducting wires shall be soldered. [For the smaller sized switches simple clamps can be employed, provided they are heavy enough to stand considerable hard usage.] For switches designed for currents of 30 amperes or less, heavy clamps or screw and washer connections with upturned lugs may be used.

i. Knife switches must operate successfully at 50 per cent. overload in amperes and [25 per cent. excess] at rated voltage, under the most severe conditions with which they are liable to meet in practice.

j. Knife switches must be plainly marked where the marking can be read when the switch is installed, with the name of the maker and the current and the voltage for which the switch is designed. Switches designed for 250 volts D. C. or 500 volts A. C. circuits, without fuses on the switch base, must be marked 250 V., D. C., 500 V., A. C. When 250-volt fuse terminals are mounted on the switch base, the marking of the switch must be 250 V., D. C. and A. C. When 600-volt fuse terminals are mounted on the switch base, the terminals must be spaced for 600-volt fuses and the switches marked 500 V., A. C. Triple pole switches designed with 125-volt spacings, between adjacent blades, must be marked 125 volts, and may be used on 3-wire D. C. or single phase systems having not more than 125 volts between adjacent wires and not more than 250 volts between the two outside wires. When designed with 250-volt spacings between adjacent blades triple pole switches must be marked 250 volts and may be used on 3-wire D. C. or single phase systems having not more than 250 volts between adjacent wires and not more than 500 volts between the two outside wires.

k. Spacings and dimensions must be at least as great as those given in the following tables:

Table 1. For switchboards and panel boards; not over 125 volts D. C. and A. C.:

	Width and thickness		Minimum separation of nearest metal parts of opposite polarity.	Minimum break distance.
	Blades.	Clips and hinges.		
30 amp .....	1-2x5-64 in.	1-2x3-64 in.	1 in.	3-4 in.
60 amp .....			1 1-4 in.	1 in.

Table 2. For individual switches; not over 125 volts D. C. and A. C.:

	Inch.	Inch.	Inch.	Inch.
30 amp.....	1-2x5-64	1-2x3-64	1 1-4	1
60 and 100 amp.....			1 1-2	1 1-4
200 amp.....			2 1-4	2
400 and 600 amp.....			2 3-4	2 1-2
800 and 1000 amp.....			3	2 3-4

A 300-ampere switch with the spacings of the 200-ampere switch above may be used on switchboards.

Table 3. For all switches; 250 volts only D. C. and A. C.:

	Inch.	Inch.	Inch.	Inch.
30 amp.....	1-2x5-64	1-2x3-64	1 3-4	1 1-2

Table 4. For all switches; not over 250 volts D. C. nor over 500 volts A. C.:

	Inch.	Inch.	Inch.	Inch.
30 amp.....	5-8x1-8	5-8x1-16	2 1-4	2
60 and 100 amp.....			2 1-4	2
200 amp.....			2 1-2	2 1-4
400 and 600 amp.....			2 3-4	2 1-2
800 and 1000 amp.....			3	2 3-4

A 300-ampere switch with the spacings of the 200-ampere switch above may be used on switchboards. Cut-out terminals on switches for over 250 volts must be designed and spaced for 600-volt fuses.

Table 5. For all switches; not over 600 volts D. C. and A. C.:

	Inch.	Inch.	Inch.	Inch.
30 amp. ....	5-8x1-8	5-8x1-16	4	3 1-2
60 " .....			4	3 1-2
100 " .....			4 1-2	4

Where barriers of approved design and made of suitable non-absorptive, non-combustible, insulating material or of impregnated hard wood are placed between parts of opposite polarity, the minimum separation of these parts on switches described in Table 5 may be that given in Table 4.

Auxiliary contacts of either a readily renewable or a quick-break type or the equivalent are recommended for D. C. switches, designed for over 250 volts, and must be provided on D. C. switches designed for use in breaking currents greater than 100 amperes at a voltage of over 250. For 3-wire direct current and 3-wire single phase systems the separation and break distances for plain 3-pole knife switches must not be less than those required in the above table for switches designed for the voltage between neutral and outside wires.

3. Snap switches.

1. Current-carrying parts must be mounted on non-combustible, non-absorptive, insulating bases, such as slate or porcelain, and the holes for supporting screws should be countersunk not less than 1/4 inch. There must in no case be less than 3-64 inch space between supporting screws and current-carrying parts.

[Sub-bases of non-combustible, non-absorptive, insulating material, which will separate the wires at least 1/2-inch from the surface wired over, must be furnished with all snap switches used in exposed or moulding work.] Sub-bases must be so designed as to separate the wires at least one-half inch from the surface wired over. They must be of a non-combustible, non-absorptive insulating material.

m. Pieces carrying contact jaws must be [screwed] secured to the base by at least 2 screws, or else made with a square shoulder, or provided with dowel-pins or otherwise arranged, to prevent possible turnings; and the nuts or screw heads on the under side of the base must be countersunk not less than 1/4 inch and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).

n. [All switches must have ample metal for stiffness and to prevent rise in temperature of any part of over 50 degrees Fahrenheit (28 degrees Centigrade) at full load. The whole device must be mechanically well made throughout.]

o. [Any material used for insulating current-carrying parts must retain its insulating and mechanical strength when subject to continued use, and must not soften at a temperature of 212 degrees Fahrenheit (100 degrees Centigrade).]

p. Binding posts must be substantially made, and the screws must be of such size that the threads will not strip when set up tight. Switches with the set-screw form of contact will not be approved.

q. Covers made of conducting material, except face plates for flush switches, must be lined on sides and top with insulating, tough and tenacious material at least 1-32 inch in thickness, firmly secured so that it will not fall out with ordinary handling. The side lining must extend slightly beyond the lower edge of the cover.

r. The handle or button or any exposed parts must not be in electrical connection with the circuit.

s. Snap switches must "make" and "break" with a quick snap, and must not stop when motion has once been imparted by the button or handle. [Snap switches of the spring break pattern, normally complying with the above requirements, but with movement of the contact carrier under control of the operator at any point in the operation of the device, must be considered in a class with switches of the regular knife blade pattern and conform to the specifications of paragraph k of this section. Snap switches must operate successfully at 50 per cent. overload in amperes and at 125 volt direct current, for all 125 volt or less switches, and at 250 volts direct cur-



rent, for all 126 to 250 volt switches under the most severe conditions which they are liable to meet in practice. For switches rated higher than 10 amperes, this test shall be at 25 per cent. overload instead of 50 per cent. When slowly turned "on" and "off" at the rate not to exceed 10 times per minute, while carrying the rated current at rated voltage, snap switches must "make" and "break" the circuit 6,000 times before failing.]

t. Snap switches must be plainly marked, where the marking may be readily seen after the device is installed] with the name or trade-mark of the maker and the current and voltage for which the switch is designed. [On flush switches these markings may be placed on the sub-plate. On other types they must be placed on the front of the cap, cover or plate. Switches which indicate whether the current is "on" or "off" are recommended.] On flush switches these markings may be placed on the sub-plate. On surface switches with covers constructed of porcelain or other moulded insulating material the marking may be on the inside of the cover. On all other types they must be placed on the front of the cap, cover or plate.

§566. Circuit breakers.

1. Generally.

Circuit breakers for operation on circuits of 550 volts or less must be made to comply with the following specifications, except in those few cases where peculiar design allows the breaker to fulfill the general requirements in some other way, and where it can successfully withstand the [test of paragraph d of this section] prescribed tests. In such cases the breakers should be submitted for special examination and approval before being used.

2. Details of construction.

a. Circuit breakers must be mounted on non-combustible, non-absorptive, insulating bases, such as slate or marble. Bases with an area of over 25 square inches must have at least 4 supporting screws. Holes for the supporting screws must be so located or countersunk that there will be at least 1/2 inch space measured over the surface between the head of the screw or washer and the nearest live metal part, and in cases when between parts of opposite polarity must be countersunk.

b. Pieces carrying contact parts must be [screwed] secured to the base by at least 2 screws, or else made with a square shoulder, dowel pin, or equivalent device, to prevent possible turning, and the nuts or screw heads on the under side of the base of front-connected breakers must be countersunk not less than 1/4 inch, and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade). All breakers must be provided with easily accessible means of tripping them by hand without injury to the operator.

c. [Circuit Breakers must successfully operate 3 times with 2-minute intervals intervening without incapacitating the breaker, the conditions of the testing current to be as given in the following table:

Current rating of breakers.	Per cent of voltage drop in test circuit with rated current flowing.	Minimum available capacity of supply system not including overload capacity.
0 to 100 amp.....	2	1,000 amp.
101 to 300 amp.....	3	3,000 amp.
400 amp.....	4	4,000 amp.
500 amp.....	5	5,000 amp.

No filing of contacts or other repairing of the breaker to be made during the test. Multiple breakers must comply with above requirements whether the test is on all poles at once or on one pole individually.]

d. [Circuit breakers must successfully withstand 2,000 volts A. C. for 1 minute between live metal and ground, between poles in multi-polar breaker and between terminals with breaker open.]

e. [The maximum rise in temperature at rated current must not exceed 90 degrees Fahrenheit (50 degrees Centigrade) for coils, or 54 degrees Fahrenheit (30 degrees Centigrade) for other parts.]

f. [Circuit breakers must not have a plus or minus error greater than 10 per cent. at any point of its calibration.]

g. Metal work of automatic overload circuit breakers must be substantial in construction, and must have ample metal for stiffness. The contact parts shall be arranged so that thoroughly good bearings are obtained; the entire device must be mechanically well made throughout.

h. Must be plainly marked, where it will be visible when installed, with the name of the maker and the current and voltage for which the device is designed.

§567. Cut-outs.

1. General rules.

a. Cut-outs must be supported on bases of non-combustible, non-absorptive, insulating material.

b. [Cut-outs must be of the enclosed type, when not arranged in approved cabinets, so as to obviate any danger of the melted fuse metal coming in contact with any substance which might be ignited thereby.] The design of the base must be such that, considering the material used, the base will withstand the most severe conditions liable to be met in practice.

c. [Cut-outs must operate successfully on short-circuits, under the most severe conditions with which they are liable to meet in practice at 25 per cent. above their rated voltage, and, for link fuse cut-outs, with fuses rated at 50 per cent. above the current for which the cut-out is designed, and for enclosed fuse cut-outs with the largest fuses for which the cut-out is designed.] Bases with an area of over twenty-five square inches must have at least four supporting screws. Holes for supporting screws must be so located or countersunk that there will be at least one-half inch space, measured over the surface, between the screw-head or washer and the nearest live metal part, and in all cases where between parts of opposite polarity must be countersunk.

d. [Cut-outs must be marked, where the marking will be plainly visible when installed, with the name of the maker, and current and voltage for which the device is designed.] Nuts or screw heads on the under side of the base must be countersunk not less than one-eighth inch, and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).

e. Cut-outs must be marked, where the marking will be plainly visible when installed, with the name of the maker, and current and voltage for which the device is designed.

2. Link fuse cut-outs.

[e. Link-fuse cut-outs must be mounted on bases made of strong, non-combustible non-absorptive, insulating material. The design of the base must be such that, considering the material used, the base will withstand the most severe conditions liable to be met in practice. Bases with an area of over 25 square inches must have at least 4 supporting screws. Holes for supporting screws must be kept outside of the area included by the outside edges of the fuse-block terminals, and must be so located or countersunk that there will be at least 1/2 inch space, measured over the surface, between the head of the screw or washer and the nearest live metal part.]

[f. Nuts or screw heads on the under side of the base must be countersunk not less than 1/4 inch, and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).]

[g. All fuse-block terminals must have ample metal for stiffness and to prevent rise in temperature of any part of over 50 degrees Fahrenheit (28 degrees Centigrade) at full load. Terminals, as far as practicable, should be made of compact form instead of being rolled out in thin strips; and sharp edges of thin projecting pieces, as on wing thumb nuts and the like, should be avoided. Thin metal, sharp edges and projecting pieces are much more likely to cause an arc to start than a more solid mass of metal. It is a good plan to round all corners of the terminals and to chamfer the edges.]

[h. Clamps for connecting the wires to the fuse-block terminals must be of solid, rugged construction, so as to insure a thoroughly good connection and to withstand considerable hard usage. For fuses rated at over 30 amperes, lugs firmly screwed or bolted to the terminals and into which the conducting wires are soldered must be used.]

[i. Link fuse cut-outs must operate successfully when blowing only 1 fuse at a time on short-circuits with fuses rated at 50 per cent. above and within a voltage 25 per cent. above the current and voltage for which the cut-out is designed.]

[j.] f. Spacings must be at least as great as those given in the following table, which applies only to plain, open-link fuses mounted on slate or marble bases. The spaces given are correct for fuse-blocks to be used on direct current systems, and can therefore be safely followed in devices designed for alternating currents. If the copper

fuse-tips overhang the edges of the fuse-block terminals, the spacing should be measured between the nearest edges of the tips.

	Minimum separation of nearest metal parts of opposite polarity.	Minimum break-distance.
Not Over 125 volts:		
10 amperes or less .....	3-4 inch	3-4 inch
11-100 amperes .....	1 inch	3-4 inch
101-300 amperes .....	1 inch	1 inch
301-1000 amperes .....	1 1-4 inch	1 1-4 inch
Not Over 250 Volts:		
10 amperes or less.....	1 1-2 inch	1 1-4 inch
11-100 amperes .....	1 3-4 inch	1 1-4 inch
101-300 amperes .....	2 inch	1 1-2 inch
301-1000 amperes .....	2 1-2 inch	2 inch

A space must be maintained between fuse terminals of the same polarity of at least one-half inch for voltages up to 125 and of at least three-quarter inch for voltages from 126 to 250. This is the minimum distance allowable, and greater separation should be provided when practicable. For three-wire systems cut-outs must have the break-distance required for circuits of the potential of the outside wires, except that in 125-250 systems with grounded neutral the cut-outs in two-wire, 125 volt branch circuits may have the spacings specified for not over 125 volts.

g. All fuse-block terminals must have ample metal for stiffness and to prevent rise in temperature of any part of over 50 degrees Fahrenheit (28 degrees Centigrade) at full load. Terminals, as far as practicable, should be made of compact form instead of being rolled out in thin strips; and sharp edges of thin projecting pieces, as on wing thumb nuts and the like, should be avoided. Thin metal, sharp edges and projecting pieces are much more likely to cause an arc to start than a more solid mass of metal. It is a good plan to round all corners of the terminals and to chamfer the edges.

3. Enclosed-fuse cut-outs—plug and cartridge type.

[k. The base must be made of non-combustible, non-absorptive, insulating material. Blocks with an area of over 25 square inches must have at least 4 supporting screws. Holes for supporting screws must be so located or countersunk that there will be at least 1/2 inch space, measured over the surface, between the screw-head or washer and the nearest live metal part, and in all cases when between parts of opposite polarity must be countersunk.]

[l. Nuts or screw-heads on the under side of the base must be countersunk at least 1/4 inch and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).]

[m. Except for sealable service and meter cut-outs, terminals must be of either the Edison plug, spring clip or knife blade type, of approved design, to take the corresponding standard enclosed fuses. They must be secured to the base by 2 screws or the equivalent, so as to prevent them from turning, and must be so made as to secure a thoroughly good contact with the fuse. End stops must be provided to insure the proper location of the cartridge fuse in the cut-out.]

[n. Clamps for connecting wires to the terminals must be of a design which will insure a thoroughly good connection, and must be sufficiently strong and heavy to withstand considerable hard usage. For fuses rated to carry over 30 amperes, lugs firmly screwed or bolted to the terminals and into which the connecting wires shall be soldered must be used.]

[o.] h. Enclosed fuse cut-outs must be classified as regards both current and voltage as given in the following table, and must be so designed that the bases of one class cannot be used with fuses of another class rated for a higher current or voltage:

Standard plug or cartridge cut-outs.	
Not Over 250 Volts.	Not Over 600 Volts.
0- 30 amperes.	0- 30 amperes.
31- 60 "	31- 60 "
61-100 "	61-100 "
101-200 "	101-200 "
201-400 "	201-400 "
401-600 "	
Sealable service and meter cut-outs.	
Not Over 250 Volts.	Not Over 600 Volts.
0- 30 amperes.	0- 30 amperes.
31- 60 "	31- 60 "
61-100 "	61-100 "
101-200 "	101-200 "

p. [Enclosed-fuse cut-outs must be of such a design that it will not be easy to form accidental short circuits across live metal parts of opposite polarity on the block or on the fuses in the block.]

4. Exceptions.

The foregoing requirements of this section shall not apply to rosettes, attachment plugs, car-lighting cut-outs and protective devices for signalling systems.

§568. Fuses.

1. Link fuses.

a. Terminals must have contact surfaces or tips of harder metal, having perfect electrical connections with the fusible part of the strip.

b. Link-fuses must be stamped with about 80 per cent. of the maximum current which they can carry indefinitely, thus allowing about 25 per cent. overload before the fuse melts.

c. Fuse terminals must be stamped with the maker's name or initials, or with some known trade-mark.

2. Enclosed fuses—plug and cartridge type; except for rosettes, attachment plugs, car-lighting cut-outs and protective devices for signal systems.

d. The fuse casing must be sufficiently dust-tight so that lint and dust cannot collect around the fusible wire and become ignited when the fuse is blown.

[The fusible wire must be attached to the terminals in such a way as to secure a thoroughly good connection and to make it difficult for it to be replaced when melted.]

e. Enclosed fuses must be classified to correspond with the different classes of cut-out blocks, and must be so designed that it will be impossible to put any fuse of a given class into a cut-out block which is designed for a current or voltage lower than that of the class to which the fuse belongs.

f. The fuse terminals must be sufficiently heavy to insure mechanical strength and rigidity. The styles of terminals, except for use in sealable service and meter cut-outs, must be as follows:

Not over 250 volts—

A. Cartridge fuse (ferrule contact).  
B. Approved plug[s] or cartridge fuses in approved casings for Edison plug cut-outs not exceeding 125 volts, but including [in] any circuit of a 3-wire 125-250 volt systems, with grounded neutral [3-wire circuits and 2-wire 125-volt or 250-volt circuits.]

31-60 " Cartridge fuse (ferrule contact) for use also in approved casings for large size Edison plug type 250-volt cut-outs.  
61-100 " }  
101-200 " } Cartridge fuse (knife blade contact).  
201-400 " }

Not over 600 volts—

0-30 amps. } Cartridge fuse (ferrule contact).  
31-60 " }  
61-100 " } Cartridge fuse (knife blade contact).  
101-200 " }  
201-400 " }

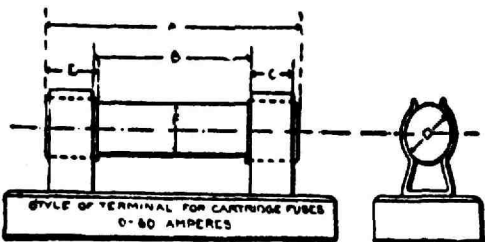
3. Exceptions.

The requirements of subdivision 2 of this section shall not apply to fuses for rosettes, attachment plugs, car-lighting cut-outs and protective devices for signaling systems.

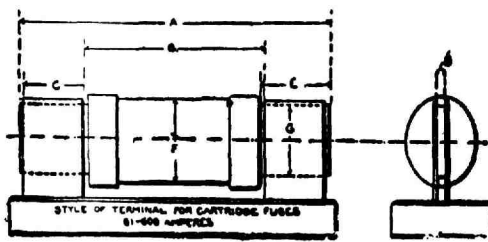
g. Cartridge enclosed fuses and corresponding cut-out blocks, except for sealable service and meter cut-outs, must conform to the dimensions given in the following table:



Table of Dimensions of the National Electrical Code Standard Cartridge Enclosed Fuse.



Form 1. Cartridge fuse—ferrule contact.



Form 2. Cartridge fuse—knife blade contact.

Voltage.	Rated capacity, amperes.	A.		B.	C.	D.	E.	F.	G.	Rated capacity, amperes.	
		Length over terminals, inches.	Distance between contact clips, inches.	Width of contact clips, inches.	Diameter of ferrules or thickness of terminal blades, inches.	Minimum length of ferrules or of terminal blades outside of tube, inches.	Diameter of tube, inches.	Width of terminal blades, inches.			
Not over 250.....	0-30	Form 1....	2	1	1-2	9-16	1-2	1-2	....	Form 1.....	0-30
	31-60	Form 1....	3	1 3-4	5-8	13-16	5-8	3-4	....	Form 1.....	31-60
	61-100	Form 2....	5 7-8	4	7-8	1-8	1	1	3-4	Form 2.....	61-100
	101-200	Form 2....	7 1-8	4 1-2	1 1-4	3-16	1 3-8	1 1-2	1 1-8	Form 2.....	101-200
	201-400	Form 2....	8 5-8	5	1 3-4	1-4	1 7-8	2	1 5-8	Form 2.....	201-400
Not over 600.....	401-600	Form 2....	10 3-8	6	2 1-8	1-4	2 1-4	2 1-2	2	Form 2.....	401-600
	0-30	Form 1....	5	4	1-2	13-16	1-2	3-4	....	Form 1.....	0-30
	31-60	Form 1....	5 1-2	4 1-4	5-8	1 1-16	5-8	1	....	Form 1.....	31-60
	61-100	Form 2....	7 7-8	6	7-8	1-8	1	1 1-4	3-4	Form 2.....	61-100
	101-200	Form 2....	9 5-8	7	1 1-4	3-16	1 3-8	1 3-4	1 1-8	Form 2.....	101-200
	201-400	Form 2....	11 5-8	8	1 3-4	1-4	1 7-8	2 1-2	1 5-8	Form 2.....	201-400

h. [Fuses must be so constructed that with the surrounding atmosphere at a temperature of 75 degrees Fahrenheit (24 degrees Centigrade) they will carry indefinitely a current 10 per cent. greater than that at which they are rated, and at a current 25 per cent. greater than the rating, they will open the circuit without reaching a temperature which will injure the fuse tube or terminals of the fuse block. With a current 50 per cent. greater than the rating and at room temperature of 75 degrees Fahrenheit (24 degrees Centigrade), the fuses starting cold, must blow within the time specified below:

0-30 amperes.....	1 minute.
31-60 ".....	2 minutes.
61-100 ".....	4 "
101-200 ".....	6 "
201-400 ".....	12 "
401-600 ".....	15 "

i. Enclosed fuses must be marked, where the marking will be plainly visible, with the name or trade-mark of the maker, the voltage and current for which the fuse is designed, and the words "National Electrical Code Standard." Each fuse must have a label, the color of which must be green for 250-volt fuses and red for 600-volt fuses.

j. [The temperature of the exterior of the fuse enclosure must not rise more than 125 degrees Fahrenheit (70 degrees Centigrade) above that of the surrounding air when the fuse is carrying the current for which it is rated.]

k. Enclosed fuses must not hold an arc or throw out melted metal or sufficient flame to ignite easily inflammable material on or near the cut-out when only one fuse is blown at a time on a short circuit on a system of the voltage for which the fuse is rated

[The normal capacity of the system must be in excess of the load on it just previous to the test by at least 5 times the rated capacity of the fuse under test. The resistance of the circuit up to the cut-out terminals must be such that the impressed voltage at the terminals will be decreased 1 per cent. when a current of 100 amperes is passed between them.]

§569. Panel boards.

a. The specifications for construction of switches and cut-outs (see § 565 and § 567 of this chapter) must be followed as far as they apply.

In the relative arrangement of fuses and switches, the fuses may be placed between the bus-bars and the switches, or between the switches and the circuits, except in the case of service switches, when § 423a of this chapter must be complied with. When the branch switches are between the fuses and bus-bars, the connections must be so arranged that the blades will be dead when the switches are open. When there are exposed live metal parts on the back of a board, or where the board will be subject to moisture, a space of at least 1/2 inch must be provided between such live metal parts and the cabinet in which the board is mounted.

b. The following minimum distance between bare live metal parts (bus-bars, etc.) must be maintained:—

Between parts of opposite polarity, except at switches and link fuses, when mounted on the same surface.	Between parts of same polarity.	
	When held free in air.	At link fuses.
Not over 125 volts.....	3-4 inch.....	1-2 inch.....
Not over 250 ".....	1 1-4 ".....	3-4 ".....
Not over 600 ".....	2 ".....	1 3-4 ".....

At switches or enclosed fuses parts of the same polarity may be placed as close together as convenience in handling will allow.

The spacings given in the first column apply to the branch conductors where enclosed fuses are used. Where link fuses or knife switches are used, the spacings must be at least as great as those required by §§565 and 567 of this chapter.

The spacings given in the second column apply to the distance between the raised main bars and between these bars and the branch bars over which they pass.

Panel boards of special design in which the insulation and separation between bus bars and between other current carrying parts is secured by means of barriers or insulating materials instead of by the spacings given above, must be submitted for special examination and approval before being used.

c. Panel boards must be marked where the marking can be plainly seen when installed, with the name or trade-mark of the manufacturer and the maximum capacity in amperes and the voltage for which the board is designed.

§570. Cabinets and cut-out boxes.

	Between parts of opposite polarity except at switches and link fuses.		Between parts of same polarity. At link fuses.
	When mounted on the same surface.	When held free in air.	
Not over 125 volts.....	3-4 inch.....	1-2 inch.....	1-2 inch.....
Not over 250 volts.....	1 1-4 inch.....	3-4 inch.....	3-4 inch.....
Not over 600 volts.....	2 inch.....	1 3-4 inch.....	.....

[a. Cabinets must in all cases be so constructed as to insure ample strength and rigidity and be dust-tight. When doors are of metal, and less than 0.109 inch (No. 12 U. S. sheet metal gage) in thickness and are not lined with insulating material, there must be a space of at least 1 inch between the door and an enclosed fuse or any live metal part. A space of at least 2 inches must be provided between open-link fuses and metal, metal-lined or glass-paneled doors of cabinets. Except as above specified, there must be a space of at least 1/2 inch between the walls, back or door of any cabinet and any exposed live metal part. Cabinets must be deep enough to allow the door to be closed when 30 ampere branch circuit switches are in any position, and when larger single throw switches are thrown open as far as their construction and installation will permit. There must be a space of at least 1/2 inch between the walls, the gutter partition, if of metal, and back of any cabinet and the nearest exposed current-carrying part of devices mounted within the cabinet. Where

branch and feeder circuit wires are led around the inside of the cabinet from terminals of panel-boards, ample space must be provided within the cabinet so that it will not be necessary to run the wires upon the face of the panel-board. This space or gutter must be partitioned off from the panel-board face by a barrier extending from the base of the panel-board to the front of the cabinet and firmly secured in position. These barriers if of metal must be of a thickness at least that of the walls of the box and must have bushed holes for wires. If barriers are of slate or marble they must be at least 1/2 inch in thickness and if of approved composition they must be at least 1/4 inch in thickness.

b. Cabinets may be made of either cast or sheet metal, wood or approved composition. Wooden or composition cabinets must not be used on metal conduit, armored cable or metal moulding systems. All metal used in construction of cabinets, including linings, if any, must be thoroughly painted or otherwise treated to prevent corrosion.

c. Wood must be well seasoned and at least 3/4 inch thick and be thoroughly filled and painted, and must be lined with a non-combustible material.

d. In all cabinets, linings of slate, marble or approved composition must be at least 1/4 inch thick and firmly secured in place; when metal is used for the lining it must be at least No. 16 U. S. sheet metal gage in thickness. For lining wooden cabinets 1/2 inch rigid asbestos board may be used when firmly secured in place by screws or tacks.

e. Only approved material [should] may be used in composition cabinets, and in no case shall it be less than 3/4 inch in thickness.

f. If cast metal is used a thickness of at least 1/8 inch must be provided. Sheet metal must not be less than .0625 inch thick (No. 16 U. S. sheet metal gage), and must in every case be of sufficient thickness or so reinforced as to comply with paragraph a of this section. In steel cabinets having an area of more than 360 square inches for any surface or having a single dimension greater than 2 feet, sheet metal must be used at least No. 14 U. S. sheet metal gage in thickness; in those having an area of more than 1,200 square inches for any surface or having a single dimension greater than 4 1/2 feet, the sheet metal must be at least No. 12 U. S. sheet metal gage in thickness.

g. Doors must shut closely at all edges against a rabbet formed as a part of the door or trim or must have turned flanges at all edges. Hinges must be of strong and durable design. A substantial latch or catch must be provided so as to keep the door closed, and a lock may be used in addition to the catch if desired. When doors have glass panels the glass must be at least 1/8 inch thick (commercial thickness), and must not have a greater area than 450 square inches unless plate glass at least 1/4 inch in thickness is used.

h. Cabinets must be marked with manufacturer's name where the name can be plainly seen when the cabinet is installed.]

a. Cabinets are intended for enclosing feeder and circuit branch panelboards and similar devices. They may be designed for either surface or flush mounting and are usually provided with removable frames or matts, trims, etc., in which the swinging doors are hung; when for the enclosure of apparatus connected within the cabinet to the wires of more than four circuits they shall have a back wiring space or one or more side wiring spaces, side gutters or wiring compartments unless the wires leave the cabinet directly opposite their terminal connections. When intended for installation out-of-doors they must be of the weatherproof pattern.

b. Cut-out boxes are intended for enclosing single devices or combinations of devices connected within the cut-out box to the wires of not more than four circuits and usually are designed for surface mounting having swinging doors or covers secured directly to the wall of the box. When intended for installation out-of-doors they must be of the weatherproof pattern.

c. Design and construction of all cabinets and cut-out boxes must be such as to insure ample strength and rigidity.

d. The spacing within cabinets and cut-out boxes must be sufficient to provide ample room for the distribution of wires and cables placed in them, and for a separation between metal parts of cabinets or cut-out boxes and current carrying parts of devices and apparatus mounted within them as follows:

1. There must be an air space of at least 1-16 inch, except at points of support, between the base of the device and the wall of any metal cabinet or cut-out box on which the device is mounted.

2. There must be an air space of at least one inch between any enclosed fuse or current-carrying part and the door, unless the door is lined with an approved insulating material or is of a thickness at least that of No. 12 U. S. gauge when the air space must be not less than one-half inch.

3. There must be a space of at least two inches between open link fuses and metal or glass of walls or doors.

4. Except as noted above there must be an air space of at least one-half inch between the walls, back, gutter partition, if of metal, or door of any cabinet or cut-out box and the nearest exposed current-carrying part of devices mounted within the cabinet where the potentials do not exceed 250 volts. This spacing must be increased to at least one inch where the potentials exceed 250 volts.

5. Cabinets and cut-out boxes must be deep enough to allow the doors to be closed when 30-ampere branch circuit panelboard switches having spool or composition handles or when switches of combination cut-outs are in any position, and when other single throw switches are thrown open as far as their construction and installation will permit.

6. Cabinets having one or more side wiring spaces, side gutters or side wiring compartments must be furnished with covers, barriers or partitions extending around or from the side or sides of all bases or groups of bases of the switches, cut-outs, circuit breakers or feeder and circuit branch panelboards within the cabinet and providing a close fit with the door, frame or sides of the cabinet so as to enclose these spaces, gutters or compartments and the wires stowed within them. At sides where wires or cables are led from the cabinet at points directly opposite their terminal connections to devices or apparatus within the cabinet, and other wires or cables are not placed, these covers, barriers or partitions may be omitted.

When cabinets have back wiring spaces which are not entirely enclosed, covers must be furnished to provide equivalent enclosure.

§571. Rosettes.

a. Current-carrying parts of rosettes must be mounted on non-combustible, non-absorptive, insulating bases. There should be no openings through the rosette base



except those for the supporting screws and in the concealed type for the conductors also, and these openings should not be made any larger than necessary. There must be at least 1/4 inch space, measured over the surface, between supporting screws and current-carrying parts. The supporting screws must be so located or countersunk that the flexible cord cannot come in contact with them. Bases for the knob and cleat type must have at least 2 holes for supporting screws; must be high enough to keep the wires and terminals at least 1/2 inch from the surface to which the rosette is attached and must have a porcelain lug under each terminal to prevent the rosette from being placed over projections which would reduce the separation to less than 1/2 inch. Bases for the moulding and conduit box types must be high enough to keep the wires and terminals at least 3/8 inch from the surface wired over.

b. Contact pieces and terminals must be secured in position by at least 2 screws, or made with a square shoulder, or otherwise arranged to prevent turning. The nuts or screw heads on the under side of the base must be countersunk not less than 1/8 inch and covered with a waterproof compound which will not melt below 150 degrees Fahrenheit (65 degrees Centigrade).

c. Line terminal plates must be at least .06 inch in thickness, and terminal screws must not be smaller than No. 6 standard screw with about 32 threads per inch. Terminal plates for the flexible cord (and for fuses) must be at least .06 inch in thickness. The connection to these plates shall be by binding screws not smaller than No. 5 standard screw with about 40 threads per inch. At all binding screws for line wires and for flexible cord, upturned lugs, or some equivalent arrangement, must be provided which will secure the wires (being held) under the screw heads.

d. The diameter of the cord inlet hole should measure 13-32 inch in order that standard portable cord may be used.

e. Ample space must be provided for a substantial knot tied in the cord as a whole. All parts of the rosette upon which the knot is likely to bear must be smooth and well rounded.

f. When the rosette is made in 2 parts, the cover must be secured to the base so that it will not work loose. [In fused rosettes, the cover must fit closely over the base so as to prevent the accumulation of dust or dirt on the inside, and also to prevent any flash or melted metal from being thrown out when the fuses melt.]

g. Rosettes must be plainly marked where the marking may readily be seen after the rosette has been installed, with the name or trade mark of the manufacturer, and the rating in amperes and volts. Fuseless rosettes may be rated 3 amperes, 250 volts [fused rosettes, with link fuses, not over 2 amperes, 125 volts].

h. [Fused rosettes must have a fuse in each pole and must operate successfully when short-circuited on the voltage for which they are designed, the test being made with the 2 fuses in circuit.]

§572. Sockets, including lamp receptacles.

a. Sockets shall be classed according to diameters of lamp bases as candelabra, medium and mogul base, to be known respectively as 1/2 inch, 1 inch and 1 1/2 inch nominal sizes, with ratings as specified in the following table:

Class.	Nominal diam.	Key.			Keyless.		
		Watts.	Volts.	Max. amp. at any voltage.	Watts.	Volts.	Max. amp. at any voltage.
Candelabra .....	1-2 in.	75	125	3-4	75	125	1
Medium .....	1 in.	250	250	2 1-2	660	250	6
		*660	250	6	660	600	
Mogul .....	1 1-2 in.				1500	250	
		†			1500	600	

\* This rating may be given only to sockets having a switch mechanism which produces both a quick "make" and a quick "break" action.

† Ratings to be assigned later, pending further discussion with manufacturers.

Miniature sockets (and receptacles) having screw shells smaller than the candelabra size may be used for decorative lighting systems, Christmas tree lighting outfits and similar purposes.

b. All sockets [and receptacles] must be marked with the name or trade-mark of the manufacturer and with the watts and volts which apply to the class. The rating marks may be abbreviated, as, for example, "250 W., 250 V." Each lamp holder of double-ended sockets must be rated as specified above, the device being marked with a single marking applying to each end.

c. Metal used for shells must be moderately hard, but not hard enough to be brittle or so soft as to be easily dented or knocked out of shape. Brass shells must be at least .13 inch in thickness and for mogul sockets not less than .025 inch, and shells of any other material must be thick enough to give the equivalent stiffness and strength.

d. The inside of metal shells must be lined with insulating material, which must absolutely prevent the shell from becoming a part of the circuit, even though the wires inside the sockets should become loosened or detached from their position under the terminal screws. The material used for lining must be at least 1-32 inch in thickness, and must be firm, compact, tough and tenacious. It must not be injuriously affected by the heat from the largest lamp permitted in the socket, [and must leave water in which it is boiled practically neutral]. It is preferable to have the lining in one piece. The lining must not extend beyond the metal shell more than 1/8 inch, but must prevent any current-carrying part of the lamp base from being exposed when a lamp is in the socket. The cap must also be lined, and this lining must comply with the requirements for shell linings.

e. Caps when made of sheet brass must be at least .013 inch in thickness and .025 inch for mogul sockets, and when cast or made of other metals must be of equivalent strength.

The inlet piece must contain sufficient metal for 5 full threads, and when not in one piece with the cap must be riveted or otherwise secured to give the strength of a single piece. There must be sufficient room in the cap to enable the ordinary wireman to easily and quickly make a knot in the cord and to push it into place in the cap without crowding. All parts of the cap upon which the knot is likely to bear must be smooth and well insulated.

f. The frame which holds the moving parts must be sufficiently heavy to give ample strength and stiffness. Brass pieces containing terminal screws must be sufficiently heavy to give ample strength and stiffness, and have at least .06 inch of thread for terminal screws. Terminal post screws must not be smaller than No. 5 standard screw, with about 40 threads per inch.

g. For candelabra [sockets] and medium sized sockets rated at 250 volts, points of opposite polarity must everywhere be kept not less than 3-64 inch apart, and for mogul sockets and sockets rated at 600 volts not less than 1/8 inch apart, provided, however, if substantial barriers of approved insulating material are used to separate such parts, these distances may be correspondingly reduced, but in no event must the separation distances measured over the surfaces of the barriers be less than those specified above.

h. [The connecting points for the flexible cord must be made to very securely grip a No. 16 or 18 B. & S. gage conductor. An upturned lug, arranged so that the cord may be gripped between the screw and the lug in such a way that it cannot possibly come out, is strongly advised.] The parts to which wiring connections are made must be designed to securely grip the conductors. An upturned lug or some equivalent arrangement must be provided to hold the wires under the screw heads.

i. The socket must firmly hold the lamp in place so that it cannot be easily jarred out and must provide a contact good enough to prevent undue heating with the maximum current allowed. The holding pieces, springs and the like, if a part of the circuit, must not be sufficiently exposed to allow them to be brought in contact with anything outside of the lamp and socket.

j. The base on which current carrying parts are mounted must be of porcelain, or other non-combustible, non-absorptive, insulating material approved for such use.

k. The key handle must not soften or become injured when used to operate the socket at a temperature of 150 degrees Fahrenheit. The handle should be thoroughly substantial and securely, but not necessarily rigidly, attached to the spindle or lever which it is designed to control.

l. All screws in porcelain pieces, which can be firmly sealed in place, must be so sealed by a waterproof compound which will not melt below 200 degrees Fahrenheit (93 degrees Centigrade).

m. The socket as a whole must be so put together that parts will not [rattle or fall apart] loose under the most severe conditions they are likely to meet with in

practice. The base [of the socket] must be [secured or] held in [the shell in] such a manner as to prevent turning or displacement relative to the shell.

n. [Sockets when slowly turned "on" and "off" at a rate of approximately 10 times per minute, while carrying a load of .6 of an ampere at 125 volts for candelabra, and 1 ampere and 3 amperes at 250 volts for medium sized 250-watt and 660-watt sockets, respectively, must "make" and "break" the circuit 10,000 times before failing, and when new must operate successfully at least 50 times at 50 per cent. in excess of the above currents, based on either 125 and 250 volts direct current and except for pull sockets when operated in either direction in any position.]

o. Keyless sockets of all kinds must comply with the requirements for key sockets as far as they apply.

p. Sockets made of porcelain or other insulating material must conform to the above requirements as far as they apply, and all parts must be strong enough to withstand a moderate amount of hard usage without breaking. Lead wires permanently attached to sockets and sealed in place must have separate outlets or be separated not less than 3/4 inch in the clear. The wires must be stranded and have approved insulating coverings.

q. [When the socket is not attached to a fixture, the threaded inlet must be provided with a strong insulating bushing having a smooth hole at least 9-32 inch in diameter. The edges of the bushing must be rounded and all inside fins removed, so that in no place will the cord be subjected to the cutting or wearing action of a sharp edge.] Where a socket is not attached to a fixture, the inlet must be provided with an approved insulating bushing which, if threaded, must be not less than 9-32 inch pipe size. The edges of bushings must be rounded and all inside fins removed so that in no case will the cord be subjected to the cutting or wearing action of a sharp edge. Bushings should have holes not less than 9-32 inch in diameter for plain pendant cord, and 13-32 inch in diameter for reinforced cord.

§573.

§574. Arc lamps.

a. Arc lamps must be provided with reliable stops to prevent carbons from falling out in case the clamps become loose.

b. All exposed parts must be carefully insulated from the circuit.

c. [Arc lamps must, for constant current systems, be provided with an approved hand switch, and an automatic switch that will shunt the current around the carbons, should they fail to feed properly.]

d. Terminals must be designed to secure a thoroughly good and permanent contact with supply wires, which contact must not become loosened by motion of the lamp during trimming.

§575. [Spark arresters.

a. Spark arresters must so close the upper orifice of the globe that it will be impossible for any sparks, thrown off by the carbons, to escape.]

§576. Insulating joints.

a. Insulating joints must, with the exception of exterior finishing or waterproofing material, be made entirely of material that will resist the action of illuminating gases, and that will not give way or soften under the heat of an ordinary gas flame.

b. Insulating joints must, with the exception of insulating studs designed to be mounted with screws or bolts, have a substantial exterior metal casing insulated from both screw connections. All exposed surfaces of insulating material must be smooth, hard and waterproof.

c. Insulating joints must show a dielectric strength between pipe attachments and between either pipe attachment separately and the exterior metal casing sufficient to resist throughout 5 minutes the application of an A. C. electro-motive force of 4,000 volts.

d. Insulating joints must be sufficiently strong to resist the strain to which they are liable to be subjected during the installation. Joints made for attachment to pipes of nominal 3-4 inch diameter or smaller must be able to withstand, without injury, a twisting effect at least as great as that required to cause the threads to give way on ordinary commercial iron gas pipe of the largest size upon which the joint can be threaded. This test need not be applied to insulating studs designed to be mounted with screws or bolts.

e. Insulating joints must be threaded for standard iron pipe (Briggs' standard thread) or for brass tube pipe standard thread as given in the following table:

Standard Iron Pipe.		
Trade size.	Actual outside diameter, inches.	No. of threads to the inch.
1-8.....	.405	27
1-4.....	.540	18
3-8.....	.675	18
1-2.....	.840	14
3-4.....	1.050	14
1.....	1.315	11 1-2
1 1-4.....	1.660	11 1-2
1 1-2.....	1.900	11 1-2
2.....	2.375	11 1-2
2 1-2.....	2.875	8
3.....	3.500	8

Joints to fit standard brass tubing having outside diameters or trade name sizes from 1-4 inch to 3-4 inch must be threaded with 27 threads to the inch.]

a. Insulating joints must be made of approved materials both for metal and other parts, including the finishing materials for exterior and interior surfaces. Except for studs designed to be mounted with screws or bolts, they must have a substantial exterior metal casing insulated from both screw connections; they must be threaded in an approved manner; and they must comply with the prescribed tests for heat, leakage, dielectric strength, torsion and bending.

b. Each joint and stud must be marked with the name or trade-mark of the manufacturer.

§577. Fixtures.

a. Fixtures must be made of metal or hard wood, except that other approved material may be used if reinforced by metal or otherwise constructed to secure requisite mechanical strength. In all cases mechanical strength must be secured practically equivalent to an all-metal fixture of similar size and form.

In all fixtures not made entirely of metal, wire-ways must be metal lined unless approved armored conductors with suitable fittings are used. An exception is made in the case of wireways in glass, marble or similar non-absorptive, non-combustible insulating materials.

All arms must be reliably secured, to prevent turning by threading and soldering, brazing, threading locked by set screw or an equivalent method.

With screw joints of arms and stems there must be not less than five threads all engaging at fixture supports, fixture bodies, etc.

All methods of fastening arms or making joints between metal parts by threading, brazing or otherwise, must be such as to secure in every case ample strength and reliability.

Sockets must, except on pendant cords, be attached to the metal of the fixtures and must be secured in a reliable and permanent manner by threading locked by set-screws or brazing or an equivalent method.

All burrs and fins in wireways must be removed and all sharp edges at points where wires emerge from arms, stems, chains, etc., must, when practicable, be removed or rounded, but in every case it must be possible to pull in and also to withdraw the wires without injuring them.

Where supply wires enter casings of fixture stems in either straight electric or combination gas and electric fixtures, there must be suitable fittings having smooth, rounded edges to prevent injury to the wire coverings and to prevent the wires from coming into contact with the edges of the ends of casings.

Fixtures for installation outdoors or where exposed to moisture must be so constructed that water cannot enter the wireways, sockets or other electrical parts.

b. All arms must be reliably secured to prevent turning. Arms of threaded tubing must not be lighter than No. 18 B. & S. gage and with screw joints of arms there must be not less than 5 threads, all engaging. All methods of fastening arms or making joints between metal parts by soldering, brazing or otherwise, must be such as to secure in every case ample strength and reliability. Must be so assembled as to furnish accessibility for inspection, or in lieu thereof must be inspected at the factory.

c. Sockets must, except on pendant cords, be attached to the metal of the fixtures and must be secured in a reliable and permanent manner. Receptacles having exposed



terminals must not be used in canopies or in any part of fixtures unless completely enclosed in metal.

d. All burrs, fins and sharp edges liable to injure wire coverings must, where practicable, be removed or rounded, but in every case it must be possible to pull in and also to withdraw the wires without injuring them. Where supply wires enter fixture stems or casings there must be suitable fittings having smooth rounded edges to prevent injury to the wire coverings. In non-metallic fixtures wireways must be metal-lined, unless approved armored conductors with suitable fittings are used. On chains or similar parts, where conductors are not completely enclosed in metal, wires must be stranded and must have rubber insulation not less than 1-32 inch in thickness, or approved pendant or portable cord may be used.

e. Fixtures must be marked with the manufacturer's name or trade-mark.

f. Fixtures must be tested in an approved manner for short circuits between conductors and for contacts between conductors and metal parts of fixtures.

g. Showcase fixtures, ceiling bulls-eyes, dome fixtures and similar types must be sufficiently ventilated, where possible, to avoid exposing the wiring to high temperatures and the wiring at such fixtures should be so disposed as to be kept as free as possible from excessive temperatures.]

b. Conductors must be not smaller than No. 18 B. & S. gage.

On chains or similar parts where conductors are not completely enclosed in metal, the conductors must be stranded and must have rubber insulation not less than 1-32 inch in thickness. Wires and flexible cords must when fixtures are externally wired, be so secured as not to be cut or abraded by the pressure of the fastenings or motion of the fixture, and must be protected against abrasion where they pass through sheet metal pans, canopies, etc.

Conductors must be so spliced or joined as to be both mechanically and electrically secure without solder. The joints must then be soldered (unless made with some form of approved splicing device) and covered with an insulation equal to that on the conductors, i. e., with both rubber and friction tape. Wires must, within the arms and stems, be without splices and taps, i. e., it should not be necessary to withdraw the wires to inspect splices and taps.

Receptacles must be so installed as to afford permanent and reliable means to prevent possible turning relative to the surfaces on which they are mounted.

Receptacles having exposed terminals must not be used in canopies unless completely enclosed in metal.

c. Tubing used in threaded arms and stems must not be lighter than No. 18 B. & S. gage. The thickness of unthreaded arms will depend largely upon the method used, and all methods of fastening arms or stems must be such as to secure in every case strength equivalent to that of a threaded connection. Such methods must be submitted for examination, test and approval. Tubing should not be kinked, flattened or cracked.

Canopies must be made sufficiently large, except where outlet boxes are used, to permit the stowing away of splices to fixture leads and to allow supply conductors, and especially the splices to be kept clear of the grounded part of gas pipes.

All methods of fastening arms or stems to fixture supports must be such as to secure in every case strength equivalent to that of a threaded connection.

Conductors used in wiring fixtures must be of approved fixture wire, approved flexible cord, or approved rubber-covered wire, excepting that conductors having approved slow-burning or other heat-resisting coverings must be used in wiring fixtures in which the wiring is exposed, from the heat of lamps to temperatures in excess of 120 degrees Fahr. (49 degrees Centigrade). All such forms of fixtures must be submitted for examination, test and approval before being introduced for use.

All fixtures should, where possible, be sufficiently ventilated to avoid exposing the wiring to high temperatures, and the wiring of fixtures should be so disposed as to be kept as free as possible from excessive temperatures.

All electrical fittings (including insulating joints, sockets, receptacles, switches, attachment plugs, etc.) must be of approved types.

Canopy insulators must be of approved types. They must be securely fastened in place so as to separate the canopies thoroughly and permanently from the surfaces and outlet boxes from which they are designed to be insulated. A strip, of a good grade of hard fibre 1-16 inch thick, permanently attached to the canopy at the ends, and at intermediate points in such a manner that the strip will permanently extend at least 3-16 inch beyond the entire upper edge of the canopy rim will be acceptable. Where the above construction is impracticable a sheet of a good grade of hard fibre 1-16 inch thick, permanently attached to the canopy and cut to conform to the general outline of the canopy and with the edges of the sheet at least flush with the edges of the canopy will be acceptable. The insulating strip or sheet must be secured by rivets or screws and the rivets or screws must be so located or countersunk that the desired effective insulation distance is obtained.

d. Tests.

Each fixture (after wiring and assembly) must be tested with a magneto which will ring through a resistance of at least 50,000 ohms and show no short circuits between conductors or contacts between conductors and metal parts of fixtures.

e. Markings.

Each fixture must be marked with the manufacturer's name or trade-mark.

§578. Rheostats, resistance boxes and equalizers.

a. Rheostats, resistance boxes and equalizers must be made entirely of non-combustible materials, except such minor parts as handles, magnet insulation, etc. All segments, lever arms, etc., must be mounted on non-combustible, non-absorptive insulating material. Holes for the supporting screws which secure this material in position must be so located or countersunk that there will be at least one-half inch space, measured over the surface, between the head of the screw or washer and the nearest live metal part.

b. Rheostats, resistance boxes and equalizers must be so constructed that when mounted on a plane surface the casing will make contact with such surface only at the points of support. An air space of at least 1-4 inch between the rheostat casing and the supporting surface will be required. The construction throughout must be heavy, rugged and thoroughly workmanlike.

c. Clamps for connecting wires to the terminals must be so designed as to insure a thoroughly good connection, and must be sufficiently strong and heavy to withstand [considerable] hard usage. For currents above 30 amperes, lugs into which the connecting wires may be soldered, or approved solderless connectors, must be used. Clamps or lugs will not be required when leads are provided as a part of the device.

d. Rheostats, resistance boxes and equalizers must be plainly marked, where the marking may be readily seen after the device is installed, with the rating and the name of the maker; and the terminals of motor-starting rheostats must be marked to indicate to what part of the circuit each is to be connected, as "line," "armature" and "field."

e. The design of the fixed and movable contacts and the resistance in each section must be such as to secure the least tendency toward arcing and roughening of the contacts, even with careless handling or the presence of dirt. In motor-starting rheostats, the contact at which the circuit is broken by the lever arm when moving from the running to the starting position must be so designed that there will be no detrimental arcing. The final contact, if any, on which the arm is brought to rest in the starting position must have no electrical connection.

f. Motor-starting rheostats must be so designed that the contact arm cannot be left on intermediate segments, and for direct current circuits must be provided with an automatic device which will interrupt the supply circuit before the speed of the motor falls to less than 1/3 of its normal value. In motor-starting rheostats for alternating current circuits the automatic interrupting device may be omitted.

g. Overload-release devices which are inoperative during the process of starting a motor will not be approved, unless other circuit breakers or fuses are installed in connection with them.

h. Rheostats, resistance boxes and equalizers must, after 100 operations under the most severe normal conditions for which the device is designed, show no serious burning of the contacts or other faults, and the release mechanism of motor-starting rheostats must not be impaired by such a test. Field rheostats, or main-line regulators intended for continuous use, must not be burned out or depreciated by carrying the full normal current on any step for an indefinite period. Resistances intended for intermittent use (such as on electric cranes, elevators, etc.) must be able to carry their rated current on any step for as long a time as the character of the apparatus which they control will permit them to be used continuously. Starting duty resistances for direct current motors shall be so constructed that when the voltage marked on the name plate or not more than 10 per cent. in excess thereof is applied to the main line terminals, and the starting arm or other starting mechanism is operated at such a rate that the current through the resistance does not fall below the rated full load

current, and this test is continued for not more than 3 minutes, there shall be no resultant flaming or molten droppings; or if the resistance conductor is fused, the arc or any attendant flame or molten droppings shall be confined within the rheostat. Starting duty resistances for alternating current motors shall be tested as specified above for direct current starting resistances, except that for starters especially designed for squirrel cage or single phase motors the test conditions shall be so modified either by reduction in the applied voltage or by the use of supplementary resistances as to produce approximately the same current conditions as will be met with in service. Continuous duty resistances shall either be so constructed that if the resistive conductor be fused the arc or any attendant flame or molten droppings shall be confined within the rheostat or they shall be constructed with such capacity that if subjected to a current flow throughout the entire rheostat, 25 per cent. in excess of that at which they are rated, for a period of 2 hours, there shall be no resultant flaming or molten droppings.]

§579. Auto-starters.

a. Coils and switches of auto-starters used in dusty and linty places or where exposed to flyings of combustible material, must be completely enclosed in substantial metal cases so constructed as to effectually exclude ordinary dust, lint or flyings of combustible material.

Auto-starters used in places where the above conditions do not exist, may be of any approved type. Cases for either transformer coils or switches must provide for access to the interior for inspection and for renewal of oil, and must be so constructed that when mounted on a plain surface the casing will make contact with such surface only at points of support. An air space of at least 1/4 inch between the casing and supporting surface will be required. The oil tank shall be marked in a suitable manner to indicate the proper oil level. When such device carries a visual oil indicator, the marking shall be for the proper oil level with the starter assembled. If the visual indicator is not used, markings shall indicate the oil level prior to assembling. The switch must provide an off position, a running position and at least one starting position. It must be so arranged that it will be held in off and running positions but cannot be left in a starting position or without the proper running overload protective devices in the circuit. The construction throughout must be thoroughly substantial.

b. Clamps for connecting wires to the terminals [boards] must be so designed as to insure a thoroughly good connection and must be sufficiently strong and heavy to withstand [considerable] hard usage. For currents above 30 amperes, lugs into which the connecting wires may be soldered, or approved solderless connectors, must be used. Clamps or lugs will not be required when leads are provided as a part of the device.

c. Auto-starters must be plainly marked, where the marking may be readily seen after the device is installed, with the rating and name of the maker; terminals to be so marked as to indicate to what part of the circuit each is to be connected.

d. The insulation of the completely assembled apparatus must withstand for 1 minute a potential test between live metal parts and frame, core and case as follows:

Rated terminal voltage of circuit.	Testing voltage.
Not exceeding 400 volts.....	1500 volts
401-800.....	2000 "
801-1200.....	3500 "
1201-2500.....	5000 "
2500 up.....	Double normal rated voltages

e. With full line voltage applied to line terminals and current taken from taps giving between 40 and 60 per cent. of the normal line voltage, 300 per cent. of full load current of the motor applied for the first 15 seconds of each 4-minute period for not more than 1 hour, auto-starters must show no resultant flaming or molten droppings. The oil, if any, in which the transformer windings are immersed shall not overflow the containing case.]

§580. Reactive coils and condensers.

a. Reactive coils must be made of non-combustible material, mounted on non-combustible bases and treated, in general, as sources of heat.

b. Condensers must be treated like other apparatus operating with equivalent voltage and currents. They must have non-combustible cases and supports, and must be isolated from all combustible materials and, in general, treated as sources of heat.

§581. Transformers, low potential.

1. Air cooled transformers.

a. Air cooled transformers must be placed in substantial metallic or other non-combustible cases, which completely enclose all current-carrying parts, with the exception of the terminals of the secondary winding of bell or other signaling transformers which may be mounted outside the casing. Air cooled transformers must be so constructed that when mounted on a plane surface the casing will make contact with such surface only at the points of support. An air space of at least 1/4 inch between the transformer casing and the supporting surface will be required. The construction throughout must be substantial and thoroughly workmanlike.]

a. Air cooled transformers must be placed in substantial metallic or other non-combustible cases, which completely enclose all current-carrying parts, with the exception of the terminals of the low voltage windings as specified below. Sheet metal cases must be not less than 1-32 inch in thickness, and cast iron must be not less than 1-8 inch in thickness. Such transformers must be so constructed that when mounted on a plane surface the casing will make contact with such surface only at the points of support. An air space of at least one-fourth of an inch between the transformer casing and the supporting surface will be required.

Leads of approved cable at least 6 inches in length and so secured as to prevent strain coming on the connections to the coils, must be brought out of the case through approved insulating bushings, except for bell-ringing and toy transformers, the low voltage terminals of which may be binding posts mounted on the case.

The construction throughout must be substantial and thoroughly workmanlike.

b. Air cooled transformers must be plainly marked, where the marking will be readily seen after the transformer is installed, with the name of maker, with the frequency, the [primary] high voltage and all [secondary] low voltages, and the rated capacity in kilo-volt-amperes.

c. [Air cooled transformers must be constructed to comply with the following tests:

1. The secondary winding shall be short circuited and normal voltage shall be applied to the primary winding for a period sufficiently long either to cause a burnout or to cause the casing to attain a constant temperature. If the transformers when so tested burn out there shall be no escape of flames or molten metal.

2. When heated to normal full load operating temperature the insulation of the transformer shall withstand continuously for 1 minute a difference of potential (alternating), between high voltage coils and between the high voltage coils and the core, in accordance with the standardization rules of the American Institute of Electrical Engineers.]

2. Bell ringing or other signaling transformers.

d. Transformers for bell-ringing or other signaling service only must be constructed in accordance with the [following specifications], requirements of paragraph a of this section, and may be approved for use when all wiring on the [primary] high voltage side is in accordance with the requirements of article 4 of this chapter.

e. [Must comply with the requirements of paragraphs a and b of this section and also with the following specifications:—

1. Provision shall be made for connecting the primary winding to the supply circuit by leads of approved rubber-covered wire not smaller than No. 14 B. & S. gage, which must be securely soldered within the case to the ends of the primary coil. These leads must pass through the walls of the case through insulating bushings which must separately insulate each conductor. The leads must extend at least 6 inches outside the case and provision must be made to prevent strain coming on the points where the leads are attached to the primary winding.

2. The primary voltage rating shall not be over 125 volts.

3. The design of the transformer shall be such that when any 2 secondary terminals are short-circuited, while 110 volts (60 cycles) are impressed on the primary, the input measured by a watt meter in the primary circuit shall not be more than 25 watts.

4. In addition to the test prescribed in paragraph c of this section, the transformers shall be run at normal primary voltage and with secondary short circuited until a constant temperature is reached as indicated by a mercury thermometer on



the outside of the case. The rise in temperature so measured shall not exceed 50 degrees Centigrade. At the end of the heating test above, the insulation shall withstand for 1 minute the application of 2,500 volts A. C. between primary and secondary coils and between primary and the core or case.

5. The proper terminals must be marked "Line" and "Bell."

e. Such transformers must be plainly marked where it can be seen after installation, with the name of the manufacturer, the frequency, the high voltage and all low voltages, and the proper terminals must be marked "Line" and "Bell." The rating of high voltage winding must not be over 125 volts.

f. The design of the transformer must be such that when any two low voltage terminals are short circuited while the rated voltage is impressed on the high voltage coil, the input measured by a wattmeter in the high voltage circuit will not be more than 25 watts.

3. Toy transformers.

g. Transformers for operating toys must be constructed in accordance with the requirements of paragraph a of this section.

h. Such transformers must be marked with the name of the manufacturer, high and all low voltages, the frequency and the rated capacity in volt-amperes.

The high voltage rating must not exceed 125 volts, nor the low voltage rating exceed 25 volts.

i. Such transformers must be so constructed as to stand the following test:

With the high voltage coil connected to a circuit of the rated voltage and frequency and with the low voltage coils short circuited, the input as measured by wattmeter must not exceed 250 watts. When so connected, and run until constant temperature is reached or until burnout occurs, the case must not be injured and there must be no escape of flames or molten metal.

§582. Lightning arresters.

a. Lightning arresters must be of approved construction.

§583. Electric signs (for low potential systems only).

a. Electric signs shall be constructed entirely of metal, or other incombustible material, except the insulation [thereof] on the wires. Sheet metal must be not less than 28 U. S. sheet metal gage. All metal must be galvanized, enameled, treated with at least 3 coats of anti-corrosive paint, or otherwise protected in an approved manner against corrosion.

b. Electric signs must be so constructed as to secure ample strength and rigidity.

Electric signs must be so constructed as to be practically weatherproof [so as] and to enclose all terminals and wiring other than the supply leads, except that open work will be permitted for signs on roofs or open ground where not subject to mechanical injury, provided the wiring is in accordance with paragraph e of this section. [Cut-outs] transformers unless of weatherproof type, cut-outs, flashers and other similar devices on or within the sign structure, must be enclosed in approved cut-out boxes or cabinets, except that if on or within the sign structure they may be placed in a separate, completely enclosed [accessible and weatherproof] compartment, or in a substantial weatherproof box or cabinet of metal of thickness not less than that of the metal of the sign itself. Each compartment must have suitable provision for drainage through one or more holes each not less than 1/4 inch in diameter.

c. Electric signs must have the maker's name or trade-mark permanently attached to the exterior.

d. Receptacles must be so designed as to afford permanent and reliable means to prevent possible turning; must be so designed and placed that terminals will be at least 1/2 inch from other terminals and from metal of the sign, except that where open work is permitted this separation must be 1 inch. Miniature receptacles will not be approved for use in outdoor signs.

e. Wiring must be approved rubber covered, not less than No. 14 B. & S. gage. [and, except where open work is permitted, must be double braided]. Wiring must be neatly run and so disposed and fastened as to be mechanically secure. Wires must be soldered to terminals, and exposed parts of wires and terminals must be treated to prevent corrosion. Wires must, where they pass through walls or partitions of the sign be protected by approved bushings. On outside of sign structure, except where open work is permitted, wires must be in approved metal conduit or in approved lead sheathed armored cable.

For open work, wires must be rigidly supported on non-combustible non-absorptive insulators which separate the wires at least 1 inch from the surface wired over. Rigid supporting requires, under ordinary conditions where wiring over flat surfaces, supports at least every 4 1/2 feet. If the wires are liable to be disturbed the distances between supports should be shortened. In those parts of circuits where wires are connected to approved receptacles which hold them at least 1 inch from surface wired over, and which are placed not over 1 foot apart, such receptacles will be considered to afford the necessary support and spacing of the wires. Between receptacles more than 1 foot, but less than 2 feet, apart an additional non-combustible, non-absorptive insulator maintaining separation and spacing equivalent to the receptacles, must be used. Except as above specified wires must be kept apart at least 2 1/2 inches for voltages up to 300, and 4 inches for higher voltages.

f. Leads from signs must pass through the walls of the sign either through approved metal conduit or armored cable, or must be neatly cabled and pass through one or more bushings of approved non-combustible, non-absorptive insulated [bushings] material.

g. Not over 1,320 watts shall be dependent upon final cutout.

#### ARTICLE 6.

##### Miscellaneous.

#### Section 685. Signaling systems.

686. Wireless telegraph apparatus.

687. Electric gas lighting.

688. Insulation resistance.

§685. Signaling systems.

1. Exception.

All wiring, apparatus and devices of signalling systems used for the transmission of intelligence as to fire, shall conform to such rules and regulations as the fire commissioner may prescribe.

2. Outside wires.

a. Outside wires must be run in underground ducts or strung on poles, and kept off the roofs of buildings, except by special permission, and must not be placed on the same cross-arm with electric light or power wires. They must not occupy the same duct, manhole or handhole of conduit systems with electric light or power wires. Single manholes, or handholes separated into sections by means of partitions of brick or tile will be considered as conforming with the above requirement. When the entire circuit from central station to building is run in underground conduits, paragraphs b to m inclusive of this section do not apply.

b. When outside wires are run on same pole with electric light or power wires, the distance between the two inside pins of each cross-arm must not be less than 24 inches. When the wires are carried in approved cables, paragraphs c, d and e of this section do not apply.

c. Where wires are attached to the outside walls of buildings, they must have an approved rubber insulating covering, and on frame buildings or frame portions of other buildings shall be supported on glass or porcelain insulators, or knobs.

d. The wires from last outside support to the cut-outs or protectors must be of copper, and must have an approved rubber insulation; must be provided with drip loops immediately outside the building and at entrance.

e. Wires must enter building through approved non-combustible, non-absorptive insulating bushings sloping upward from the outside, and both wires may enter through the same bushing, if desired.

3. Ten ampere installations.

f. An all-metallic circuit shall be provided, except in telegraph systems.

g. At the entrance of wires to building, approved single pole cut-outs, designed for 251-600 volts potential and containing fuses rated at not over 10 amperes capacity, shall be provided for each wire. These cut-outs must not be placed in the immediate vicinity of easily ignitable stuff, or where exposed to inflammable gases, or dust or to flyings of combustible material.

h. The wires inside building shall be of copper not less than No. 16 B. & S. gage, and must have insulation and be supported, the same as would be required for an installation of electric light or power wiring, 0-600 volts potential.

i. The instruments shall be mounted on bases constructed of non-combustible, non-absorptive insulating material. Holes for the supporting screws must be so located, or counter-sunk, that there will be at least 1-2 inch space, measured over the surface, between the head of the screw and the nearest live metal part.

4. Less than 10 ampere installations.

j. Wires must be provided with an approved protective device located as near as possible to the entrance of wires to building. The protector must not be placed in the immediate vicinity of easily ignitable stuff, or where exposed to inflammable gases or dust or flyings of combustible materials.

k. Wires from entrance to building to protector must be supported on porcelain insulators, so that they will come in contact with nothing except their designed supports.

l. The ground wire of the protective device shall be run in accordance with the following requirements:—

1. Shall be of copper and not smaller than No. 18 B. & S. gage.

2. Must have an insulating covering approved for voltages from 0 to 600, except that the preservative compound may be omitted.

3. Must run in as straight a line as possible to a good permanent ground. This may be obtained by connecting to a water or gas pipe connected to the street mains or to a ground rod or pipe driven in permanently damp earth. When connections are made to pipes, preference shall be given to water pipes. If attachment is made to gas pipe, the connection in all cases must be made between the meter and the street mains. In every case the connection shall be made as near as possible to the earth. When the ground wire is attached to a water pipe or a gas pipe, it may be connected by means of an approved ground clamp fastened to a thoroughly clean portion of said pipe, or the pipe shall be thoroughly cleaned and tinned with rosin flux solder, and the ground wire shall then be wrapped tightly around the pipe and thoroughly soldered to it. When the ground wire is attached to a ground rod driven into the earth, the ground wire shall be soldered to the rod in a similar manner. Steam or hot-water pipes must not be used for a protector ground.

m. The protector to be approved must comply with the following requirements:

1. For instrument circuits of telegraph systems, an approved single pole cut-out in each wire, designed for 2,000 volts potential, and containing fuses rated at not over 1 ampere capacity. When main line cut-outs are installed as called for in paragraph g of this section the instrument cut-outs may be placed between the switchboard and the instrument as near the switchboard as possible;

2. In all other systems the protector must be mounted on non-combustible, non-absorptive insulating bases, so designed that when the protector is in place, all parts which may be alive will be thoroughly insulated from the wall to which the protector is attached. The protector must have the following parts:

A lightning arrester which will operate with a difference of potential between wires of not over 500 volts, and so arranged that the chance of accidental-grounding is reduced to a minimum;

A fuse designed to open the circuit in case the wires become crossed with light or power circuits. The fuse must be able to open the circuit without arcing or serious flashing when crossed with any ordinary commercial light or power circuit.

A heat coil, if the sensitiveness of the instrument demands it, which will operate before a sneak current can damage the instrument the protector is guarding;

Heat coils are necessary in all circuits normally closed through magnet windings, which cannot indefinitely carry a current of at least 5 amperes;

The heat coil is designed to warm up and melt out with a current large enough to endanger the instruments if continued for a long time, but so small that it would not blow the fuses ordinarily found necessary for such instruments.

3. The fuses must be so placed as to protect the arrester and heat coils, and the protector terminals must be plainly marked "line," "instrument," "ground." An easily read abbreviation of the above words will be allowed.

5. Generally.

The following rules apply to all systems whether the wires from the central office to the building are overhead or underground:

n. Wires beyond the protector, or wires inside buildings where no protector is used, must be neatly arranged and securely fastened in place in some convenient, workmanlike manner. They must not come nearer than 2 inches to any electric light or power wire in the building, unless separated therefrom by some continuous and firmly fixed non-conductor creating a permanent separation; this non-conductor to be in addition to the regular insulation on the wire.

o. Wires where bunched together in a vertical run within any building must have a fire-resisting covering sufficient to prevent the wires from carrying fire from floor to floor unless they are run either in non-combustible tubing or in a fireproof shaft, which shaft must be provided with fire stops at each floor. Signaling wires and electric light or power wires may be run in the same shaft, provided that one of these classes of wires is run in non-combustible tubing, or provided that when run otherwise these two classes of wires shall be separated from each other by at least 2 inches. In no case shall signaling wires be run in the same tube with electric light or power wires.

p. Transformers or other devices for supplying current to signaling systems from light, heat or power circuits must be of a design expressly approved for this purpose. The primary wiring must be installed in accordance with the requirements of article 4 of this chapter, and the secondary wiring in accordance with this article. §686. Wireless telegraph apparatus.

In setting up wireless telegraph apparatus, all wiring within the building must conform to the requirements of this chapter for the class of work installed and to the following additional specifications:

a. Aerial conductors must be permanently and effectively grounded at all times when station is not in operation by a conductor not smaller than No. 4 B. & S. gage copper wire, run in as direct line as possible to water pipe at a point on the street side of all connections to said water pipe within the premises, or to some other equally satisfactory earth connection.

b. Aerial conductors when grounded as above specified must be effectually cut off from all apparatus within the building.

c. Or the aerial must be permanently connected at all times to earth in the manner specified above, through a short-gap lightning arrester, said arrester to have a gap of not over .015 inch between brass or copper plates not less than 2 1/2 inches in length parallel to the gap, and 1 1/2 inches the other way with a thickness of not less than 1/4 inch mounted upon non-combustible, non-absorptive insulating material of such dimensions as to give ample strength. Other approved arresters of equally low resistance and equally substantial construction may be used.

d. In cases where the aerial is grounded as specified in paragraph a of this section, the switch employed to join the aerial to the ground connection shall not be smaller than a standard 100 ampere knife switch.

e. Where supply is obtained direct from the street service the circuit must be installed in approved metal conduits or armored cable. In order to protect the supply system from high potential surges, there must be inserted in circuit either a transformer having a ratio which will give a potential on the secondary leads not to exceed 550 volts, or two condensers in series across the line, the connection between said condensers to be permanently and effectually grounded. These condensers should have capacity of not less than 1/2 micro-farad.

§687. Electric gas lighting.

a. Electrical gas lighting, unless it is the frictional system, must not be used on the same fixture with the electric light, except under special permission in writing.

§688. Insulation resistance.

The wiring in any building must comply with the following requirements: The complete installation must have a resistance between conductors and between all conductors and the ground (not including attachments, sockets, receptacles, etc.) not less than that given in the following table:

Up to 5 amperes.....	4,000,000 ohms
Up to 10 amperes.....	2,000,000 ohms
Up to 25 amperes.....	800,000 ohms
Up to 50 amperes.....	400,000 ohms
Up to 100 amperes.....	200,000 ohms
Up to 200 amperes.....	100,000 ohms
Up to 400 amperes.....	50,000 ohms
Up to 800 amperes.....	25,000 ohms
Up to 1,600 amperes.....	12,500 ohms

The test must be made with all cut-outs and safety devices in place. If the lamp sockets, receptacles, electroliers, etc., are also connected, only 1/2 the resistance specified in the table will be required.

Section 2. This ordinance shall take effect immediately.

Which was referred to the Committee on General Welfare.

Note—New matter in italics; old matter in brackets [] to be omitted.

Which was laid over.



Reports of the Committee on Finance—

No. 355.

**Report of the Committee on Finance in Favor of Filing Request of the Surrogates of New York County for Special Revenue Bonds, \$1,000, for Purchase of Equipment, Etc.**

The Committee on Finance, to which was referred on April 11, 1916 (Minutes, page 8), the annexed request of the Surrogates of New York County for special revenue bonds, \$1,000, for purchase of equipment, etc., respectfully

REPORTS:

That the Committee has been advised by the Bureau of Contract Supervision that funds are available for this purpose by transfer from other accounts. It therefore recommends that the request be placed on file.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

Chambers of the Surrogates' Court, County of New York, New York, March 29, 1916.

To the Honorable the Board of Aldermen, New York City:

Gentlemen—We desire respectfully to call your attention to the fact that our fund for the purchase of equipment for this year (Code No. 3208, 1916), for which the sum of \$779 was appropriated, has now an unencumbered balance of only \$92.57. This is the fund from which we purchase our law books, rugs, furniture and other equipment.

Up to date we have spent \$55.83 for furniture and \$121.93 for window ventilators, typewriter equipment and sundries. The great part of the fund, both in this and other years, has been expended for law books, for which we have already spent \$513.50 since January 1, 1916. The law library has in the past been very poorly equipped, and, with a view to more nearly bringing it up to our requirements, some sets of books which were badly needed were purchased last year, and this year a set of the United States Reports have been added. Our expenditure for various law reports which are issued from time to time is necessarily large, as the private chambers of each Surrogate, as well as the law library, have in most cases to be supplied, while, in the matter of yearly volumes of the Code of Civil Procedure, advance sheets, etc., it is necessary also to provide the heads of departments with copies.

Two years ago \$1,700 was appropriated for this fund by the Board of Estimate and Apportionment, and of that amount we expended \$1,440.28, while last year, although the appropriation was reduced to \$779, special revenue bonds to the amount of \$250 and a transfer of a further amount of \$250 were made later in the year, and we expended during that year \$1,276.08.

In our estimate for this year we requested an appropriation of \$1,700, but \$779 only was allowed. We now respectfully ask your Board to recommend to the Board of Estimate and Apportionment the issuance of \$1,000 in revenue bonds to be placed to the credit of No. 3208, 1916, which, with the present unexpended balance, will amount to \$1,092.57. This amount we propose to expend for the following necessary equipment:

Three typewriters (old ones to be exchanged), estimated	\$145 53
One typewriter chair	7 20
Binding straps for Record Room	39 53
Stencils (estimated from 1915, less \$4.83 already spent for this purpose)	72 33
Legislative Documents	50 00
Codes of Civil Procedure, 25 copies at \$3.50 each	87 50
Advance Sheets, 8 copies at \$9 each	72 00
Due American Law Book Co. on Corpus Juris (including "Cyc"), as per agreement, \$15 per month, beginning August 1, 1916	75 00
For other law books and law reports, the cost of which can only be estimated on the basis of 1915, as they consist mostly of subscriptions, as follows: New York Reports, Appellate Division Reports, Miscellaneous Reports, New York Supplemental Reports, Northeastern Reports, Abbott's Supplemental Digest (annual and general), U. S. Reports, Cumming & Gilbert's Consolidated Laws, Laws of New York (supplements), New York Digest, New York Annotated Digest, Supplement to Ash's Greater New York Charter, Bliss' Annotated Code (supplement), Mills' Surrogates' Reports, Session Laws, Bender's Law Diaries, Shepherd's Citations, Supplement to "Words and Phrases," new text-books (estimated)	411 00
Furniture (estimated)	100 00
Unforeseen expenses	32 48
	\$1,092 57

Every item of the above equipment is absolutely necessary for use in the administration of this court and office. It will be seen from the above list of law reports, to which we are compelled to subscribe, how imperative is the need for sufficient funds. We have at present only \$92.57 with which to meet the above list of obligations, and we respectfully urge upon your honorable Board the necessity of granting our request for the issuance of \$1,000 in special revenue bonds for necessary and routine expenses, as specified herein. Very respectfully,

JOHN P. COHALAN, ROBERT LUDLOW FOWLER, Surrogates.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, April 28, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen: No. 355—Surrogates' New York County, Request for Special Revenue Bonds, \$1,000, for Purchase of Equipment, Etc.

Dear Sir—The need for the equipment for which the above amount has been requested has been examined into, and the budget request, allowances made thereon and the expenditures made from the 1916 appropriation for equipment have been analyzed.

Reference to the budget sheets reflecting the detail of the appropriation for the purchase of equipment for the offices of the Surrogates of New York County discloses the following:

	Request.	Allowance.
Law Books	\$700 00	\$600 00
Rugs	150 00	
Filing Cabinets	100 00	50 00
Typewriters	200 00	
Stencils	120 00	50 00
Ventilators	150 00	
Desks	140 00	
Chairs	25 00	
File Boards (for Record Room)	50 00	29 00
Typewriter Keys	15 00	
Legislative Documents	50 00	50 00
	\$1,700 00	\$779 00

In requesting the issuance of the revenue bonds the Surrogates state that it was proposed to expend this amount for the following necessary equipment:

Three typewriters	\$145 53
One typewriter chair	7 20
Binding straps for record room	39 53
Stencils	72 33
Legislative documents	50 00
Code of Civil Procedure	87 50
Advance sheets	72 00
Due American Law Book Co. on Corpus Juris (including "Cyc") as per agreement, \$15 per month, beginning August 1, 1916	75 00
For various law books	411 00
Furniture	100 00
Unforeseen expenses	32 48
	\$1,092 57

An analysis of expenditures and outstanding open market orders against the appropriation account for the purchase of equipment discloses the following:

Letter files	\$1 50
Dusters and whisk brooms	8 05

Desk	38 83
Cook stove	5 40
Rug	10 50
Library folding steps	6 50
Law books	513 50
Ventilators	60 00
Rubber stamps	4 83
Speed keys	3 15
Trow Directory	12 00
File boards	24 00
Metal tipped guides	3 00

\$691 26

A comparison between the expenditures and the allowances reveals the fact that the sum of \$147.43 was expended for items not allowed in the budget. In addition the appropriation account was drawn upon to the extent of \$300 for one set of U. S. Supreme Court Reports, 238 separate volumes, which was not taken into consideration at the time of the preparation of the budget. These expenditures, which were not provided for, account for the depletion of the budget allowance and the necessity for the issuance of revenue bonds to replenish the account for the needs of the department for the remainder of the year.

From an investigation of the various items of the request, the following appear to be necessary:

One typewriter chair	\$7 20
Stencils	72 33
Legislative documents	50 00
Codes of Civil Procedure	87 50
Due American Law Book Co. on Corpus Juris (Inc. "Cyc")	75 00
Various law books	411 00

\$703 03

Less unencumbered balance in appropriation account..... 87 74

\$615 29

The following items of the request are not recommended for the reasons stated: *Three typewriters.* The question of the exchange of the present typewriters through the purchase of new ones was considered at the budget time and it was decided that the condition of the machines was not such as would warrant the necessity for the purchase of new ones. A recent examination of the typewriter machines indicates that they are in good enough condition to meet the requirements and that the consideration of the purchase of new ones can be deferred until next budget, as being not sufficiently important to warrant the issuance of revenue bonds.

*Binding straps for record room.* There is at present a sufficient stock of binding straps on hand to meet the requirements of the department for the balance of the year.

*Advance sheets, 8 copies at \$9 each.* The analysis of the expenditures made from the appropriation account discloses that the 8 copies of the advance sheets have already been paid for.

*Furniture estimated and unforeseen expenses.* No recommendation is made for these items due to the fact that there was no apparent necessity for an appropriation for these purposes.

While many of the articles for which an issuance of revenue bonds is requested were provided for in the budget, and while the depletion of this account is due to the purchase of articles not provided for, in fact in some cases specifically denied, it is apparent that the needs of the department require the replenishment of this account to the extent of \$600. However, in account No. 3206 Salaries Regular Employees, accruals amounting to approximately \$3,800 are available for transfer.

It is suggested that the Surrogates of New York County be requested to make application to the Board of Estimate and Apportionment for a transfer of funds in the amount of \$600 from account No. 3206 to account No. 3208, thus obviating the necessity for the issuance of revenue bonds. Respectfully,

TILDEN ADAMSON, Director.

Which report was accepted.

No. 371—(S. O. No. 69).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$5,000, for the Purchase of an Asphalt Truck—President, Borough of Queens.**

The Committee on Finance, to which was referred on April 11, 1916 (Minutes, page 33), the annexed request of the President of the Borough of Queens for special revenue bonds, \$5,000, for the purchase of an asphalt truck, respectfully

REPORTS:

That the annexed report of the Bureau of Contract Supervision sustains the need of this truck, and recommends that \$4,500 is sufficient for the purpose, and as no funds are available for transfer, the Committee recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of four thousand five hundred dollars (\$4,500), the proceeds whereof to be used by the President of the Borough of Queens for the purpose of purchasing an asphalt truck for the Bureau of Highways, all obligations contracted for hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

The City of New York, Office of the President of the Borough of Queens, Long Island City, April 1, 1916.

To the Honorable Board of Aldermen, City of New York:

Gentlemen—Your approval is hereby requested, in accordance with the provisions of subdivision 8 of section 188 of the Greater New York Charter, of the authorization of an issue of Special Revenue Bonds to an amount not exceeding the sum of five thousand (\$5,000) dollars, to provide funds for the purchase of an asphalt truck for the use of the Bureau of Highways, this Department.

There has been assigned to this Department for the past year an asphalt truck, which has been in constant use, and it has been found that by the purchase of an additional truck much more work could be accomplished by the Maintenance Division of the Bureau of Highways in the repairing of the highways throughout the Borough. This truck is to be used for the purpose of conveying material used in the repair of the streets in the Borough.

As the weather conditions will now permit our working force to proceed with the work of repairing the highways, I would request that your Board pass upon the matter as soon as possible. Yours very truly,

MAURICE E. CONNOLLY, President of the Borough of Queens.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, May 8, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen: No. 371—President, Borough of Queens, Request for Special Revenue Bonds, \$5,000, to Provide Funds for the Purchase of an Asphalt Truck for the Bureau of Highways.

Sir—An examination of this request indicates that it is proposed to purchase a five-ton automobile truck of standard make for the purpose of hauling asphalt in connection with the operation of the asphalt plant.

The principal need for this equipment is due to the fact that the roadways of Broadway, from Murray Lane to City Line; Shell Road, from Hoffman Boulevard to Jackson Avenue; Metropolitan Avenue, from Dry Harbor Road to Jamaica Avenue; and Rockaway Boulevard, from Far Rockaway to Rockaway Beach, which are under guarantee, and the repair of which was not taken into consideration at the preparation of the Budget, will have to be kept in repair by the maintenance forces of the Bureau of Highways, due to the abandonment of the contracts.

The retained percentages on the various contracts appear to be sufficient for the payment of necessary labor and material, but after such payment there will not be sufficient balance to permit of the purchase of an auto truck, which, owing to the extremely long hauls, will be more economical than to employ teams and trucks in transporting the asphalt. The average hauls on the various roadways heretofore mentioned are from four to twelve miles each way, from the asphalt plant, and it is stated that asphalt hauled by a team and truck at these long distances would not be at the desired temperature to be handled properly.



In addition to the above work, the truck may be very advantageously used on other repair or construction work where the hauls are very long.

However, investigation has revealed that a five-ton automobile truck with a hydraulic hoist can be purchased for approximately \$4,500, and it would appear that an allowance in this amount would be sufficient.

The President of the Borough of Queens states that there are no funds available for transfer within the present Budget appropriations for the purchase of the truck.

Very truly yours,  
TILDEN ADAMSON, Director.

Which was laid over.

No. 375.

**Report of the Committee on Finance in Favor of Filing Request of the Commissioner of Parks, Manhattan and Richmond, for Special Revenue Bonds, \$20,000, for the Acquisition of a Boating and Skate House Plant in Central Park.**

The Committee on Finance to which was referred on April 11, 1916 (Minutes, page 56), the annexed request of the Commissioner of Parks, Boroughs of Manhattan and Richmond, for Special Revenue Bonds, \$20,000 for the acquisition of a boating and skate house plant in Central Park, respectfully

**REPORTS:**

That this matter was referred to the Bureaus of Contract Supervision and Standards for investigation and reports, which reports are annexed hereto, and in consideration of said reports, the committee have concluded that favorable action on this matter is not advisable. It, therefore, recommends that the request be placed on file.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

City of New York, Department of Parks, Boroughs of Manhattan and Richmond, Municipal Building, 10th Floor, April 10th, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen, City Hall, New York City:

Dear Sir—Request is hereby made for the issue, in accordance with the provisions of subdivision 8, section 188 of the Greater New York Charter, of special revenue bonds to the amount of \$20,000, the proceeds to be used for the acquisition of a boating and skate house plant in Central Park and for the municipal operation thereof during the season of 1916.

After careful consideration of various plans of operation, and having observed the methods employed in other large cities of this country, I reached the conclusion that these privileges should be operated in the future so as to provide better service at less cost to the greatest number of people of New York. In many of the large cities I found the municipalities operating privileges such as these, treating the matter of service as more important than that of revenue, and thus charging very low rates, nevertheless, getting a very fair profit on the investment.

Last year in St. Paul, Minn., the operation of these concessions obtained a profit of \$8,000. Minneapolis, a figure slightly below this amount, and several other cities have reports equally favorable.

These concessions for many years past have been held by the same privilege holder. I have no doubt he is a very worthy man, but I do not feel that under the past method it has proved possible to make the concessionaire responsive to the changing needs of the citizens who use these privileges. Thus it is that this concessionaire has, down to the present, run his privilege precisely on the basis of the needs of the park some ten or fifteen years ago, and has not provided the kind of rates demanded by the large crowds under present conditions.

There is no doubt that this form of recreation in the parks can be made as useful and popular as it is in other large cities.

The Corporation Counsel rendered an opinion that under the present New York Charter this City was not at liberty to operate municipally its park privileges, as is done in many of the large cities of the country. However, he has recently rendered me a modified opinion that would make possible the operation of the boating and skating privileges herein planned by allowing the public to take boats and use skating facilities for a certain period without charge, merely making a small charge after a certain time limit has expired in case the boats and skates are not returned, because the users wished to make use of them for a longer period. It is on this basis that it is proposed to operate these privileges in case the special revenue bonds requested are authorized.

I feel that it is important that New York make a trial of municipal operation, and urge that this opportunity be now taken advantage of when the term of this privilege has run out.

The 1916 cost is estimated as follows:

Operation of the plan as proposed will entail cost for additional personal service as follows:	
Carpenter (1), 300 days, at \$5 per day.....	\$1,500 00
Painters (3), 150 days, at \$4 per day.....	600 00
On the pond will need two men in connection with the swan boats as Attendants, 150 days, at \$3 per day each.....	900 00
A Cashier or Clerk for 150 days, at \$75 per month.....	375 00
On the large lake will need four Attendants, 150 days, at \$3 per day each. One Clerk to have charge of the accounts, 150 days, at \$75 per month.....	1,800 00
On the Harlem Mere will need two Attendants, 150 days, at \$3 per day each.....	375 00
200 days' of attendance service to take care of the checking at the various skate houses during the skating season.....	900 00
600 00	
Skate Houses and Equipment—	
It is estimated by the Department that it will cost to erect portable skate houses at both the Harlem Mere and the lower lake at least.....	3,200 00
The estimated cost to procure equipment which would be necessary for operating the boating and skating privilege in 1916.....	10,000 00
Total.....	\$20,250 00

The main privilege holder in Central Park has itemized his present equipment as costing \$26,375, which he would be willing to sell for \$21,369.

The privilege holder on Harlem Meer lists his equipment as having cost him \$1,224.30, and has signified his willingness to sell it for \$833.50.

While the foregoing estimates may be equitable and just, and it would not seem possible to duplicate the articles enumerated in the open market at anything near the prices designated, the Purchasing Agent of this Department has done considerable investigation along these lines to determine whether it would not be possible to buy similar equipment for early delivery, and has obtained proposals, which indicate that we will have several bidders in any competition which we might advertise. The proposals submitted indicate that it would cost not less than \$10,000 to procure an equipment, which would be at all adequate for the purpose of operating the boating and skate privileges on the various Central Park lakes. Very truly yours,

CABOT WARD, Commissioner of Parks, Manhattan and Richmond.

City of New York, Board of Estimate and Apportionment, Bureau of Standards, Municipal Building, May 6, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Committee on Finance, Board of Aldermen:

Sir—In response to your letter of April 13, 1916, for a report on a request of the Commissioner of Parks, Manhattan and Richmond, for \$20,250 in special revenue bonds for the acquisition of the Boating and Skating House plant in Central Park, and for the Municipal operation thereof during the season of 1916, I submit as follows:

**Present System of Operation.**

At the present time the privilege of operating these activities is awarded to the highest bidder at public letting. The holder of the privilege purchases and maintains his own equipment, engages the necessary force for operation, contracts with the City to pay a certain fixed rental in specified installments, relieves the City of liability on account of damage suits and conducts his activities under the general supervision of the Department. The three lakes embraced in the scope of these activities and for which the concessionaire pays rental are as follows:

Location and Concessionaire	Annual Rental
Large Lake, August Braum.....	\$2,500 00
Swan Lake, August Braum.....	300 00
Harlem Mere, William H. Keeler.....	225 00
Total.....	\$3,025 00

**Proposed System of Municipal Operation.**

It is proposed to allow the public the use of the boats free for a half hour and to exact a penalty of 25 cents per hour for excess time. This method is suggested in view of an opinion of the Corporation Counsel to the effect that the City cannot legally make a regular charge for the boats. A deposit of \$1 or \$2 will be demanded when the boats are taken out and from this deposit any accruing penalties will be deducted.

The swan boats are to be entirely free for the use of the public. The Department proposes to adopt a schedule which will allow children from orphan asylums, schools, etc., the use of these boats on certain specified days and at certain hours, the general public to have the use of the boats at other times.

The electrically propelled launches now in use which accommodate thirty persons each will be discarded by the Department for the reason that it is impossible to derive any income from the operation by the City under the Corporation Counsel's opinion, which permits only an income in the shape of penalties.

The details of the plans for skating are not fully completed. The general plan, however, will be to work out a system of penalties similar to the one proposed for the operation of the boats.

An estimated gross revenue of \$18,000 for 1916 has been worked out on the theory that most persons will use the boats for at least an hour. An investigation of the operation of the boat privileges shows that for the swan and row boats there is needed on week days a force of 20 men whose wages total \$32.50 per day. On Sundays and holidays this force is increased to 33 men at a cost of \$88. This aggregates a weekly cost of \$283 for personal service or at least \$5,000 per season. In the light of these figures, the Commissioner's request for \$2,700 for this purpose appears wholly inadequate. In making the comparison, it should further be borne in mind that the concessionaire pays lower wages and works his men longer hours than the City could. The concessionaire can hire men at the lowest figure at which they may be obtained, works them from 9 to 14 hours, as the service requires, and can hire men quickly and with no trouble for emergency or rush service. On the other hand, the City would have to observe civil service rules and regulations, pay prevailing rates and would probably have some difficulty because of unavoidable delays in securing civil service employees quickly for emergency work.

On the Harlem Mere, the Commissioner requests \$900 for personal service. This also appears inadequate for the same reasons.

The figures submitted by the present concessionaire of the skating and checking privilege show that on week days he employs 19 men at a total cost of \$42.50, and on Sundays and holidays 27 men at a cost of \$65.50. For this item of cost the Commissioner requests \$600. The duration of this privilege being of course wholly dependent upon climatic conditions, the estimate must of necessity be a pure guess. Assuming that the City can operate the privilege at the same cost for personal service as the concessionaire, which is out of the question, \$600 will provide for approximately 12 days of operation.

The Department proposes that the checking of the clothes of skaters be conducted in the same manner as rental of row boats by making no charge for the first hour during which clothes are checked and making a charge of 5 or 10 cents per hour thereafter. Under the present private operation a charge of 10 cents is collected for each article checked.

If the City operates these activities, it becomes liable for damage to and loss of personal property. At present the concessionaire protects the City against loss.

Approval of the municipal operation of these privileges in one borough will naturally be followed by requests from the other boroughs of the City for a similar change. Consideration of this request, therefore, involves not only question of whether the City is willing to provide the amount requested in this particular case, and the additional cost to come as outlined in this report, but also similar outlays in the other boroughs.

That part of the request involving expenditures for other than personal service will be treated in a separate report by the Bureau of Contract Supervision.

Yours truly,  
GEORGE L. TIRRELL, Director.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, May 8, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Committee on Finance, Board of Aldermen: No. 375—Department of Parks, Boroughs of Manhattan and Richmond. Request for Special Revenue Bonds, \$20,000, for the Acquisition of a Boating and Skate House in Central Park and for the Municipal Operation Thereof During the Season of 1916.

Dear Sir—The Bureau of Contract Supervision herewith submits its report, covering the physical aspects of the above request.

The Park Department requests a total of \$13,200 for portable buildings and necessary equipment for the operation of boating and skating facilities. The Department has made no itemized statement of the equipment with which it intends to start operation, but does state that it will cost "not less" than the amount above noted. This assertion appears to be not only true, but there is evidence that the City would probably be obligated to expend a considerable sum in excess of that requested, in order to meet, without dissatisfaction to the public, a service that is planned to be partially gratuitous.

The following tabulation has been prepared partly from inventory prices submitted by the present lessees of the boating and skating privilege, and partly from prices submitted for new equipment. The list comprises items which would admit only of minimum operation and does not make provision for an indeterminate amount of miscellaneous equipment necessary for making repairs, replacements and extension of service:

	Cost of a Minimum Equipment by the Purchase of	
	Present Equipment.	New Equipment.
<b>Boating Equipment.</b>		
<i>The Pond (5th Avenue and 59th Street)—</i>		
Four swanboats.....	\$1,300 00	.....
Portable house.....	400 00	.....
Boat platform.....	75 00	.....
One rowboat.....	.....	\$25 00
<i>The Lake (72nd Street)—</i>		
200 rowboats at \$26.....	.....	5,200 00
250 pairs oars at \$1.32.....	.....	340 00
2 boat landings.....	1,500 00	.....
200 boat signs.....	.....	85 00
204 lanterns.....	150 00	.....
<i>Harlem Mere (5th Avenue and 110th Street)—</i>		
30 rowboats at \$26.....	.....	780 00
50 pairs oars at \$1.32.....	.....	66 00
30 boat signs.....	.....	14 00
Platform and walks for boat landing.....	65 00	.....
<b>Skating Equipment.</b>		
1,000 pairs skates at 75 cents.....	.....	750 00
Portable house at Harlem Mere.....	.....	1,500 00
Portable house at lake.....	750 00	.....
Checks.....	100 00	.....
	\$4,340 00	\$8,760 00
Total cost of minimum equipment.....		\$13,100 00

This total checks very closely that requested by the Department. Study of the items and prices, however, discloses the fact that, even at this figure, some of the equipment would be second-hand and some of only average quality, upon both classes of which depreciation will probably be large.

It appears, therefore, to be a reasonable conclusion that the amount, \$13,200, requested by the Department is not an over estimate of cost, but rather, if anything, an under estimate. How much more will be necessary is purely problematical, depending upon three factors, namely:

- (1) Large or small depreciation which, in turn, arises from the quality of equipment, operating management and public respect for City property.
  - (2) The popularity of the proposed operation,
- and



(3) The attitude of the City authorities will take in the future toward an increased service, if such is demanded.

It is my understanding that the Commissioner of Parks proposes to operate a free boat service except for the use of boats beyond the prescribed period of free use. It is my opinion that revenue bonds should not be issued to provide a free boat service, which certainly cannot be regarded as an emergency need.

The Bureau of Standards is submitting a separate report covering the items of personal service requested. Very truly yours, TILDEN ADAMSON, Director.  
Which report was accepted.

No. 378—(S. O. No. 70).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$41,100, to Provide Additional Funds for the Maintenance of the Highways—President, Borough of Queens.**

The Committee on Finance, to which was referred on April 11, 1916 (Minutes, page 38), the annexed request of the President of the Borough of Queens for special revenue bonds, \$68,040, to provide additional funds for the maintenance of the highways, respectfully

**REPORTS:**

Commissioner Dayton appeared before the Committee and explained the reason for this request. Mr. Sullivan, of the Bureau of Contract Supervision, also appeared and in a verbal report sustained the request, but stated that \$41,100 would be sufficient. The Committee accordingly recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of forty-one thousand one hundred dollars (\$41,100), the proceeds whereof to be used by the President of the Borough of Queens for the purpose of providing additional funds for the maintenance of the highways.

All obligations contracted for hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

The City of New York, Office of the President of the Borough of Queens, Long Island City, April 11, 1916.

To the Board of Aldermen, City of New York:

Gentlemen—In accordance with the provisions of subdivision 8 of section 188 of the Charter, I hereby request your approval of an issue of revenue bonds to the extent of \$68,040 for the purpose of providing additional funds for the maintenance of highways under my jurisdiction for the year 1916.

The estimate is based upon the employment of one hundred (100) men up to the end of October on the basis of twenty-four (24) working days per month, and Assistant Foremen on the basis of one to each ten men and the employment of teams and carts.

At the time the estimate for 1916 was submitted to your Board there was submitted in support thereof data as to the areas which this Department is charged with maintaining and among the figures submitted was one showing an area of dirt roads to the extent of 8,709,675 square yards and macadam roads 1,243,705 square yards in addition to the improved pavements for which there appears to be ample provision at this time on the basis of the costs obtained from previous experience. The average costs for the usual maintenance of dirt roads is 3 cents per square yard per year, and that of maintaining macadam roads is 88.7 cents per square yard, assuming that the roads are rebuilt.

The total of cost of maintaining these two features, assuming that all of them were taken care of, would have amounted to \$358,700, which figure the Board of Estimate and Apportionment and your Board would not have allowed in the analysis of the Budget.

At the time the Budget was made this Department, like most others, was in the position where it was anxious to assist the budget makers in producing as low a budget as possible, in view of the conditions that prevailed last year, and on the whole budget I consented to a very material reduction below the allowance of the previous year for the reason I have stated, although at all times there was submitted supporting data to justify a much greater appropriation on the assumption that normal conditions would prevail during this year.

It is common knowledge that the past winter has been a most severe one and particularly with respect to the unimproved streets in this Borough, and for that reason I am requesting an additional appropriation as heretofore set forth in order that I may in a small way do the best I possibly can, that even a satisfactory showing may be made. The roads have materially deteriorated during the year and the dirt streets are in a condition which justifies treatment in almost every case, which, of course, the budget allowance did by no means contemplate.

The same condition that prevails with respect to the dirt and macadam roads prevails regarding the improved pavements, out of maintenance which this Department is obligated to maintain and the expenses of such maintenance will far exceed the estimates that were presented at the time the budget was under consideration.

It is my desire that the work of repairing these roads be prosecuted early in the season and I ask your Board to dispose of this request speedily in order that the situation may be relieved at the earliest possible moment. Yours very truly,

JAMES A. DAYTON, Acting President of the Borough of Queens.

Which was laid over.

No. 403—(S. O. No. 71).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$2,500, for the Reconstruction of Laboratory Tables in Chemistry Hall, College of The City of New York.**

The Committee on Finance, to which was referred on April 18, 1916 (Minutes, page 85), the annexed request of the Trustees, College of The City of New York, for special revenue bonds, \$2,500, for the reconstruction of laboratory tables in the Chemistry Hall, respectfully

**REPORTS:**

That this request is necessary on account of the constantly increasing number of students and lack of accommodation, and the annexed report of the Bureau of Contract Supervision approves of the amount asked for. The Committee therefore recommends that the accompanying resolution be adopted.

Resolved, That in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of two thousand six hundred dollars (\$2,600), the proceeds whereof to be used by the Trustees, College of The City of New York, for the purpose of reconstructing laboratory tables in the Chemistry Hall. All obligations contracted for hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

The College of the City of New York, Office of the Board of Trustees, St. Nicholas Terrace and One Hundred Thirty-ninth Street, April 12, 1916.  
Hon. FRANK DOWLING, President, Board of Aldermen, New York City.

Dear Sir—Enclosed herewith please find, for presentation to the Board of Aldermen, form of resolution for an appropriation of Special Revenue Bonds in the amount of \$2,600 for reconstructing laboratory tables in the Chemistry Building.

The tables in Laboratories 303, 307 and 309, when altered, will provide places for 450 more students, or 44 section hours, or 1,120 student instructional hours per week. The number of students debarred for lack of space during the spring term of 1916 is 132.

The alterations when made in the tables of Laboratory 107 will provide places for 96 more students in Organic Chemistry, or 20 section hours, or 384 student instructional hours per week. The number of students debarred for lack of space during the spring term of 1916, in Organic Chemistry, is 55.

The expenditure of said sum of \$2,600 as aforesaid would overcome the difficulties and provide adequate accommodation for the constantly increasing number of students desiring to use the Chemistry Laboratories. Very truly yours,

JAS. W. HYDE, Secretary, Board of Trustees.

Resolved, That pursuant to Subdivision 8 of Section 188 of the Greater New York Charter the Board of Estimate be and they hereby are requested to authorize the Comptroller to issue Special Revenue Bonds in the amount of \$2,600 to provide

funds to reconstruct and alter laboratory tables in the Chemistry Building of the College of the City of New York.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, April 24, 1916.

Mr. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen:  
No. 403—Request of the Board of Trustees of the College of the City of New York for \$2,600 special revenue bonds for Reconstructing Laboratory tables in the Chemistry Building.

Sir—On April 20, 1916, you requested the Bureau of Contract Supervision to investigate the above request.

The laboratory tables, as now constructed, provide individual storage spaces for the apparatus used by the students. In Laboratory No. 107, forty-eight spaces are provided, and in laboratories Nos. 303, 307 and 309, three hundred and thirty-six spaces are provided. The alterations proposed will provide ninety-six additional spaces in Laboratory No. 107, and five hundred and four additional spaces in laboratories Nos. 303, 307 and 309, a total of six hundred additional storage spaces.

It is necessary in order to properly control loss of apparatus to provide an individual storage space for the apparatus used by each student, the cost of which is charged to him. Any loss or damage to the apparatus of a student must be made good or paid for by him. This system is necessary because of the large quantity of expensive apparatus used.

In the spring term of 1916 there were 55 students debarred from work in Laboratory No. 107, and 132 from work in laboratories Nos. 303, 307 and 309, because of the lack of these lockers. It will be necessary for these students to complete the work in chemistry before graduating, and the number of new applicants for admission is constantly increasing.

The amount requested is reasonable for the proposed work.

Respectfully,

TILDEN ADAMSON, Director.

Which was laid over.

No. 424—(S. O. No. 72).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$2,500, for Equipment of Record and Equity Departments—County Clerk, Bronx County.**

The Committee on Finance to which was referred on April 25, 1916 (Minutes, page 142), the annexed request of the County Clerk of Bronx County for special revenue bonds, \$3,000, for equipment of Record and Equity Departments, respectfully

**REPORTS:**

That this matter was referred to the Bureau of Contract Supervision, and its report annexed hereto approves of the request with a slight reduction due to the change in equipment, which reduction is agreed to by the County Clerk of Bronx County. The committee therefore recommends that the accompanying resolution be adopted.

Resolved, That in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of two thousand five hundred dollars (\$2,500), the proceeds whereof to be used by the County Clerk, Bronx County, for the purpose of purchasing and installing office equipment of Record and Equity Department. All obligations contracted for hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

County Clerk's Office, County of Bronx, New County Court House, New York, April 21, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen, City of New York, N. Y. C.:

Sir—I herewith most respectfully request your Honorable Board to issue special revenue bonds to the amount of \$3,000, in order to equip the Record and Equity Departments with fireproof cases and counters and to erect a balcony in this office, in compliance with chapter 424, Laws of 1913, sections 1196 and 1198.

At the present time the records are stored on plain pine wooden shelves, which is a violation of the law. I make this appeal for the protection of these court records, as your Honorable Board knows the value of the same.

I enclose copy of a resolution sent to me by the Bronx County Bar Association, requesting that this matter be attended to.

Respectfully yours,

JAMES V. GANLEY.

At a meeting of the Association of the Bar of the County of Bronx, held February 11th, 1916, the following was adopted:

Whereas, The records of the Supreme Court and the County Court in Bronx County, as filed in the County Clerk's office, are constantly increasing in volume; and Whereas, The Laws of the State of New York (Educational Law, Chapter 424, L., 1913), require that such records shall be properly safeguarded; and

Whereas, Said records at the present time are piled upon shelves made of pine boards in said Clerk's office, thereby being especially subject to fire which might result in their destruction; and

Whereas, Modern practise requires the assembling of such records in proper filing cases; therefore be it

Resolved, That the County Clerk of Bronx County be and he hereby is requested to assemble the records in his office in proper steel filing cases which are substantially fireproof; and further

Resolved, That the Board of Estimate and Apportionment of the City of New York be and it hereby is requested to furnish the County Clerk of Bronx County the necessary funds for the acquiring of such filing cases; and be it further

Resolved, That a copy of these resolutions properly attested be forwarded to James V. Ganley, County Clerk of Bronx County, and to the Secretary of the Board of Estimate and Apportionment of the City of New York.

A copy.

(Signed) J. PHILIP VAN KIRK, Secretary.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, May 8th, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen:  
No. 424—County Clerk, Bronx, Request for Special Revenue Bonds, \$3,000, for Equipment of Record and Equity Department.

Sir—On April 27, 1916, you requested the Bureau of Contract Supervision to investigate the above matter.

Upon investigation the following facts have been developed:

The records of the Equity Department of the Bronx County Clerk's office are now stored on open wooden shelving in a room in the County Court House. These records consist of original papers in civil actions before the Supreme and County Courts, records of incorporation, mechanics' liens, transcripts of judgments and marriage licenses.

There are at present no counter facilities in this department for the transaction of business with the public. On March 1, 1916, the quarters in the County Court House, formerly occupied by the District Attorney, were turned over to the County Clerk as a means of relieving the congestion in his office. In order to properly equip these quarters for the use of the County Clerk a suitable counter is necessary.

The County Clerk proposes to refit his Equity Department with steel shelving covered with roller curtains arranged in two tiers, access to the upper tier being by means of a balcony and ladders. A steel counter 21 feet long is also proposed in order to provide a place for file clerks to work and for transacting business with the public. Storage space for books is to be provided under this counter.

The existing wood counter in the present Notarial Division is to be moved to the quarters formerly occupied by the District Attorney, and used by the cashier and notarial clerk. No records will be stored in this room, so a wood counter will serve the purpose as well as a metal one. A new metal counter is proposed to take the place of the one moved in order that it will conform with the other equipment.

The filing cases requested will take care of the existing records now stored on wood shelving and also provide for one year's increased capacity.

It is suggested by this Bureau and agreed to by a representative of the County Clerk that the file cases be covered with hinged doors instead of roller curtains. Roller curtains are a constant source of trouble due to the chains breaking and the curtain jamming in the grooves.

From the above it would appear that the quantity of equipment proposed is reasonable, but that the estimated cost should be reduced on the basis of equipping the cases with hinged doors to the sum of \$2,500. Respectfully,

TILDEN ADAMSON, Director.

Which was laid over.



No. 425—(S. O. No. 73).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$2,630, for Repairing and Renewing Street Signs—President, Borough of Richmond.**

The Committee on Finance, to which was referred on April 25, 1916 (Minutes, page 142), the annexed request of the President of the Borough of Richmond for special revenue bonds, \$2,630, for repairing and renewing street signs, respectfully

## REPORTS:

That the need of these signs has been shown to the Committee by Commissioner Morrison, and as the annexed report of the Bureau of Contract Supervision approves of the request, the Committee therefore recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of subdivision 8 of section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue special revenue bonds to the amount of two thousand six hundred and thirty dollars (\$2,630), the proceeds whereof to be used by the President of the Borough of Richmond for the purpose of repairing and renewing street signs; all obligations contracted for hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, MICHAEL STAPLETON, Committee on Finance.

City of New York, Office of the President of the Borough of Richmond, Borough Hall, New Brighton, New York City, April 22, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen, City Hall, New York City:

Dear Sir—I herewith make request for an issue of special revenue bonds in the amount of \$2,630 for repairing and renewing street signs and placing a few street signs in new locations in the Borough of Richmond.

About 1,200 sign posts and name plates were erected in this Borough in 1909, and no repairs have been made to them since that date. While the posts themselves are in good condition, many of the signs have been totally destroyed, others have been partially damaged, and the whole system needs overhauling and put in good condition.

A detailed estimate of cost is attached hereto.

Very truly yours, CALVIN D. VAN NAME, President of the Borough.

*Renewals of Street Signs in the Borough of Richmond.*

190 new signs, frames and fittings, complete, at....	\$4 00		
Assembling, erecting and supervision.....	1 00	\$5 00	\$950 00
930 indestructible name plates, with fittings.....	\$1 24		
Assembling, erecting and supervision.....	32	1 56	1,450 80
132 enameled plates, the same as now in use, with bolts and nuts .....	\$0 45		
Assembling, erecting and supervision.....	15	60	79 20
25 posts and name plates in new locations, set in concrete, at .....	\$6 00		150 00
Total .....			\$2,630 00

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, May 8, 1916.

No. 425—President, Borough of Richmond, Request for Special Revenue Bonds, \$2,630, for Repairing and Renewing Street Signs.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen:

Sir—On April 27, 1916, you requested the Bureau of Contract Supervision to investigate the above matter.

Upon examination the following facts have been developed.

Street signs now in use in the Borough of Richmond are composed of two strips of iron with the street name enameled on one side. The strips are fastened together with bolts and nuts and are attached to a post about 7 feet high by means of a collar. Another sign is placed at right angles to the first to indicate the name of the cross street.

About 1,200 of these posts with 2,400 signs were erected in 1900.

The President proposes to purchase 190 new signs with the necessary fittings to replace those in the built up sections that have become illegible or have been removed; 132 enameled plates to repair partially damaged signs; 930 indestructible name plates with fittings to take the place of enameled signs in the outlying sections that have been destroyed, and 25 posts and signs complete for new locations.

From the foregoing it will be seen that the depreciation on the original signs has been about 50 per cent. in 7 years. In view of this fact it appears wise to abandon the existing 7 foot poles as fast as the present signs give out and place signs, similar to those used in Manhattan, on telephone, electric light or trolley poles in the built up sections at a height of 12 feet above the ground. The old posts could be reset in the outlying sections where no transmission poles exist. This plan is being tried out in Manhattan and The Bronx.

The first cost of the two signs is about the same but the maintenance on the high sign is materially lower and it will not be necessary to purchase any new posts to extend the system.

The number of signs necessary to restore the system to its original condition is based on a detailed survey by the Borough President's Office. A field inspection made by this bureau indicates that the request is reasonable.

The amount of \$1,000 was included in account 784, General Plant Equipment, Care of Highways, 1916, for the purchase of street signs but the Borough President states that more urgent expenditures have had to be met and that the balance now in the fund is only \$536, which is required for the balance of the year.

In view of the above facts the request seems reasonable. Very truly yours,

TILDEN ADAMSON, Director.

Which was laid over.

No. 445—(G. O. 78).

**Report of the Committee on Finance in Favor of Adopting Resolution Amending Issue of Corporate Stock, \$25,000, for the Construction of a Gravity Water System, Including Completion of Reservoir, at Tuberculosis Sanatorium at Otisville, N. Y.**

The Committee on Finance, to which was referred on May 2, 1916 (Minutes, page 438), the annexed resolution amending issue of corporate stock, \$25,000, for the construction of a gravity water system, including completion of reservoir, at Tuberculosis Sanatorium at Otisville, N. Y., respectfully

## REPORTS:

That Mr. Fiske, Secretary of the Department of Health, appeared before the Committee and explained that the purpose of this request is to build a non-climable fence around the watershed for the prevention of trespass and contamination. The Committee therefore recommends that the accompanying resolution be adopted.

Resolved, That the Board of Aldermen hereby approves of and concurs in the following amended resolution adopted by the Board of Estimate and Apportionment at a stated meeting held April 28, 1916:

Resolved, That, subject to concurrence herewith by the Board of Aldermen, the resolution adopted by the Board of Estimate and Apportionment on June 26, 1913, and concurred in by the Board of Aldermen on July 15, 1913, which authorized an issue of twenty-five thousand dollars (\$25,000) corporate stock, to provide means for the construction of a gravity water system, including completion of reservoir, at the Tuberculosis Sanatorium, Otisville, N. Y., under the jurisdiction of the Department of Health, be and the same is hereby amended by adding after the words "including completion of reservoir," the words "and the erection of a wire fence to enclose the property of the reservoir."

FRANCIS P. KENNEY, WM. P. KENNEALLY, ROBERT L. MORAN, HENRY H. CURRAN, JOHN DIEMER, F. H. STEVENSON, SAMUEL J. BURDEN, CHARLES DELANEY, Committee on Finance.

Which was laid over.

Reports of the Committee on Public Letting—

No. 420—(S. O. No. 74).

**Report of the Committee on Public Letting in Favor of Adopting Resolution to Authorize the Commissioner of Public Charities to Contract for Installation of Mechanical Draft Equipment at Sea View Hospital, Without Public Letting.**

The Committee on Public Letting, to which was referred on April 25, 1916 (Minutes, page 140), the annexed request of the Commissioner of Public Charities

for authority to contract without public letting for installation of mechanical draft equipment at Sea View Hospital, respectfully

## REPORTS:

Deputy Commissioner Thompson appeared before the Committee and explained the need of this device and stated its economical value. A similar device was installed in the Kings County Hospital showing a saving of \$20,000 yearly. By purchasing without public letting one can be bought for \$800, whereas \$1,350 will be the cost otherwise. The Committee therefore recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of section 419 of the Greater New York Charter, the Commissioner of Public Charities be and he is hereby authorized and empowered to enter into contract, without public letting, for the installation of mechanical draft equipment at Sea View Hospital at a cost not to exceed two thousand dollars (\$2,000).

JOHN McCANN, JOHN F. McCOURT, C. AUGUSTUS POST, JAMES J. BROWNE, PETER SCHWEICKERT, WM. P. McGARRY, MICHAEL J. HOGAN, Committee on Public Letting.

Department of Public Charities of The City of New York, Municipal Building, Tenth Floor, May 4, 1916.

Public Letting Committee, Board of Aldermen, City Hall, New York City:

Gentlemen—Complying with your request relative to our suggestion that we be permitted to contract without public letting for the installation of mechanical draft equipment at Sea View Hospital, I beg to state that the \$2,000 referred to in our letter is made up first, of a 130-inch steel plate fan, directly connected with 2 by 8 vertical engines, which will cost \$800. This machinery can be obtained at once, whereas, if we are to purchase by public letting, it will cost us in the neighborhood of \$1,350, and we will not be able to secure delivery in three months. The balance of the \$2,000 is made up of labor and incidental material, such as cement, sand, brick, etc., the exact details of which cannot be given at this time, as they will not be known until we begin to do the work and make some of the alterations.

I trust this information is what you require. Yours very truly,

HENRY C. WRIGHT, Deputy and Acting Commissioner.

Which was laid over.

No. 421—(S. O. No. 75).

**Report of the Committee on Public Letting in Favor of Adopting Resolution to Authorize the President of the Borough of Manhattan to Purchase Materials for Use in Repairs of the Riverside Drive Viaduct.**

The Committee on Public Letting to which was referred on April 25, 1916 (Minutes, page 141), the annexed request of the President of the Borough of Manhattan for authority to purchase materials for use in repairs of the Riverside Drive Viaduct without public letting, respectfully

## REPORTS:

Commissioner Boschen and Mr. E. W. Stern appeared before the committee and stated that owing to the uncertainty of the market, if granted the privilege of purchasing without public letting much better prices could be had and a considerable saving to the city thereby. The committee, therefore, recommends that the accompanying resolution be adopted.

Resolved, That in pursuance of the provisions of section 419 of the Greater New York Charter, the President of the Borough of Manhattan be and he is hereby authorized and empowered to purchase in the open market, without public letting, the various kinds of materials necessary to the work of repairs on the Riverside Drive Viaduct between 127th and 135th Streets, to an amount not to exceed Thirty-seven hundred dollars (\$3,700).

JOHN McCANN, JOHN F. McCOURT, C. AUGUSTUS POST, JAMES J. BROWNE, PETER SCHWEICKERT, WM. P. McGARRY, MICHAEL J. HOGAN, Committee on Public Letting.

City of New York, President of the Borough of Manhattan, Municipal Building, April 14th, 1916.

Hon. FRANK L. DOWLING, President of the Board of Aldermen:

Dear Sir—This department is about to commence the work of repairs upon the Riverside Drive Viaduct, between 127th and 135th Streets, for which funds were duly appropriated by the Board of Estimate and Apportionment under date of October 29th, 1915. The work will be performed by City employees, and the amount of materials required can only be determined as the work progresses and the damaged parts are uncovered. In order that the department may obtain the various kinds of materials that are required with the least possible delay:

I respectfully request that permission be granted by your Honorable Board to purchase in the open market, without public letting, such materials as may be necessary for an amount not exceeding \$3,700.

Your early consideration will oblige. Very truly yours,

MARCUS M. MARKS, President, Borough of Manhattan.

Which was laid over.

No. 423.

**Report of the Committee on Public Letting in Favor of Adopting Resolution to Authorize the Commissioner of Bridges to Purchase Various Supplies for Reconstruction of the Roadway of the Queensboro Bridge Without Public Letting.**

The Committee on Public Letting, to which was referred on April 25, 1916 (Minutes, page 141), the annexed request of the Commissioner of Bridges for authority to purchase various supplies for reconstruction of the roadway of the Queensboro Bridge without public letting, respectfully

## REPORTS:

Chief Engineer Byrne appeared before the committee and explained that the market prices of the various materials were fluctuating and it is to the advantage of the City to purchase in the open market, as considerable saving could be had by so doing. The committee, therefore, recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of section 419 of the Greater New York Charter, the Commissioner of Bridges be and he is hereby authorized and empowered to purchase in the open market, without public letting, the following supplies for use in the reconstruction of the pavement on the roadways of the Queensboro Bridge: Structural steel, plates, angles, etc., twenty-three thousand dollars (\$23,000); rivets, two thousand four hundred dollars (\$2,400); bolts and washers, four thousand dollars (\$4,000); yellow pine lumber, eleven thousand five hundred dollars (\$11,500), a total of forty thousand nine hundred dollars (\$40,900).

JOHN McCANN, JOHN F. McCOURT, C. AUGUSTUS POST, JAMES J. BROWNE, PETER SCHWEICKERT, WM. P. McGARRY, MICHAEL J. HOGAN, Committee on Public Letting.

Department of Bridges, City of New York, Municipal Building, Manhattan, N. Y., April 21, 1916.

To the Honorable the Board of Aldermen of The City of New York:

Gentlemen—On April 11, 1916, your Honorable Board adopted an ordinance providing for the issue of corporate stock of the City of New York to an amount of \$144,000, to provide means for the reconstruction of the present wood block pavement on the roadway of the Queensboro Bridge. For the prosecution of the work, various supplies will be purchased, including structural steel, rivets, bolts, washers, lumber, wood blocks, cement, sand and gravel. In view of the present condition of the pavement on the bridge work will be started at once, and the supplies first needed are the structural steel, etc., to be used for reinforcing the floor, and the lumber to be used under portions of the new wood block pavement.

If the steel is purchased on contract it would require many months for the manufacturer to fabricate the same, as the steel plants are filled with orders. Similarly, if the lumber is purchased on contract, it would require much time for its cutting and shipment. I believe that the steel and lumber can be purchased from stock by buying from various dealers and obtained as cheaply as by purchase under contract. This will insure quick deliveries and immediate prosecution of the work. I therefore beg to request your Honorable Board to grant me permission to purchase the following supplies for use in the reconstruction of the pavement on the roadways of the Queensboro Bridge in the open market without public letting:

Structural Steel—Plates, angles, etc.....	\$23,000 00
Rivets .....	2,400 00
Bolts and washers .....	4,000 00
Yellow pine lumber .....	11,500 00

The wood blocks, cement, sand and gravel, required later, will be purchased in the usual manner by contract.

Yours truly,

F. J. H. KRACKE, Commissioner.



The President put the question whether the Board would agree to accept such report and adopt said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Burden, Browne, Cardani, Cassidy, Collins, Colne, Crane, Curley, Curran, Delaney, Diemer, Dixon, Donnelly, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Friedlander, Gaynor, Gilmore, Goetz, Gutman, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Tolk, Trau, Walsh, Wendel, Williams, Wirth—58.

No. 429.

**Report of the Committee on Public Letting in Favor of Adopting Resolution to Authorize the Commissioner of Docks to Enter Into Contract for Removal of Coenties Reef in the East River, Without Public Letting.**

The Committee on Public Letting, to which was referred on April 25, 1916 (Minutes, page 144), the annexed request of the Commissioner of Docks for authority to enter into contract without public letting for removal of Coenties Reef in the East River, respectfully

**REPORTS:**

That Commissioner Smith appeared before the committee in reference to this matter. He recited the action of Congress in agreeing to the work, if the City of New York will bear its share of the cost. This the city has agreed to. The Federal Government authorities have received bids for this work, the lowest of which is \$196,900, which is \$200,000 lower than the average of the other bids received. The Dock Department has been informed that this bid is acceptable to the Federal Government. It can be readily seen that if permitted to take advantage of this price the City of New York would be benefited accordingly, and save the further expense of advertising and preparing specifications, and the delay incidental to such procedure. The Committee, therefore, recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of Section 419 of the Greater New York Charter, the Commissioner of Docks be and he is hereby authorized and empowered to enter into Contract No. 1317 with the Great Lakes Dredge & Dock Company without public letting for the removal of that portion of the rock known as Coenties Reef, in the East River, between the planes of thirty-five feet and forty feet below mean low water, at a cost not to exceed one hundred and twenty-three thousand two hundred and twenty-one dollars and ninety-six cents (\$123,221.96).

JOHN McCANN, JOHN F. McCOURT, C. AUGUSTUS POST, JAMES J. BROWNE, PETER SCHWEICKERT, WILLIAM P. McGARRY, MICHAEL J. HOGAN, Committee on Public Letting.

The City of New York, Department of Docks and Ferries, Office of the Commissioner, Pier A, North River, April 19, 1916.

**Removal of Coenties Reef.**

Hon. FRANK L. DOWLING, President, Board of Aldermen:

Dear Sir—I transmit herewith, in duplicate form of Contract No. 1517, bond and specifications for removing Coenties Reef, East River, New York.

The United States Government has received proposals in a lump sum bid for removing this reef to a depth of 40 feet below mean low water. These proposals provide that the successful bidders shall enter into a contract with the United States Government for the removal of the reef to a depth of 35 feet below mean low water for a consideration equal to 10685/28555 of the lump sum bid, and shall also enter into a contract with the City of New York for the removal of that part of the reef lying between the 35 and 40 foot planes for a consideration equal to 17870/28555 of the lump sum bid.

The United States Government now advises this Department that the bid of the Great Lakes Dredge and Dock Company, of Boston, Massachusetts, for the entire removal of the reef to a depth of 40 feet below mean low water for the sum of \$196,900 is the lowest, and that the bid is considered reasonable, and has been recommended to the Chief of Engineers of the United States Army for acceptance. The City's portion of the contract for the removal of the rock between the planes of 35 and 40 feet below mean low water under this bid is therefore \$123,221.96.

This contract is to be charged against Corporate Stock funds C. D. D. 43 "For removal of Coenties Reef."

I request that you authorize this Department to enter into a contract with the Great Lakes Dredge and Dock Company, for the City's portion of the work as herein set forth. Yours very truly,

RICHARD C. HARRISON, Acting Commissioner of Docks.

Memorandum from Commissioner's Office.

Summary of bids opened by the U. S. Engineer's Office, New York City, April 14, 1916:

Great Lakes Dredge & Dock Co.....	\$196,900 00
Bowers Southern Dredging Co.....	238,434 25
James Stewart & Co., Inc.....	344,717 00
Eugene Breyman.....	377,777 00
Timothy J. Dady.....	389,822 00
Morris & Cumings Dredging Co.....	399,643 00

The President put the question whether the Board would agree to accept such report and adopt said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Burden, Browne, Cardani, Cassidy, Collins, Colne, Crane, Curley, Curran, Delaney, Diemer, Dixon, Donnelly, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Friedlander, Gaynor, Gilmore, Goetz, Gutman, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Tolk, Trau, Walsh, Wendel, Williams, Wirth—58.

Reports of the Committee on Salaries and Offices—

No. 360—(G. O. No. 79).

**Report of the Committee on Salaries and Offices in Favor of Adopting Resolution to Establish the Grade of Position of Auto Truck Driver and Rejecting the Establishment of the Grade of Position of Chauffeur—Department of Education.**

The Committee on Salaries and Offices to which was referred on April 11, 1916 (Minutes, page 12), the annexed resolution to establish the grades of positions of Chauffeur and Auto Truck Driver in the Department of Education, respectfully

**REPORTS:**

The position of Chauffeur was established and provided in the budget at \$1,200. A vacancy occurred and the present incumbent was transferred from another bureau of the department. The Bureau of Standards recommends that the position be graded at \$1,080 and refused to approve of the higher rate for the months of February, March and April of this year. The Committee has been informed by Mr. Jones of the Department of Education, that this action has been reconsidered and the salary approved at \$1,200. Mr. Jones further informed the Committee that the President of the Board of Education requests that no change in grade or salary be made, as the one now filling the position is a competent man; his working hours are very long and uncertain. He has been in the service of the department for more than ten years and is entitled to the salary provided in the budget. As regards the position of Auto-truck driver the Committee agrees with the Board of Estimate. The Committee, therefore, recommends that so much of the foregoing resolution as relates to the position of Chauffeur be rejected, and that that portion relating to Auto-truck driver be approved. It accordingly recommends that the accompanying resolution be adopted.

Whereas, The Board of Estimate and Apportionment adopted the following resolution at a stated meeting held March 31, 1916:

Resolved, That the Board of Estimate and Apportionment, pursuant to the provisions of section 56 of the Greater New York Charter, hereby recommends to the Board of Aldermen the establishment in the Department of Education of the grades of positions, in addition to those heretofore established, as follows:

Title.	Rate per Annum.	Number of Incumbents.
Chauffeur .....	\$1,080 00	One
Auto Truck Driver .....	960 00	One

Resolved, That the Board of Aldermen hereby approves of and concurs in so much of the above resolution as relates to the grade of position of "Auto-Truck Driver" for one incumbent at the rate of \$960.000 per annum, and fixes the salary of said position as set forth therein, and rejects so much of the said resolution as relates

to the grade of position of "Chauffeur" for one incumbent at the rate of \$1,080.00 per annum.

CHARLES DELANEY, JNO. J. O'ROURKE, EDWARD V. GILMORE, FRANK J. SCHMITZ, FRANCIS P. BENT, ROBERT L. MORAN, Committee on Salaries and Offices.

Which was laid over.

No. 365.

**Report of the Committee on Salaries and Offices in Favor of Filing Communication from the Corporation Counsel, Being an Opinion Relative to the Appointment of Dr. Benjamin Abramowitz as Physician to Ludlow Street Jail.**

The Committee on Salaries and Offices to which was referred on April 11, 1916 (Minutes, page 14), the annexed communication from the Corporation Counsel, being an opinion relative to the appointment of Dr. Benjamin Abramowitz as Physician to Ludlow Street Jail, respectfully

**REPORTS:**

That having examined the subject and noting the contents, the committee recommends that the communication be placed on file.

CHARLES DELANEY, JOHN J. O'ROURKE, EDWARD V. GILMORE, FRANK J. SCHMITZ, FRANCIS P. BENT, ROBERT L. MORAN, Committee on Salaries and Offices.

City of New York, Law Department, Office of the Corporation Counsel, New York, April 1, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen:

Sir—I am in receipt of your communication dated February 16, 1916, reading as follows:

"On January 25, 1916, the Board of Aldermen, by a vote of a majority of its members, passed a resolution appointing Dr. Benjamin Abramowitz as Physician at the New York County Jail, at a salary of \$1,000 per annum, which resolution was approved by the Mayor on February 1st, 1916. The Board predicted this action upon the authority conferred upon the Common Council of The City of New York by Section 126 of the Code of Civil Procedure. A Dr. O'Brien had been the incumbent of this position for a number of years, and was filling the position at the time of the passage of this resolution.

"On the 7th instant, the Secretary of the State Civil Service Commission addressed a letter to the Clerk of the Board, asking the particulars as to the appointment of Dr. Abramowitz, and was informed that the Board made the appointment under the provisions of the above-cited section of the Code of Civil Procedure. He also inquired as to the removal of Dr. O'Brien, and was answered by a quotation of the part of the section which states that the physician of a jail holds his office at the pleasure of the Board.

"This office is now in receipt of a communication from Secretary Birdseye, copy of which is enclosed, in which he states that he is directed by the State Civil Service Commission to advise me that it cannot accept the appointment of Dr. Abramowitz, as the position of physician, for which he has been selected, is in the competitive class.

"Will you kindly advise me whether, in your opinion, the Board of Aldermen exercised its legal powers in making this appointment under the authority granted to it by Section 126 of the Code of Civil Procedure, or whether the power granted to it under this section is removed and superseded by the Civil Service Law. Your kind attention to this request at an early date will oblige."

The communication from Mr. Birdseye, addressed to Mr. Shelley, Secretary to the President of the Board of Aldermen, under date of February 15, 1916, a copy of which was enclosed, reads as follows:

"We have your letter of February 11th advising as to the appointment of Dr. Benjamin Abramowitz as physician at the New York County Jail.

"I am directed by the State Civil Service Commission to advise you that it cannot accept the appointment of Dr. Abramowitz as the position of physician for which he has been selected is in the competitive class.

"Your attention is respectfully invited to the decision of the court in the matter of Phillips, 139 App. Div. 365, aff'd 200 N. Y. 521, in which it was held that 'Physicians to the county jails of the several counties are within the classified service under the Civil Service Law, and appointments to that office must be made in accordance with that law; that the term of the office is indefinite does not exempt it from the provisions of the Civil Service Law.'

"As to the removal of Dr. O'Brien, would invite your attention to Section 22 of the Civil Service Law which reads in part as follows:

"In every county of the state wholly included within the limits of a city but not comprising the whole of such city, no regular clerk or head of a bureau or person holding a position in the classified state civil service, subject to competitive examination, shall be removed until he has been allowed an opportunity of making an explanation; and in every case of removal the true grounds thereof shall be forthwith entered upon the records of the department of the office in which he has been employed, and a copy filed with the state civil service commission. In case of a removal, a statement showing the reasons therefore shall be filed in the department or office where such clerk, head of a bureau or person had been employed."

Replying to your inquiries, the case to which Mr. Birdseye refers to sustain the position taken by the State Civil Service Commission with respect to the appointment of Dr. Abramowitz. I am unable, however, to agree with Mr. Birdseye's suggestion that section 22 of the Civil Service Law, which he quotes, would apply in this case. The Courts have held that where there is statutory provision for the summary removal of officers, or where the term of office expires, statutory provisions requiring an opportunity of making an explanation or a trial before an incumbent of a position may be removed, do not apply. Section 126 of the Code of Civil Procedure provided:

"The board of supervisors of each county, except New York, must appoint some reputable physician, duly authorized to practice medicine, as the physician to the jail of the county. If there is more than one jail, they must appoint a physician to each. The common council of the city of New York must appoint a similar physician, to the jail of that city and county. The physician to a jail holds his office at the pleasure of the board which appointed him, except in the county of Kings. In that county, the term of his office is three years."

By the Prison Law, this section of the Code was re-enacted at section 348, omitting the words "The common council of the city of New York must appoint a similar physician, to the jail of that city and county," and by the Prison Law, section 126 of the Code of Civil Procedure is declared to be repealed, except with respect to that portion of said section which applied to The City of New York.

It would seem, therefore, that the Board of Aldermen have the power to remove a Physician to the Jail in the County of New York, without regard to the provisions of section 22 of the Civil Service Law, but, on the other hand, the said Board of Aldermen must, in making appointments to this position, appoint persons certified by the State Civil Service Commission from duly constituted eligible lists.

Respectfully yours,

LAMAR HARDY, Corporation Counsel.

Which report was accepted.

**SPECIAL ORDERS.**

No. 66—(Int. No. 422).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$18,975, in Order to Employ Laborers to Patrol the Croton Water Shed and the New Croton Aqueduct.**

The Committee on Finance to which was referred on April 25, 1916 (Minutes, page 141) the annexed request of the Commissioner of Water Supply, Gas and Electricity for Special Revenue Bonds, \$18,975, in order to employ laborers to patrol the Croton Water shed and the New Croton Aqueduct, respectfully

**REPORTS:**

This is an item that was denied the department in the 1916 Budget. Commissioner Williams appeared before the committee and explained that it was of vital interest to the city, that some effort be made to protect these places particularly at the present time, when so much unrest is manifested. The Committee, therefore, recommends that the accompanying resolution be adopted.

Resolved, That in pursuance of the provisions of Subdivision 8 of Section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue Special Revenue Bonds to the amount of Eighteen thousand nine hundred and seventy-five dollars (\$18,975), the proceeds whereof to be used by the Commissioner of Water Supply, Gas and Electricity for the purpose of employing laborers to patrol the Croton Water Shed and the New Croton Aqueduct. All obligations hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, F. H. STEVENSON, CHARLES DELANEY, MICHAEL STAPLETON, ROBERT L. MORAN, SAMUEL J. BURDEN, FRANK A. CUNNINGHAM, JOHN DIEMER, Committee on Finance.



The City of New York, Department of Water Supply, Gas and Electricity, Office of the Commissioner, Municipal Building, New York City, April 20, 1916.

Hon. FRANK L. DOWLING, President, Board of Aldermen, City Hall, New York City:

Dear Sir—The department requests that the Board of Aldermen consent to the issue of special revenue bonds to the amount of \$18,975 in order that it may employ thirty additional laborers to patrol the dams and reservoirs on the Croton Watershed and the New Croton Aqueduct.

Respectfully,

WILLIAM WILLIAMS, Commissioner.

The President put the question whether the Board would agree to accept such report and adopt said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Burden, Browne, Cardani, Cassidy, Collins, Colne, Crane, Curley, Curran, Delaney, Diemer, Dixon, Donnelly, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Friedlander, Gaynor, Gilmore, Goetz, Gutman, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Tolk, Trau, Walsh, Wendel, Williams, Wirth—58.

No. 67—(Int. No. 426).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds for Certain Departmental Uses—Commissioner of Parks, Queens.**

The Committee on Finance to which was referred on April 25, 1916 (Minutes, page 143), the annexed request of the Commissioner of Parks, Borough of Queens, for Special Revenue Bonds, \$5,847.50, for certain departmental uses respectfully

**REPORTS:**

This matter was included in the departmental estimate for 1916, but was denied in the Budget. Commissioner Weier appeared before the Committee and explained the necessity for this expenditure, which is approved in reports of the Bureau of Contract Supervision and the Bureau of Standards, which reports are annexed hereto. The Committee, therefore, recommends that the accompanying resolution be adopted.

Resolved, That in pursuance of the provisions of Subdivision 8 of Section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue Special Revenue Bonds to the amount of Five thousand, six hundred and seventy-two dollars and fifty cents (\$5,672.50), the proceeds whereof to be used by the Commissioner of Parks, Borough of Queens, for the purpose of certain departmental uses.

Repair to fence Kings Park.....	\$350 00
Repair to plumbing Highland Park.....	100 00
Painting Band Stand, Highland Park.....	25 00
Heating Repairs, Golf House.....	50 00
326 days of Climber and Pruner, and 266 days of Laborer to replace deduction made for Municipal Garage at \$2.50 (wages).....	1,480 00
732 days of Laborer at \$2.50 to restore cut of two men in the gardening force (wages).....	1,830 00
735 days of Laborer at \$2.50 for unusual requirements because of the severe weather (wages).....	1,837 50

Total ..... \$5,672 50

—All obligations hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, F. H. STEVENSON, CHARLES DELANEY, MICHAEL STAPLETON, ROBERT L. MORAN, SAMUEL J. BURDEN, FRANK A. CUNNINGHAM, JOHN DIEMER, Committee on Finance.

The City of New York, Department of Parks, Borough of Queens, April 24th, 1916.

The Honorable the Board of Aldermen, City Hall, New York City:

Sirs—I would respectfully ask that you authorize an issue of revenue bonds in the amount of \$5,847.50 for the use of the Department of Parks, Borough of Queens.

This money is needed to replace deductions made in the budget at the last moment, as follows:

326 days of Climbers and Pruners to replace deductions made for Municipal Garage at \$2.50 a day .....	\$815 00
732 days of Laborers at \$2.50 to restore cut of two men in Gardening force .....	1,830 00
266 days of Laborers at \$2.50 per day to replace deduction made for Municipal Garage at .....	665 00
735 days of Laborers at \$2.50 for unusual requirements because of the severe winter .....	1,837 50
Repairs to fence, Kings Park .....	350 00
Repairs to Plumbing, Highland Park .....	100 00
Repairs to Plumbing, Golf House .....	100 00
Painting Band Stand, Highland Park.....	100 00
Heating Repairs, Golf House .....	50 00

\$5,847 50

I have the honor to remain, Respectfully, JOHN E. WEIER, Commissioner.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, April 29, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen:

No. 426—Park Commissioner, Queens—Request for Special Revenue Bonds, \$5,847.50, for departmental uses; Items of Other Than Personal Service Only.

Sir—The items of other than personal service have been examined into by the Bureau of Contract Supervision and facts have been developed as follows:

Repairs to Fence, Kings Park, \$350.  
It is proposed to make necessary minor repairs and to paint this wrought iron picket, which is five feet high and 2,600 feet long. It has scaled and rusted badly and should be cleaned thoroughly with a wire brush and receive one coat of red lead and two coats of paint. The amount requested is very reasonable for the work.

Repairs to Plumbing, Highland Park, \$100; Repairs to Plumbing, Golf House, \$100.  
Funds for these items of work were specifically provided in the 1916 budget. The unencumbered balance in the account should be sufficient to do all emergent repairs.

Painting Band Stand, Highland Park, \$100.

The Commissioner states that he will be able to do this work with his present budget force if he is allowed sufficient to purchase the paint. The work should be done and \$25 would be an ample allowance for the paint.

Heating Repairs, Golf House, \$50.  
This work was also provided for in the budget, but owing to the fact that amounts allowed for repairs to lawnmowers, harness and rolling stock were insufficient, the sum allowed in the budget for this item was used to defray the extra cost. This work is necessary and the requested amount is reasonable.

Very truly yours,

TILDEN ADAMSON, Director.

City of New York, Board of Estimate and Apportionment, Bureau of Standards, Municipal Building, May 1st, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Committee on Finance, Board of Aldermen:

Dear Sir—In reply to your letter of April 27th, 1916, for a report on a request of the Park Commissioner, Queens, for \$5,847.50, I report as follows:

The need for providing special revenue bonds to meet certain deficiencies in the appropriation for the Department of Parks, Queens, was taken up informally with the Bureau of Standards before the formal request was made to the Board of Aldermen. The request now made by the Commissioner is in detail as follows:

1. 326 days of Climber and Pruner, and 266 days of Laborer to replace deduction made for Municipal Garage at \$2.50.....	\$1,480 00
2. 732 days of Laborer at \$2.50 to restore cut of two men in the gardening force .....	1,830 00
3. 735 days of Laborer at \$2.50 for unusual requirements because of the severe weather .....	1,837 50
4. Repairs to fences, Kings Park.....	350 00
5. Repairs to plumbing, Highland Park.....	100 00
6. Repairs to plumbing, Golf House.....	100 00
7. Painting bandstand, Highland Park.....	100 00
8. Heating repairing, Golf House.....	50 00

Total ..... \$5,847 50

Item No. 1 is requested on the ground that this allowance was taken out of the

Budget for the purposes of the Municipal Garage without the Commissioner's knowledge. The Commissioner states that while the allowance for his men was taken away the work still remains as part of the duties of the Department. Whether or not the Municipal Garage received the equivalent allowance in its schedule for this deduction is not clear. At any rate, the Bridge Department does not appear to be in a position to cede the funds for the two employees in question.

Item No. 2 represents in effect the proposed restoration of two Gardeners. These Gardeners were eliminated from the Budget under a misapprehension and a schedule modification which restored the Gardeners was made by taking the funds out of the allowance for Laborer.

Item No. 3 represents the actual cost of snow removal and other work caused by the unusually severe winter. The Budget estimate for this work is always merely a guess. The actual requirements cannot, of course, be foretold.

Items Nos. 4 to 8 have been reported on in a separate communication by the Bureau of Contract Supervision. Yours truly,

GEORGE L. TIRRELL, Director.

The President put the question whether the Board would agree to accept such report and adopt said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Burden, Browne, Cardani, Cassidy, Collins, Colne, Crane, Curley, Curran, Delaney, Diemer, Dixon, Donnelly, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Friedlander, Gaynor, Gilmore, Goetz, Gutman, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Tolk, Trau, Walsh, Wendel, Williams, Wirth—58.

No. 68—(Int. No. 428).

**Report of the Committee on Finance in Favor of Adopting Resolution to Authorize an Issue of Special Revenue Bonds, \$5,635, for Reconstruction of the Roadway Pavement on Approaches to the City Island Bridge.**

The Committee on Finance to which was referred on April 25, 1916 (Minutes, page 144), the annexed request of the Commissioner of Bridges for Special Revenue Bonds, \$5,635, for reconstruction of the roadway pavement on approaches to City Island Bridge, respectfully

**REPORTS:**

This matter was referred to the Bureau of Contract Supervision for investigation and report, and according to their report annexed hereto, they deem the work necessary and the estimated cost reasonable. The Committee therefore recommends that the accompanying resolution be adopted.

Resolved, That, in pursuance of the provisions of Subdivision 8 of Section 188 of the Greater New York Charter, the Board of Estimate and Apportionment be and it is hereby requested to authorize the Comptroller to issue Special Revenue Bonds to the amount of Five thousand six hundred and thirty-five dollars (\$5,635), the proceeds whereof to be used by the Commissioner of Bridges for the purpose of reconstruction of the roadway pavement on approaches to the City Island Bridge. All obligations hereunder to be incurred on or before December 31, 1916.

FRANCIS P. KENNEY, WM. P. KENNEALLY, F. H. STEVENSON, CHARLES DELANEY, MICHAEL STAPLETON, ROBERT L. MORAN, SAMUEL J. BURDEN, FRANK A. CUNNINGHAM, JOHN DIEMER, Committee on Finance.

Department of Bridges, City of New York, Municipal Building, Manhattan, N. Y., April 24, 1916.

To the Honorable the Board of Aldermen of The City of New York:

Gentlemen—I beg to ask your Honorable Board to adopt a resolution, pursuant to the provisions of subdivision 8 of section 188 of the Greater New York Charter, requesting the Board of Estimate and Apportionment to authorize the issue of special revenue bonds to the amount of \$5,635, for the purpose of providing means for reconstructing the roadway pavement on the approaches to the City Island Bridge.

The roadway through Pelham Park and the main avenue in City Island leading to the bridge are paved with asphalt. The existing gravel pavement on the approaches of the bridge needs to be replaced with an asphalt pavement. The two approaches have a combined length of about 1,100 feet and the roadway is 35 feet wide, with surface car track on the same. The area to be paved, exclusive of the railway area, is approximately 3,220 square yards and the estimated cost of removing the existing pavement and laying a new asphalt pavement on a concrete foundation is \$1.75 per square yard, making a total of \$5,635. Yours respectfully,

F. J. H. KRACKE, Commissioner.

City of New York, Board of Estimate and Apportionment, Bureau of Contract Supervision, Municipal Building, May 1, 1916.

Hon. FRANCIS P. KENNEY, Chairman, Finance Committee, Board of Aldermen:

No. 428—Commissioner of Bridges—Request for Special Revenue Bonds, \$5,635, for Reconstruction of the Roadway Pavement on Approaches to the City Island Bridge.

Sir—On May 1, 1916, you requested the Bureau of Contract Supervision to investigate this request:

The condition of the macadam pavement which it is proposed to replace with asphalt is bad. It is so badly pitted that any repair thereof would be a waste of funds. On the City Island side, this pavement abuts an asphalt pavement laid by the Borough authorities and on the Pelham Park side it adjoins the asphalt road laid by the Park Department. The excellence of the pavements laid by the President and the Park Department accentuates the poor condition of this connecting link of pavement which is under the Bridge Department's jurisdiction.

The aggregate length of the approaches is about 1,100 feet; 800 feet on the Pelham Park side and 300 feet on the City Island side.

There was requested for the repair of this pavement in the budget for 1916, the sum of \$400, which was allowed. Owing to a large and unexpected expenditure for repaving at Willis avenue, the unencumbered balance in the fund of \$12,000 is \$2,603, which sum, the Bridge Department stated, will be insufficient for ordinary repairs.

It is intended to replace this macadam pavement with asphalt on concrete. The area, exclusive of that used by the railroad, is 3,220 square yards and the estimated cost of the work, at \$1.75 per square yard, is \$5,635, which is reasonable.

Respectfully,

TILDEN ADAMSON, Director.

The President put the question whether the Board would agree to accept such report and adopt said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Burden, Browne, Cardani, Cassidy, Collins, Colne, Crane, Curley, Curran, Delaney, Diemer, Dixon, Donnelly, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Friedlander, Gaynor, Gilmore, Goetz, Gutman, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Tolk, Trau, Walsh, Wendel, Williams, Wirth—58.

**GENERAL ORDERS.**

No. 72—(Int. No. 450).

**Resolution Appointing Various Persons Commissioners of Deeds.**

Resolved, That the following named persons be and they are hereby appointed Commissioners of Deeds:

By Aldermen Bent—

Joseph J. Metzger, 1113 Greene Ave., Brooklyn.

Endorsed by N. Dietz and J. S. Ross.

Philip J. Gass, 1416 Jefferson Ave., Brooklyn.

Endorsed by J. R. Edson and A. Little.

August George Beyer, 90 E. 18th St., Brooklyn.

Endorsed by James H. Cross and P. McCormack.

By Alderman Browne—

Henry C. Draper, 90 Johnson St., Brooklyn.

Endorsed by M. Connelly and W. Hennessey.

By Alderman Carroll—

Frank Robert Geraty, 39 East 76th St., Manhattan.

Endorsed by H. G. Calhoun and J. P. Brunneall.

Joseph V. De Rosa, 19 E. 88th St., Manhattan.

Endorsed by W. A. Eaton and G. E. Oberle.

By Alderman Cassidy—

Julius M. Leder, 210 E. 83d St., Manhattan.

Endorsed by W. C. Hecht and M. Levy.



- By Alderman Collins—  
William E. Rozett, 225 East 24th St., Manhattan.  
Endorsed by J. Ferguson and L. Kugelman.
- By Alderman Cox—  
Frank Siefert, 340 Dill Place, Glendale, Queens.  
Endorsed by H. Sanders and A. J. Morris.  
Michael Schoenherr, 300 St. Nicholas Ave., Ridgewood, Queens.  
Endorsed by A. S. Benninger and C. Gastmeyer.  
Albert Lambert, 975 Seneca Ave., Queens.  
Endorsed by M. Hertz and W. A. Moller.  
Herbert Bernard Keneally, 60 Seminole St., Neponsit, Queens.  
Endorsed by M. H. Ellison and M. Taylor.
- By Alderman Crane—  
Margaret M. McDermott, 502 West 173d St., Manhattan.  
Endorsed by J. S. Barron and S. B. Williams.  
William Kirk, 736 West 181st St., Manhattan.  
Endorsed by H. M. Kroic and J. S. Diamond.  
James Sprinz, 590 West 174th St., Manhattan.  
Endorsed by I. Hecht and D. J. Lumsden.  
Sigmund H. Spritz, 565 West 162nd St., Manhattan.  
Endorsed by H. Greenberg and M. H. Wolfe.  
John Augustus Wrede, 601 West 174th St., Manhattan.  
Endorsed by W. F. Schneider, Jr. and H. W. Beyer.
- By Alderman Curley—  
Edward I. Eisenberg, 866 Hunters Point Ave., Bronx.  
Endorsed by S. Markman and C. S. Gross.  
George W. Conner, 140 Brown Pl., Bronx.  
Endorsed by W. D. Cushman and C. E. Chalmert.  
Owen J. McCue, 377 East 141st St., Bronx.  
Endorsed by G. R. Lahrmann and C. A. Spear.  
Diogenes Terretta Wian, 2748 3d Ave., Bronx.  
Endorsed by W. J. Gerhardt and H. Amster.  
Marvin E. Kleinberger, 941 Intervale Ave., Bronx.  
Endorsed by J. F. Sullivan and J. H. Cross.  
Samuel Katz, 882 Beck St., Bronx.  
Endorsed by J. C. Erskine and G. H. Wolf.  
Morris Goldgeier, 600 Prospect Ave., Bronx.  
Endorsed by S. Cohen and J. Silverstein.
- By Alderman Curran—  
Thomas F. McCoy, 3 & 5 Bank St., Manhattan.  
Endorsed by G. Vogt and C. Jacobs.
- By Alderman Daly—  
Frank Higbie, 2773 Briggs Ave., Bronx.  
Endorsed by O. J. McCue and G. W. Tirchingham.
- By Alderman Diemer—  
Henry Gerken, 28 Vernon Ave., Brooklyn.  
Endorsed by A. M. Lang and Wm. J. Hackett.
- By Alderman Dostal—  
Celia Weiss, 76 St. Marks Pl., Manhattan.  
Endorsed by H. Weiss and M. Rothman.
- By Alderman Drescher—  
Abraham Rockmore, 1540 Eastern Parkway, Brooklyn.  
Endorsed by M. N. Noden and H. L. Breslaw.  
Bernard L. Golieb, 419 Blake Ave., Brooklyn.  
Endorsed by A. Kiendl and S. Fish.  
Leo B. Cohen, 1808 Prospect Place, Brooklyn.  
Endorsed by A. Kiendl and S. Fish.
- By Alderman Dunn—  
William Dunn, 5320 6th Ave., Brooklyn.  
Endorsed by H. S. Nichols and W. V. Donovan.  
Joseph A. Beyers, 7110 Ridge Court, Brooklyn.  
Endorsed by J. Walsh and A. Isaacsen.  
Henry Morris Haviland, 172 71st St., Brooklyn.  
Endorsed by W. S. Keiley and C. P. Browning.
- By Alderman Farley—  
William J. O'Connor, 367 East 62nd St., Manhattan.  
Endorsed by F. L. Hackenburg and J. C. Kirchoff.  
Alois G. McKay, 207 East 72nd St., Brooklyn.  
Endorsed by F. L. Hackenburg and J. C. Kirchoff.
- By Alderman Ferrand—  
Joseph M. Karl, 55 8th Ave., Brooklyn.  
Endorsed by S. K. Andrews and T. H. Roulston.
- By Alderman Friedlander—  
Henry Herz, 224 West 122nd St., Manhattan.  
Endorsed by J. W. Bermant and H. I. Perlin.  
David Taubenfeld, 80 West 126th St., Manhattan.  
Endorsed by S. Rosenstein and S. Deutch.  
Isidor Tow, 12 East 127th St., Manhattan.  
Endorsed by S. Suigerman and D. B. Baum.
- By Alderman Gaynor—  
Samuel Stern, 155 Havemeyer St., Brooklyn.  
Endorsed by S. Keansner and J. Schlazen.
- By Alderman Goetz—  
John A. Munson, Jr., 49 Delap St., Jamaica, Queens.  
Endorsed by S. C. Donovan and J. P. Barrell.  
Samuel A. Hodges, 48 Vanderveer Ave., Queens.  
Endorsed by J. Leich and C. F. Douglass.
- By Alderman Gutman—  
Gussie Laufer, 95 East 116th St., Manhattan.  
Endorsed by A. D. Feldstein and J. Ludlow.  
Isidor Wasserman, 7 East 98th St., Manhattan.  
Endorsed by J. Lewis and M. Wasserman.
- By Alderman Haubert—  
Thomas Chas. Beichert, 1336 Hancock St., Brooklyn.  
Endorsed by H. Deimer and A. S. Schaefer.  
Chas. F. Werner, 1205 Hancock St., Brooklyn.  
Endorsed by C. H. Haubert and W. I. Wolff.
- By Alderman Hilkemeier—  
Harry P. Francis, 45 Melrose St., Brooklyn.  
Endorsed by O. Muhlbaier and R. Fischer.  
Morris George Kantrowitz, 295 Stanhope St., Brooklyn.  
Endorsed by H. Levy and L. H. Lewbel.  
Louis Selle, 16 Ditmar St., Brooklyn.  
Endorsed by F. Schieffer and W. Bennether.
- By Alderman Hogan—  
Edward J. Fitzsimmons, 174 Warren St., Brooklyn.  
Endorsed by J. P. Judge and J. H. Collins.  
Henry S. B. Wright, 71 Pierrepont St., Brooklyn.  
Endorsed by E. B. Terry, Jr., and H. C. Mesereau.
- By Alderman Kenney—  
Frederick W. Scott, 164 Bond St., Brooklyn.  
Endorsed by W. J. Bryan and T. D. Scanlon.
- By Alderman McCann—  
Joseph A. N. Thomas, 315 West 54th St., Manhattan.  
Endorsed by M. Siedorf and B. M. Caulkin.
- By Alderman McGarry—  
Frederick C. Streib, 95 Nassau Ave., Brooklyn.  
Endorsed by J. S. Nelson and Geo. See.
- By Alderman McKee—  
John A. Galvin, 2066 Madison Ave., Manhattan.  
Endorsed by W. E. Slevin and C. G. Welsch.
- By Alderman Moore—  
Luther H. Kidder, 15 Hale Ave., Brooklyn.  
Endorsed by C. Schmulke and J. Wien.
- By Alderman Mullen—  
Ida M. Fitzpatrick, 2727 Eighth Ave., Manhattan.  
Endorsed by H. I. Brightman and Geo. Norris.
- Louis Feinstein, 3495 Broadway, Manhattan.  
Endorsed by R. Stone and J. Shornetz.
- By Alderman Palitz—  
James W. Dillon, 1163 Clay Ave., Bronx.  
Endorsed by J. M. O'Neill and J. W. Euson.  
Samuel S. Weiss, 1358-60 Brook Ave., Bronx.  
Endorsed by J. Blumenthal and H. L. Iallete.  
Frank Gieb, 1242 Brook Ave., Bronx.  
Endorsed by Peter Yoors and Henry Philpa.
- By Alderman Post—  
Walter R. Taylor, 57 North 14th St., Flushing, Queens.  
Endorsed by A. Dreyfus and J. H. Blosh.
- By Alderman Quinn—  
William H. Gentzlinger, 97 Riverside Drive, Manhattan.  
Endorsed by Max Isahowitz and Max Weiss.  
Monte London, 672 St. Nicholas Ave., Manhattan.  
Endorsed by Max Tachna and A. M. Davis.
- By Alderman Robitzek—  
Herman H. Feldstein, 1048 Bryant Ave., Bronx.  
Endorsed by Ed. Isaac and J. Frank.  
Nathan L. Spertell, 910 Prospect Ave., Bronx.  
Endorsed by I. L. Herscher and J. Kulkier.  
Bernard J. Blickman, 1504 Charlotte St., Bronx.  
Endorsed by J. Nemeror and J. T. Cox.  
Arthur Weyl, 897 Cauldwell Ave., Bronx.  
Endorsed by N. W. Herbst and S. Garry.  
Louis A. Moskowitz, 675 East 170th St., Bronx.  
Endorsed by H. W. Cook and J. A. Hamilton.  
Benjamin Berenson, 783 Beck St., Bronx.  
Endorsed by M. Landan and S. Reiner.
- By Alderman Ryan—  
Betty L. Scharoun, 1323 70th St., Brooklyn.  
Endorsed by T. A. Pelligrino and J. J. Butler.  
Bernard Pollak, 2025 Cropsey Ave., Brooklyn.  
Endorsed by J. Harors and S. Kahan.  
Philip Pariser, 2859 Cortland St., Brooklyn.  
Endorsed by L. L. Richman and L. J. Warshauer.
- By Alderman Shields—  
Jacob W. Bermant, 231 West 111th St., Manhattan.  
Endorsed by Henry Herz and H. I. Perlin.
- By Alderman Schmitz—  
Vincent J. Kowalski, 124 41st St., Corona, Queens.  
Endorsed by J. V. Ganwel and S. Eught.  
Henry Klein, 67 Maurice Ave., Elmhurst, Queens.  
Endorsed by G. Cook and C. A. Jacob.
- By Alderman Smith—  
Judson B. Pinckney, 439a Monroe St., Brooklyn.  
Endorsed by N. L. Reeves and E. C. Arnold.
- By Alderman Squires—  
Harold D. Watson, 934 Albemarle Rd., Brooklyn.  
Endorsed by F. M. Livingston and R. S. Keisteller.  
J. Louis Lutjen, 345 Westminster Road, Brooklyn.  
Endorsed by L. J. Schindler and H. V. C. Bell.  
Leon Longuemare, 3412 Glenwood Road, Brooklyn.  
Endorsed by E. Johnson and H. W. Temple.  
Harper D. Canaday, 904 East 10th St., Brooklyn.  
Endorsed by J. H. Richards and D. L. Brown.  
William Harold Huelsner, 1011 Ocean Ave., Brooklyn.  
Endorsed by R. H. Van Ness and J. Hays.
- By Alderman Stapleton—  
Richard J. Delehanty, 5 Madison St., Manhattan.  
Endorsed by M. Stapleton and T. F. Campbell.
- By Alderman Stevenson—  
Charles L. Livingston, 312 Garfield Pl., Brooklyn.  
Endorsed by W. Bondy and G. C. Sniffen.  
Catherine A. Weldon, 591 Seventh St., Brooklyn.  
Endorsed by W. Loenunthel and S. Weinheim.  
H. Murray LaMont, 902 President St., Brooklyn.  
Endorsed by W. J. Maxwell and D. E. Jayne, Brooklyn.
- By Alderman Trau—  
Lawrence E. Joffe, 109 East 108th St., Manhattan.  
Endorsed by C. J. Kennedy and D. J. Dunne.
- By Alderman Williams—  
Isadore Kronstein, 26 West 112th St., Manhattan.  
Endorsed by J. Gaus and A. Daris.
- By Alderman Wirth—  
Samuel Howard Zimmerman, 347 Bainbridge St., Brooklyn.  
Endorsed by J. M. May and M. S. Pons.
- By Alderman Wendel—  
Jacob Kleinman, 843 Eighth Ave., Manhattan.  
Endorsed by G. V. Meckel and Mack Schenck.
- By Alderman Wise—  
George L. Tighe, 618 West 135th St., Manhattan.  
Endorsed by J. Sebastian Maxwell and R. P. Rumsey.  
Auto U. Scott, 3 East 132nd St., Manhattan.  
Endorsed by A. J. Kohn and E. A. Wise.
- The President put the question whether the Board would agree with said resolution.
- Which was decided in the affirmative by the following vote:  
Affirmative—Aldermen Bassett, Burns, Cardani, Cassidy, Cole, Collins, Colne, Cox, Curley, Delaney, Diemer, Dixon, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Gaynor, Gilmore, Gutman, Hannon, Haubert, Heyman, Hilkemeier, Kenneally, McCann, McCourt, McGarry, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Schmitz, Schweickert, Shields, Silberstein, Squiers, Stapleton, Stevenson, Tolk, Trau, Wendel, Wirth, Wise; President Van Name, by Henry P. Morrison, Commissioner of Public Works; President Connolly, by James A. Dayton, Commissioner of Public Works; President Pounds, by Edmund W. Voorhies, Commissioner of Public Works; President Marks, by Ralph Folks, Commissioner of Public Works—56.
- No. 73—(Int. No. 437).
- Report of the Committee on Finance in Favor of Adopting Resolution to Pay a Bill of the Adams Express Company for Delivering Packages of Supplies to Members of the Board of Aldermen.**
- The Committee on Finance, to which was referred on April 25, 1916 (Minutes, page 153), the annexed resolution to pay a bill of the Adams Express Company for delivering packages of supplies to members of the Board of Aldermen, respectfully
- REPORTS:
- That, having examined the subject, they believe the attached bills to be proper. The Committee therefore recommends that the accompanying resolution be adopted.
- Resolved, That the Comptroller be and he is hereby authorized and empowered to draw a warrant in favor of the Adams Express Company for the sum of sixteen dollars and fifty-one cents (\$16.51), said sum to be payment in full for delivering packages of supplies to members of the Board of Aldermen during the month of March, 1916; the said sum to be charged to and paid out of the budgetary appropriation entitled—"Board of Aldermen and City Clerk, Code No. 8, Transportation."
- FRANCIS P. KENNEY, WM. P. KENNEALLY, F. H. STEVENSON, CHARLES DELANEY, MICHAEL STAPLETON, ROBERT L. MORAN, SAMUEL J. BURDEN, FRANK A. CUNNINGHAM, JOHN DIEMER, Committee on Finance.
- The President put the question whether the Board would agree with said resolution.
- Which was decided in the affirmative by the following vote:  
Affirmative—Aldermen Bassett, Burns, Cardani, Cassidy, Cole, Collins, Colne, Cox, Curley, Delaney, Diemer, Dixon, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Gaynor, Gilmore, Gutman, Hannon, Haubert, Heyman, Hilkemeier, Kenneally, McCann, McCourt, McGarry, McKee, Martin, Molen, Moore, Moran, Mullen,



O'Rourke, Palitz, Post, Quinn, Schmitz, Schweickert, Shields, Silberstein, Squiers, Stapleton, Stevenson, Tolk, Trau, Wendel, Wirth, Wise; President Van Name, by Henry P. Morrison, Commissioner of Public Works; President Connolly, by James A. Dayton, Commissioner of Public Works; President Pounds, by Edmund W. Voorhies, Commissioner of Public Works; President Marks, by Ralph Folks, Commissioner of Public Works—56.

No. 74—(Int. No. 304).

**Report of the Committee on Public Thoroughfares in Favor of Adopting an Ordinance to Amend Subdivision 2 of Section 13 of Article 2 of Chapter 24, Code of Ordinances, Relating to Peddlers and Particularly to "Restricted Streets."**

The Committee on Public Thoroughfares, to which was referred on March 14, 1916 (Minutes, page 700), the annexed ordinance to amend subdivision 2 of section 13 of article 2 of chapter 24 of the Code of Ordinances, relating to peddlers, and particularly to "restricted streets," respectfully

**REPORTS:**

That, having examined the subject, it believes the proposed change to be advisable, and it therefore recommends that the proposed ordinance be adopted.

AN ORDINANCE to amend Subdivision 2 of Section 13 of Article 2 of Chapter 24 of the Code of Ordinances, Relating to Peddlers, and Particularly to "Restricted Streets."

*Be it Ordained, by the Board of Aldermen of The City of New York, as follows:*  
Section 1. Subdivision 2 of section 13 of article 2 of chapter 24 of the Code of Ordinances, relating to peddlers, and particularly to "restricted streets," as amended, is hereby further amended by striking therefrom the line [Broadway, from 134th Street to 158th Street, Manhattan;] and inserting at the head of the list of streets contained in said subdivision the following words:

*All streets lying within the territory bounded by 134th Street, Amsterdam Avenue, 158th Street and the North River, Manhattan;*

Sec. 2. This ordinance shall take effect immediately.

Note—New matter in *italics*; old matter, in brackets [ ], to be omitted.

MICHAEL STAPLETON, JOHN McCANN, F. W. SMITH, JOHN J. REGAN, FRANK MULLEN, W. F. QUINN, EDWARD W. CURLEY, THOMAS W. MARTIN, M. D., ALEXANDER S. DRESCHER, FRANCIS P. BENT, CHARLES W. DUNN, Committee on Public Thoroughfares.

The President put the question whether the Board would agree with said resolution.

Which was decided in the affirmative by the following vote:

Affirmative—Aldermen Bassett, Burns, Cardani, Cassidy, Cole, Collins, Colne, Cox, Curley, Delaney, Diemer, Dixon, Dostal, Dunn, Drescher, Eagan, Farley, Ferguson, Ferrand, Gaynor, Gilmore, Gutman, Hannon, Haubert, Heyman, Hilkemeier, Kenneally, McCann, McCourt, McGarry, McKee, Martin, Molen, Moore, Moran, Mullen, O'Rourke, Palitz, Post, Quinn, Schmitz, Schweickert, Shields, Silberstein, Squiers, Stapleton, Stevenson, Tolk, Trau, Wendel, Wirth, Wise; President Van Name, by Henry P. Morrison, Commissioner of Public Works; President Connolly, by James A. Dayton, Commissioner of Public Works; President Pounds, by Edmund W. Voorhies, Commissioner of Public Works; President Marks, by Ralph Folks, Commissioner of Public Works—56.

No. 75—(Int. No. 320).

**Report of the Committee on Public Thoroughfares in Favor of Filing an Ordinance to Amend Article 3 of Chapter 24 of the Code of Ordinances Relating to "Rules of the Road," Horses: Driving of.**

**MAJORITY REPORT.**

The Committee on Public Thoroughfares to which was referred on March 21, 1916 (Minutes, page 741) the annexed ordinance to amend Article 3 of Chapter 24 of the Code of Ordinances, relating to "Rules of the Road" Horses: driving of, respectfully

**REPORTS:**

That the committee held a public hearing on this matter owing to the great number of communications received in opposition to the proposed ordinance, in order that those interested might present their views. Such hearing was held on Friday, April 28th, 1916, in the Aldermanic Chamber. Many owners of horses, representatives of the Society for the Prevention of Cruelty to Animals, of the Humane Society, Safety First Society, Veterinarian profession and a number of persons interested through humane motives attended. A majority of those present were opposed to the proposed ordinance and it was shown to the committee and agreed to by both sides, that Sections 185 and 188 of Article 16 of the Penal Law affords ample relief under any circumstances that may arise in this regard.

In consideration of this fact the committee deems action on this matter inadvisable, and recommends accordingly that the proposed ordinance be placed on file.

The Committee further calls attention to Section 185 of Article 16, the Penal Law, State of New York.

Section 185—"A person who permits any animal to be unjustifiably injured, maimed, mutilated or killed, or who wilfully sets on foot, instigates, engages in, or in any way furthers any act of Cruelty to any animal, or any act tending to produce such cruelty, is guilty of a misdemeanor."

AN ORDINANCE to amend Article 3 of Chapter 24 of the Code of Ordinances, Relating to "Rules of the Road."

*Be it Ordained, by the Board of Aldermen of The City of New York, as follows:*  
That Section 1, Article 3 of chapter 24, of the Code of Ordinances relating to "Rules of the Road," is hereby amended, by adding to the end thereof a new section to read as follows:

Section 19. Horses, driving of:

1. Between November 1st and April 1st, in each year, no horse, mule or other large animal, whether led or used for the purpose of driving or hauling, shall be driven on any of streets, avenues or highways of the City of New York, unless the animal is shod in such a manner as will prevent slipping.

2. Any person violating this provision shall, upon conviction, be punished by a fine not to exceed \$10 or imprisonment in the City Prison for ten days, or both.

Section 2.

This ordinance shall take effect thirty days after its approval by the Mayor.

Note. New matter in *italics*.

JOHN McCANN, FRED SMITH, JOHN I. RYAN, FRANK MULLEN, W. F. QUINN, THOMAS W. MARTIN, M. D., EDWARD W. CURLEY, FRANCIS P. BENT, Committee on Public Thoroughfares.

*Brief Submitted by the American Society for the Prevention of Cruelty to Animals Favoring Proposed Horseshoeing Ordinance Introduced by Alderman Alexander Drescher and as Subsequently Amended Reading as Follows:*

"Between November 1st and April 1st, in each year, no horse, mule or other large animal used for the purpose of driving or hauling, shall be driven on any of the streets, avenues or highways of the City of New York, unless the animal is shod in such a manner as will prevent, or tend to prevent, slipping. Any person violating this ordinance shall, upon conviction, be punished by a fine not to exceed \$10 or imprisonment in the City Prison for ten days, or both." (Extract.)

The ordinance permits an owner to use his own judgment and discretion as to what character of device he will use and gives him a wide range of choice between pads, slippers, caulks, chains, rough shoeing or any other kind of emergency device that will do the work, and prevent, or tend to prevent, slipping.

The ordinance has been endorsed by the most representative horse owners and users of the City of New York including the Coal Merchants Association; Retail Dry Goods Association; Safety First Federation of America; Bradley Contracting Co. (copy of whose letter of endorsement is herewith submitted); Degnon Contracting Co. (Mr. Louis Harrington, in charge of their horses and vehicles); Peter Doelger Brewing Co.; Flynn Bros., Contractors; the American Express Co.; B. Altman; Reinfrank Bros.; R. H. Macy; John Wanamaker; Bloomingdale Bros.; Lord & Taylor; I. B. Greenhut & Co.; E. D. & W. D. Stein; John Bingham and William Koster, stable keepers; P. Riordan, Truckman, Miller Bros.; Saks and Co., and the press of the City unanimously.

In addition, its adoption is urged by the Women's League for Animals; the Humane Society of New York; The American Society for the Prevention of Cruelty to Animals; all humane workers, and the public generally.

The strong point in favor of the proposed ordinance lies in the fact that it does not describe a particular shoe or shoes, but simply states that "an animal shall be shod in such a manner as will prevent, or tend to prevent, slipping."

The Fire Department of the City of New York; the Bradley Contracting Co. (with over 1,100 horses), the Degnon Contracting Co.; most of the Department Stores and others, have, for a number of years, been shoeing their horses with rubber

pads, helped out, in particularly slippery weather, with frost nails, and thus have prevented the slipping and falling of their horses on snow and ice in the winter time.

The Bradley Contracting Co., in relation to the matter, writes as follows:

Bradley Contracting Co., 1 Madison Ave., New York, April 27, 1916.

Hon. ALFRED WAGSTAFF, President The Amer. Society for Prev. Cruelty to Animals, 26th Street & Madison Avenue, New York City:

My dear Colonel—Your Mr. Freel called on us today in relation to the proposed ordinance relative to shoeing of horses between November and April in each year, inclusive. Briefly, we desire to say that for the past thirty years we have been operating all of our horses with rubber pads during the winter months and have been singularly free from accidents as a result of falls and injuries due to falls. In particularly slippery weather, where the loads are heavy, we sometimes added frost nails, and in that way we have prevented the possibility of our horses slipping. This has been our experience and as a result, we have reached the conclusion that slipping, may in a very large measure be prevented.

You have our authority to use this letter. Yours very truly,

BRADLEY CONTRACTING CO., WILLIAM BRADLEY, Treasurer.

If this can be accomplished successfully by the Fire Department and other representative horse owners, surely it is possible, with proper care and the outlay of a few additional dollars, for the rest of the horse owners and users of the City of New York to accomplish the same results.

The only thing that stands in the way of the adoption of this resolution, in the opinion of the Society, is the unwillingness of some horse owners to expend the few additional dollars required in order to provide the necessary and proper safeguards to protect animals from accident, injury and death, first; and second, the lack of a proper understanding of the ordinance, its objects and purposes.

The Coal Merchants' Association, which, as the Committee knows, is engaged in a very heavy hauling, forwarded a memorandum to the Thoroughfare Committee, suggesting, by way of remedy, the following:

"The suggestion which we take the liberty of proposing is that the wording of the ordinance be changed in at least one respect; that, instead of providing that no horse shall be driven, etc., 'unless the animal is shod in such a manner as will prevent slipping,' the clause quoted should read as follows: 'unless the animal is shod in such a manner as will tend to prevent slipping.'"

"This, it is at once apparent, will eliminate the oppressive and unreasonable features of the ordinance and will at the same time in no manner lessen the amount of precaution against slipping required on the part of horse owners. In fact, it will determine and place upon them an exact duty, and achieve the very object sought to be accomplished by the proposed ordinance, the difference being that the slipping is not proof of the crime, but the failure to properly shoe to prevent slipping is fixed as the crime.

"In conclusion, the Coal Merchants wish to reiterate their willingness and desire to co-operate in any move that will tend towards the betterment of traffic conditions and the elimination of the suffering of horses in the City of New York.

"Respectfully submitted,

"COAL MERCHANTS' ASSOCIATION: LOUIS H. MOOS, Counsel."

The ordinance has already been amended so as to comply entirely with the suggestion made by the Coal Merchants' Association, and the words "or tend to prevent" have been incorporated.

Burns Bros., the largest Coal Merchants in our city, in forwarding a copy of the memorandum to this office, addressed the following letter:

Burns Bros., Coal, Fulton and Church Sts., New York, April 27, 1916.

Mr. THOMAS F. FREEL, Superintendent the Amer. Society for Prev. Cruelty to Animals, Madison Avenue and 28th Street, New York City:

Dear Sir—We are in favor of the proposed ordinance coming up for a hearing in the Aldermanic Chamber tomorrow morning, as worded in your letter received by us this morning. We enclose herewith a brief prepared by the Coal Merchants' Association on the subject. This, you will notice, advocates the very thing you are in favor of. Very truly,

(Signed) BURNS BROS.

There is not a member of your Honorable body that will not recollect the horrible conditions of cruelty that occurred upon the streets of our city during the month of March of this year, when even the Humane Societies found themselves almost powerless to relieve suffering and distress to animals, without suspending and tying up the entire commerce and traffic of the city. We are satisfied that no member of your Honorable body cares to witness similar scenes on our streets again and we are pressing for the passage of this ordinance in order to serve a legal and timely notice on horse owners and users that they will have to prepare to furnish such necessary safeguards for the proper protection and safety of their horses as the conditions of our streets require in the winter months.

May we point out that not a single representative citizen, man or woman, outside of some horse owners, appeared before the Committee to oppose the ordinance, and the horse owners who did appear in opposition represented only a small portion of the horse owners of our city, and we firmly believe a majority of them would not have opposed if they understood what it was the ordinance sought to accomplish.

We are confident that if your Honorable body will favorably consider and pass the ordinance, it will afford ordinary and proper protection to willing, faithful animals, will solve a most vexatious and annoying traffic problem and in less than a month after it goes into effect will be regarded as a proper reasonable and economic regulation by horse owners, users and drivers themselves.

We would therefore ask for the favorable consideration of the proposed ordinance. Respectfully submitted,

THE AMER. SOCIETY FOR THE PREV. OF CRUELTY TO ANIMALS, THOMAS F. FREEL, Superintendent.

*Horse Owners Favoring the Passage of the Proposed Ordinance.*

Coal Merchants' Association, Retail Dry Goods Assn., Safety First Federation of America, Bradley Contracting Co., Degnon Contracting Co., Flynn Bros. (Contractors), Reinfrank Bros., B. Altman, R. H. Macy, Saks and Co., John Wanamaker, J. B. Greenhut Co., Bloomingdale Bros., Lord & Taylor, E. D. & W. D. Stein (Truckmen), Miller Bros. (Truckman), John Bingham (stable keeper), William Koster (stable keeper), Peter Doelger Brew. Co., Clausen Flanagan Brew. Co., Loewer's Gambrinus Brew. Co., David Mayer Brew. Co., A. Hupfel & Sons, John Eichler Brew. Co., George Ehret's Brew. Co., Lion Brew Co., T. McKeon, Chace Trucking Co., Union Boarding Stables, Jos. F. Whelan Co., M. Romanoff, Sheffield Farms-Slawson-Decker Co., Mutual Milk & Cream Co.—McDermott Milk Co., American Express Co., Adams Express Co.

**MINORITY REPORT.**

*To the Honorable Board of Aldermen of the City of New York:*

The undersigned members of the Committee on Public Thoroughfares to which committee was referred on March 21st, 1916, (Minutes, page 741) the ordinance relating to "rules of the road" and particularly to the driving of horses, respectfully reports:

That a public hearing was held on this matter in the Aldermanic Chamber on Friday, April 28th, 1916, and was largely attended.

The proposed ordinance was amended with the following language which was added to Paragraph 1 "or tend to prevent slipping" upon the recommendation of the Coal Merchants' Association, through its counsel, Louis H. Moose, and in this way was eliminated what appeared to be oppressive and an unreasonable feature of the ordinance and at the same time not lessen the amount of precaution against slipping required on the part of horse owners, but in fact determined and placed upon them an exact duty and went towards achieving the very object sought. The difference is that it does not prove the misdemeanor, but the failure to properly shoe to prevent slipping is fixed as the misdemeanor.

It was pointed out by those who appeared in favor of the ordinance that the enactment of the same would tend towards the betterment of traffic conditions and the elimination of the suffering of horses in the City of New York.

This ordinance will permit the owner to use his own judgment and discretion as to what character of device he will use and gives him a wide range of choice as long as he will employ some means that will prevent or tend to prevent horses from slipping.

The American Society for Prevention of Cruelty to Animals and all humane societies, it was asserted, found themselves this past winter powerless to relieve suffering and distress of animals without tying up the traffic and commerce of the City.

The adoption of this ordinance will be a timely notice to horse owners and users that they will have to prepare to furnish such necessary safeguards as will tend to prevent the slipping of their horses during a time when the City streets are covered with ice and sleet.

The proposed ordinance has the endorsement of the following concerns: R. H.



Macy & Co., J. B. Greenhut Company, Lord & Taylor, Bloomingdale Brothers, John Wanamaker, Degnon Contracting Company, Safety First Federation, B. Altman Co., Rheinfrank Brothers, John Bingham, E. D. & W. Stein, Saks & Co., Bradley Construction Co., Miller Brothers, James Riordan, American Society for the Prevention of Cruelty to Animals, Peter Doelger Brewing Co., Flynn Bros. Contracting, Coal Merchants' Association, Retail Dry Goods Association, Bradley Contracting Co., American Express Co., William Koster, and the press of the City unanimously.

In view of the foregoing the undersigned recommend the passage of this ordinance forbidding horses that are not so shod as to tend to prevent slipping from being driven on the streets in the winter time, thus doing away with the misery endured by many poor horses in the winter during the past when the streets were covered with sleet and ice. The passage of this ordinance will also do a great deal toward improving traffic conditions.

The proposed ordinance is presented with the further recommendation that the fine should not exceed ten dollars or imprisonment in the City Prison for more than two days (instead of ten) or both.

The undersigned minority members of the Committee on Public Thoroughfares of the Board of Aldermen recommend that this report be substituted for the majority report and that the following ordinance as amended herein be accepted.

That Section 1, Article 3 of chapter 24, of the Code of Ordinances relating to "Rules of the Road," is hereby amended by adding to the end thereof a new section to read as follows:

Section 19—Horses, driving of:

1. Between November 1st and April 1st, in each year, no horse, mule or other large animal, whether led or used for the purpose of driving or hauling, shall be driven in any of the streets, avenues or highways of the City of New York, unless the animal is shod in such a manner as will prevent or tend to prevent slipping.

2. Any person violating this provision shall, upon conviction, be punished by a fine not to exceed ten (\$10.00) dollars or imprisonment in the City Prison for two days, or both.

Section 2. This ordinance shall take effect thirty days after its approval by the Mayor.

Note—New matter in italics.

That they, therefore, recommend that the said resolution and ordinance be adopted. MICHAEL STAPLETON, Chairman; CHARLES W. DUNN, ALEXANDER S. DRESCHER.

Alderman Haubert moved that the minority be substituted for the majority report. The President put the question whether the Board would agree with said motion. Which was decided in the negative by the following vote:

Affirmative—Aldermen Burns, Cole, Collins, Colne, Crane, Curran, Dostal, Dunn, Drescher, Ferrand, Gutman, Haubert, O'Rourke, Post, Stapleton, Williams; President Van Name, by Henry P. Morrison, Commissioner of Public Works—16.

Negative—Aldermen Bassett, Burden, Browne, Carroll, Cardani, Cassidy, Cox, Cunningham, Curley, Delaney, Diemer, Dixon, Donnelly, Eagan, Farley, Ferguson, Friedlander, Gaynor, Gilmore, Hannon, Heyman, Hilkemeier, Kenneally, Kenney, McCann, McCourt, McGarry, McGillick, McKee, Martin, Molen, Moore, Moran, Mullen, Quinn, Robitzek, Schmitz, Schweickert, Shields, Silberstein, Smith, Squiers, Stevenson, Tolk, Trau, Walsh, Wendel, Williams, Wirth, Wise; President Connolly, by James A. Dayton, Commissioner of Public Works; President Pounds, by Edmund W. Voorhies, Commissioner of Public Works; President Marks, by Ralph Folks, Commissioner of Public Works—54.

The majority report was then, on viva voce vote, accepted.

ACKNOWLEDGMENTS.

Acknowledgments of receipt of preamble and resolutions adopted by the Board of Aldermen on the question of preparedness were received from the President of the United States and the following members of the Congress:

Senator James W. Wadsworth, Jr., Representatives Meyer London, Thomas G. Patten, Michael F. Farley, William S. Bennet, Edmund Platt, Thomas B. Dunn and Henry Bruckner.

The same were ordered on file.

Alderman Trau moved that the Board do now adjourn.

The President put the question whether the Board would agree with said motion. Which was decided in the affirmative.

And the President declared that the Board stood adjourned until Tuesday, May 16th, 1916, at 1.30 o'clock P. M.

P. J. SCULLY, City Clerk and Clerk of the Board of Aldermen.

## DEPARTMENT OF FINANCE.

### WARRANTS MADE READY FOR PAYMENT IN DEPARTMENT OF FINANCE WEDNESDAY, MAY 10, 1916.

Below is a statement of warrants made ready for payment on the above date, showing therein the Department of Finance voucher number, the dates of the invoices or the registered number of the contract, the date the voucher was filed in the Department of Finance, the name of the payee and the amount of the warrant.

Where two or more bills are embraced in the warrant, the dates of the earliest and latest are given, excepting that, when such payments are made under a contract, the registered number of the contract is shown in the place of the second invoice date.

Where the word "final" is shown after the name of the payee, payment will not be made until thirty days after the completion and acceptance of the work, but all of the other warrants mentioned will be forwarded through the mail unless some reason exists why payment is to be made in person, in which event written notice will be promptly given to the claimant.

In making a written or verbal inquiry at this office for any of the above mentioned warrants, it is requested that reference be made by the Department of Finance voucher number.

WILLIAM A. PRENDERGAST, Comptroller.

Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.
<b>Armory Board.</b>				
56557	1- 4-16	4- 3-16	Nicholas J. Schery .....	\$255 00
<b>Department of Bridges.</b>				
69720	4- 3-16	5- 4-16	Agent and Warden, Sing Sing Prison.	\$57 60
67569	2-26-16	4-27-16	The American Rolling Mill Company..	927 01
<b>Bellevue and Allied Hospitals.</b>				
65966	3-15-16	4-25-16	J. H. Freedlander .....	\$349 34
69656	3-15-16	5- 3-16	John Chatillon & Sons .....	3 00
69472	1-12-16	5- 2-16	McQuillen & Chave .....	95 00
69598	3-22-16	5- 4-16	The Watters Laboratories .....	27 00
69489	3-24-16	5- 4-16	Coles & Company .....	22 80
69637	2- 5-16	5- 4-16	Agent & Warden of Auburn Prison..	65 00
6952	3-16-16	3-27-16	Welsbach Gas Lamp Co.....	70 67
69625	1- 3-16	5- 4-16	The White Company .....	16 30
69646	3-24-16	3-28-16	James M. Shaw & Co.....	58 66
69611	3-30-16	5- 3-16	The Ballwood Company .....	80 75
69648	3- 6-16	5- 3-16	Clements Mfg. Co.....	46 50
68716	3-13-16	5- 1-16	Stein, Hirsh & Co.....	89 15
67327			Shults Bread Co. ....	147 24
67325	12-31-15	4-27-16	Shults Bread Co. ....	153 40
67326	1-25-16	4-27-16	Shults Bakery .....	117 50
69484	4- 1-16	5- 2-16	Wm. J. Hewlett .....	32 32
69481	3- 3-16	4- 2-16	Conron Bros. Company .....	3 50
69482	3-31-16	5- 2-16	Nathan Strauss, Inc. ....	1 00
69483	2-29-16	5- 2-16	J. M. Horton Ice Cream Co.....	9 45
69553	3-17-16	5- 3-16	Turner Halsey Company .....	40 64
69538	3-31-16	5- 3-16	Burns Bros. ....	37 41
69546	3-13-16	5- 3-16	Stump & Walter Co. ....	75 93
69641	3-31-16	5- 3-16	Geo. F. Sargent Company .....	69 75
69640	3-11-16	5- 3-16	F. Madlener Mfg. Co.....	4 50
69649	3-16-16	5- 3-16	Firestone Tire & Rubber Co., Inc..	14 70
69657	3-24-16	5- 3-16	Peerless Rubber Manufacturing Co..	17 50
69650	3-18-16	5- 3-16	J. H. Block Co.....	4 75
69616	3-14-16	5- 3-16	The American Laundry Machinery Co.	59 00

Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.
69617	3- 9-16	5- 3-16	Taylor Instrument Companies.....	10 50
69621	3-11-16	3-16-16	5- 3-16 Wappler Electric Mfg. Co., Inc.....	9 50
69601	3-17-16	5- 3-16	Bissell Carpet Sweeper Co.....	12 45
69596	3- 4-16	5- 3-16	Jordan Bros. ....	73 20
69597	3-18-16	5- 3-16	Roger Williams .....	3 75
69606	3-20-16	3-28-16	5- 3-16 Frank A. Hall & Sons.....	11 45
69599	3-21-16	5- 3-16	Hartley-Wallace Co. ....	17 50
69475	12-27-15	5- 2-16	Wm. A. Sander .....	56 00
69627	3-20-16	5- 3-16	The Perfection Spring Service Co.....	1 68
69623	4- 1-16	5- 3-16	Jas. B. Donohue .....	29 20
69459	12-18-15	2-17-16	5- 2-16 Mead, Johnson & Co. ....	90 00
69516	3- 9-16	3-20-16	5- 3-16 The J. L. Mott Iron Works.....	16 20
<b>Board of Coroners.</b>				
70939			Charles Hoeft .....	\$4 60
70888		5- 5-16	G. W. Tong.....	10 50
70886		5- 5-16	Charles Wuest .....	12 50
<b>Municipal Civil Service Commission.</b>				
6124		5- 6-16	William Mabon .....	\$25 00
6123		5- 6-16	E. B. Ackerman .....	55 00
<b>County Court, Kings County.</b>				
5788	3-26-16	4-29-16	Louis A. Zimmerman .....	\$19 65
5789	4- 7-16	4-28-16	Thomas F. Darcy .....	20 30
<b>County Court, Bronx County.</b>				
69900	4- 3-16	5- 1-16	Adams, Flanagan Co.....	\$42 06
<b>City Magistrates' Courts.</b>				
71322	3-31-16	5- 8-16	The Western Union Telegraph Co.....	\$2 19
71323	2-29-16	5- 8-16	The Western Union Telegraph Co.....	41
71325	3-31-16	5- 8-16	Monahan Express Co.....	30
71324	4-30-16	5- 8-16	Postal Telegraph Cable Co.....	1 91
71320	5- 1-16	5- 8-16	Frank Oliver, Chief Clerk.....	2 85
<b>Court of Special Sessions.</b>				
6049		5- 5-16	Abraham Geller .....	\$20 00
6050		5- 5-16	Bernard Gross .....	48 00
71156		5- 6-16	Adolphus Ragan, Chief Clerk.....	150 00
<b>Court of General Sessions.</b>				
67095	4-22-16	4-27-16	Roy F. Schoonmaker .....	\$141 00
67091	4- 7-16	4-27-16	Roy F. Schoonmaker .....	142 50
67094	4-19-16	4-27-16	Nathaniel Phillips .....	200 00
67093	4-19-16	4-27-16	William Blau .....	200 00
67089	4-19-16	4-27-16	Dr. Herbert C. De Cornwell.....	250 00
67610	3-31-16	4-21-16	Holtz & Freystedt Restaurant & Wine Co., Inc. ....	141 00
67092	4-19-16	4-27-16	Dr. Herbert C. De V. Cornwell.....	200 00
67097	4-19-16	4-27-16	Herbert C. De V. Cornwell.....	250 00
67098	4-19-16	4-27-16	Dr. Charles W. Stevens .....	250 00
67090	4-19-16	4-27-16	Dr. Charles W. Stevens .....	250 00
67099	4-22-16	4-27-16	Roy F. Schoonmaker .....	147 00
67088	4-19-16	4-27-16	Henry H. Curran .....	250 00
67096	4-19-16	4-27-16	Henry H. Curran .....	250 00
<b>City Court, New York County.</b>				
70595	4-17-16	5- 5-16	West Publishing Co.....	\$34 50
70594	4- 8-16	5- 5-16	T. Hanrahan & Co.....	2 75
69995	4- 5-16	5- 4-16	Gretchen Bevins .....	8 20
<b>Surrogate's Court, Queens County.</b>				
69904	5-21-15	1- 8-16	5- 3-16 L. C. Smith & Bros. Typewriter Co....	\$2 65
<b>Surrogate's Court, New York County.</b>				
69740	4-16-16	5- 4-16	Gerard, Crane & Co.....	\$22 08
<b>Supreme Courts.</b>				
69883			The Sherwood Co.....	\$74 00
69879	4-27-16	5- 3-16	West Publishing Co.....	36 75
69882	4-27-16	5- 3-16	R. L. Polk & Co., Inc.....	60 00
<b>County Clerk, Queens County.</b>				
69686	4-18-16	5- 4-16	Jamaica Bookbindery .....	\$92 00
<b>County Clerk, New York County.</b>				
69661	3-10-16	4- 4-16	5- 4-16 Agent & Warden of Auburn Prison...	\$51 90
<b>Board of Child Welfare.</b>				
70596	4-30-16	5- 5-16	Harry L. Hopkins, Executive Secretary	\$29 91
<b>Hunter College.</b>				
69055	1-21-16	5- 2-16	Irving Pitt Manufacturing Co.....	\$66 00
69068	2-25-16	5- 2-16	Polhemus Printing Co.....	19 75
<b>College of The City of New York.</b>				
68349	4- 1-16	4-29-16	Munson Supply Co.....	\$3 15
<b>Board of City Record.</b>				
70877	3-22-16	4-27-16	5- 5-16 New York American .....	\$78 50
70876	3-29-16	5- 5-16	Engineering & Contracting.....	2 53
70885	4- 6-16	5- 5-16	Sarasohn & Son.....	21 00
70884	4- 6-16	5- 5-16	New York Evening Journal.....	42 00
70883	4-19-16	5- 5-16	Brooklyn Daily Times .....	11 20
70866	4-28-16	4-29-16	5- 5-16 Brooklyn Daily Times .....	75 20
70882	4- 7-16	5- 5-16	Civil Service Chronicle .....	8 75
70881	4- 8-16	5- 5-16	The Chief Publishing Co.....	8 75
70878	3-21-16	5- 5-16	Sun Printing & Publishing Assn.....	32 00
70871	3-13-16	5- 5-16	Jewish Daily Forward .....	10 50
70867	4-26-16	5- 1-16	5- 5-16 The Staten Islander .....	70 00
70868	4- 1-16	4-19-16	5- 5-16 The Brooklyn Daily Eagle.....	78 40
70870	2-28-16	3-31-16	5- 5-16 The Brooklyn Daily Eagle.....	25 60
70869	4-19-16	5- 5-16	Long Island Star Publishing Co.....	50 00
70880	4- 1-16	4- 6-16	5- 5-16 The New York Times.....	60 00
70879			The New York Herald.....	20 90
70875	3-30-16	5- 5-16	Engineering News .....	24 60
70874	3-25-16	5- 5-16	Engineering Record—McGraw Publishing Co., Inc.....	15 90
70873	3-18-16	4- 5-16	5- 5-16 The Evening Post .....	48 00
<b>Department of Correction.</b>				
63949	1-31-15	10-31-15	4-19-16 Gordon Lumber Co.....	\$626 20
59985	3-29-16	4-11-16	Geo. E. Shoemaker .....	142 50
70635	3-28-16	5- 5-16	The National Refining Co.....	7 10
70634	4-18-16	5- 5-16	J. S. Woodhouse Co.....	7 20
70632	4-14-16	5- 5-16	Benjamin Horton .....	38 23
70630	4-24-16	5- 5-16	Scott Stamp & Coin Co.....	2 00
70626	4-20-16	5- 5-16	The Curtis Garage & Stable Supply Co.	7 50
70625	4-14-16	5- 5-16	The Wickman & Co.....	24 75
70642	3- 9-16	5- 5-16	Dieges & Clust .....	2 50
70644	4-25-16	5- 5-16	Department of Correction .....	5 85
70645			The Howe Scale Co. of New York...	17 00
70647	4-24-16	5- 5-16	D. B. Pershall & Son.....	6 22
70653	4-18-16	5- 5-16	Wm. E. Kleine & Co.....	16 08
70657	3-30-16	5- 5-16	De La Vergne Machine Co.....	31 37
68603			Department of Correction .....	36 00
70646	4-20-16	5- 5-16	Montgomery & Co., Inc.....	8 00
70648	4-24-16	5- 5-16	Reiley Bros. Ladder Co., Inc.....	34 90
70649	4-26-16	5- 5-16	Agent and Warden of Clinton Prison	5 00
70651			Candee, Smith & Howland Co.....	10 60
70652	4-20-16	5- 5-16	Department of Correction .....	36
70654	4-19-16	5- 5-16	The Smith-Worthington Co.....	4 60
70656			Hull, Grippen & Co.....	7 50
70641	4-19-16	5- 5-16	Bramhall-Deane Co. ....	17 51
67367	3-20-16	4-27-16	Joseph Harris Co.....	154 05
70659	4-19-16	5- 5-16	Nason Manufacturing Co.....	6 00
70660	4-20-16	5- 5-16	Conklin & Cummins.....	70 00
70664	4-11-16	5- 4-16	Crane Co. ....	6 50
70663	4-17-16	5- 5-16	Crane Co. ....	2 25



Finance Voucher No.	Invoice Dates or Contract Number.	Received in Depart- ment of Finance.	Name of Payee.	Amount.	Finance Voucher No.	Invoice Dates or Contract Number.	Received in Depart- ment of Finance.	Name of Payee.	Amount.	
70665	4-18-16	5- 5-16	C. D. Durkee & Co.	2 50	67035	2-29-16	41461	4-27-16	The J. W. Pratt Co.	1,580 68
4698		4- 5-16	Robert W. McCully	54 60	68789				American Type Founders' Co.	68 50
67390		5- 8-16	Ayres & Galloway Hardware Co., Inc.	82 24	69003	2-16-16		5- 2-16	Peter J. Donohue's Sons	44 07
67393	4-11-16	4-27-16	Benjamin Horton	36 25					<b>Department of Finance.</b>	
70658	4-20-16	5- 5-16	Flushovalve Co.	7 20	70587	4- 8-16		5- 5-16	American District Telegraph Co.	\$7 45
67370	1-21-16	4-27-16	Swan & Finch Co.	97 80	70574	4-11-16		5- 5-16	The Economist	10 34
67382	3-17-16	4-27-16	Konop Iron Works	29 00	70573	4-26-16		5- 5-16	Metropolitan Advertising Co.	5 00
67362	2-15-16	3-22-16	Geo. A. Bates	106 75	70576				Goldsmith Brothers	3 00
67368	3-25-16	4-27-16	Hoffman Homestead Farm	183 60	71595			5- 9-16	Chandler Withington, Chief Engr.	70 91
67395	3-31-16	4-27-16	Ramapo Iron Works	119 42	71596			5- 9-16	Chas. A. O'Malley, Appraiser of Real Estate	12 70
67391	3-23-16	4-27-16	Contractors' Service Co.	326 50	71597				H. C. W. Melick, Acting Chief	127 18
67392	4-18-16	4-27-16	Gordon Lumber Co.	195 00	71600			5- 9-16	D. E. Kemlo, Chief Auditor of Accounts	226 68
67388			Troy Laundry	25 50					Mary E. Brennan, Clerk	3 00
68593	3-24-16	5- 1-16	F. Eckenroth & Son, Inc.	51 00	71598				<b>Fire Department.</b>	
			<b>District Attorney, New York County.</b>						O. F. Browning	\$10 00
68990			L. D. Powell Co.	\$6 50	70358	4-11-16		5- 5-16	American-La France Fire Engine Co., Inc.	25 00
66991			R. L. Polk & Co., Inc.	24 00	70371	3-14-16		5- 4-16	Western Electric Co., Inc.	8 45
6125		5- 6-16	David N. Carvalho	55 00				5- 4-16	Tower Bros. Stationery Co.	2 25
6127		5- 6-16	Jacob F. Keyser	100 00	70360	4-12-16		5- 4-16	Globe Tire Co., Inc.	12 50
5713	4-14-16	4-27-16	Bartholomew Moynahan	256 70	70361	4-17-16		5- 4-16	Empire Rubber & Tire Co.	2 77
			<b>Department of Docks and Ferries.</b>		70364	3-31-16		5- 4-16	American Ever Ready Works	2 58
71365	4-29-16	5- 8-16	Francis J. Ryan, Asst. Act. Secretary.	\$7 70	70366	2-17-16		5- 4-16	Knickerbocker Supply Co.	6 96
71370		5- 8-16	John O. Farrell	27 95	70370	4- 1-16		5- 4-16	Agent & Warden of Sing Sing Prison	20 47
71364	5- 1-16	5- 8-16	Max Drucker	3 40	70368	3-27-16		5- 4-16	Swan & Finch Co.	17 80
71353	5- 1-16	5- 8-16	T. F. Keller	60	70367	4-10-16		5- 4-16	Gimbel Brothers	16 20
71363	5- 1-16	5- 8-16	H. A. Martens, Asst. Engineer	16 41	70359	4-11-16				
71362	5- 4-16	5- 8-16	Chas. E. Trout, Asst. Engineer	32 55	70362	4-15-16				
71360	4-30-16	5- 8-16	Robert H. Malone	75						
71359		5- 8-16	John M. Phelan, Auditor	20 25	66851	3-23-16		4-26-16	A. F. Brombacher & Co.	\$141 90
71366		5- 8-16	H. A. Watkins, Actg. Supt. of Docks.	10 74	66160	4- 8-16	43930	4-23-16	Borden's Farm Products Division	742 56
67578	4-13-16	4-27-16	A. P. W. Paper Co.	145 00	56799	3- 9-16	44103	4- 4-16	L. R. Wallace	550 00
67586	3-31-16	4-27-16	Knickerbocker Supply Company	285 74	68679	12-31-15		5-10-16	The Globe-Wernicke Co.	14 00
67555	4-22-16	4-27-16	Pattison & Bowns	33,931 52	32325	12-29-15		2- 3-16	Anton Larsen & Son, Inc.	80 00
67553		4-27-16	Thomas J. Waters Co.	6,166 80	70790	3-31-16		5- 5-16	The Western Union Telegraph Co.	9 86
67554		4-27-16	P. Sanford Ross, Inc.	2,831 14	68086	2- 1-16		4-28-16	Swinton & Co.	33 80
67551		4-27-16	Holbrook, Cabot & Rollins Corp.	2,860 38	68071	3-31-16		4-28-16	The Fleischmann Co.	24 50
67552		4-27-16	Holbrook, Cabot & Rollins Corp.	1,851 30	70203	3-31-16	43943	5- 4-16	Shults Bread Co.	11 72
67579	4-10-16	4-27-16	General Illuminating Company	785 00	70205	3- 1-16	43934	5- 4-16	Leo Hamburger	12 00
			<b>Board of Elections.</b>		70201	3-31-16	44524	5- 4-16	P. Lawless' Sons	2 10
136630	11- 4-15	11-22-15	The Staten Islander	\$44 46	70207	4- 1-16	44104	5- 4-16	Edward Wisely & Son	56 29
69301	4-11-16	5- 2-16	McMullan Trucking Co.	50 00	69850	4-11-16		5- 3-16	The Charity Organization Society	24 00
69299	4-13-15	5- 2-16	Sage Bros.	16 00	67523			4-27-16	James D. Burt	345 24
69298	4-11-16	5- 2-16	P. Belford & Son	50 00	67538	4- 5-16	43379	4-27-16	L. Mundet & Son	649 04
			<b>Board of Estimate and Apportionment.</b>		67434	3-30-16		4-27-16	The New Jersey Wire Cloth Co.	283 50
71157		5- 8-16	George L. Tirrell, Director	\$35 84	67512	4- 6-16	43382	4-27-16	Ernst Leitz	337 50
67613	3- 31-16	4-27-16	Katherine V. Francis	734 31	67524		43367		James S. Barron & Co.	1,654 24
			<b>Department of Education.</b>		67517		42993	4-27-16	Chas. D. Norton Co.	2,458 30
69037	6-28-15	1-11-16	John Wiley & Sons, Inc.	\$73 13	67539	3-31-16	43328	4-27-16	Johnson & Johnson	1,000 00
68823	1- 7-16	5- 2-16	Schoverling, Daly & Gales	85 00	67513	4-11-16	44474	4-27-16	Morris & Co.	638 47
69034	12-23-15	5- 2-16	S. T. Taylor Co.	49 68	67535	4-11-16	44474	4-27-16	Morris & Co.	670 54
69008	1-25-16	5- 2-16	The Royal Co. of N. Y., Assignee of Charles Williams	36 55	67516	2-29-16	42961	4-27-16	Burns Bros.	305 99
		5- 3-16	E. E. Stapleton	32 78	67531	3-31-16	43931	4-27-16	Mutual Milk & Cream Co.	961 02
69013	2-17-16	5- 3-16	G. Schirmer, Inc.	1 00	67515	3-31-16	44479	4-27-16	Conron Bros. Co.	147 33
70509		5- 5-16	Atkinson, Mentzer & Co.	3 60	67514	4- 1-16	44475	4-27-16	Armour & Co.	250 52
70508	2-26-16	5- 2-16	P. Derby & Co., Inc.	44 00	67537	4- 4-16	44318	4-27-16	Meyer-Denker-Sinram Co.	310 00
69015	2- 9-16	5- 2-16	F. E. Folsom, Assignee of William G. Hill	81 75	70817				A. Blauvelt, M. D., Asst. and Acting Sanitary Supt.	3 95
68773	3- 3-16	5- 2-16	George Roach	67 30	69845	2-11-16		5- 3-16	Columbia Graphophone Co.	25 00
		5- 4-16	Paul Baron	31 29	69841	4-11-16		5- 3-16	Underwood Typewriter Co., Inc.	56 70
69014	2-26-16	5- 4-16	Paul Baron	10 50	69846	4-14-16		5- 3-16	C. L. Soldan	18 90
69909	3-16-16	5- 4-16	Paul Baron	2 25	69830	4-11-16		5- 3-16	James A. Miller	27 00
69967	3-16-16	5- 4-16	M. J. Tobin	92 40	68069	10-25-15		4-28-16	Hammacher, Schlemmer Co.	30 34
70490	3-13-16	5- 4-16	Wm. Bratter & Co.	41 75	68063	4- 1-16		4-28-16	Whitall-Tatum Company	9 75
69982	3-25-16	5- 4-16	The J. W. Pratt Company	4 84	68075	4- 3-16		4-28-16	3-in-One Oil Company	21 60
69968	3- 2-16	5- 4-16	Agent and Warden of Clinton Prison.	66 00	68078	4- 6-16		4-28-16	L. Barth & Son	8 00
69983	3- 6-16	5- 4-16	C. H. F. Jurgens	3 60	68084	3-30-16		4-28-16	Arthur C. Jacobson & Sons	32 00
69103	1-27-16	5- 5-16	D. Appleton & Co.	90 94	68083	4- 1-16		4-28-16	Swinton & Company	24 32
69985	1-31-16	5- 5-16	Syndicate Trading Co.	8 20	68085	3-28-16		4-28-16	Richardson & Boynton Co.	6 00
70497	2- 4-16	5- 5-16	The A. N. Palmer Co.	83 60					<b>Board of Inebriety.</b>	
70553	3- 3-16	5- 4-16	John Wiley & Sons, Inc.	1 50	66688			4-26-16	J. S. Woodhouse Co., Inc.	\$71 77
70478	3- 3-16	5- 5-16	E. Steiger & Co.	1 89	66685	4-12-16			The Smith-Worthington Co.	60 99
69974	2-10-16	5- 5-16	H. C. Hallenbeck	60 20				5- 5-16	Timothy Foley	\$3 96
70474	1-14-16	5- 5-16	The J. W. Pratt Co.	25 25	70737	5- 1-16		5- 5-16	A. Schneider	2 25
70484	2-18-16	5- 5-16	E. D. Fox	29 19	70738	5- 1-16		5- 5-16	Knickerbocker Ice Company	3 00
69131	3-11-16	5- 3-16	Charles E. Merrill Co.	64 00	70735	4- 3-16		5- 5-16	Berkshire Products Co., Inc.	6 00
69006	1-31-16	4- 5-16	Paul Baron	32 00	70736	4-29-16			<b>Commissioner of Jurors, Bronx County.</b>	
70470	3- 6-16	4-27-16	Standard Oil Co. of New York	93 52				5- 4-16	Nickel Towel Supply	\$3 25
70468		5- 4-16	The J. W. Pratt Co.	11 80	70057	4-30-15		5- 4-16	L. Gibb, Jr.	2 84
67366	4- 5-16	5- 4-16	The J. W. Pratt Co.	24 00	70056	5- 1-16			<b>Commissioner of Jurors, Richmond County.</b>	
69973	12-24-15	5- 4-16	A. B. Dick Co.	24 00	64642			4-20-16	New York Telephone Company	\$16 77
69972	12-24-15	5- 4-16	A. B. Dick Co.	24 00					<b>Department of Licenses.</b>	
68870	1-12-16	5- 5-16	Lyons & Carnahan	1 95	70753	4-30-16		5- 5-16	John Ferretti	\$8 75
68872	2- 4-16	5- 4-16	Rolle Rubber Co.	3 06	70755			5- 5-16	Eureka Towel and Apron Supply	5 00
70554	2-28-16	5- 4-16	M. J. Tobin	9 56	70756	4- -16		5- 5-16	The Initial Towel Supply Co.	3 00
69975	2-21-16	5- 4-16	Favor, Ruhl & Co.	2 00	70750	4-18-16		5- 5-16	The Henry Aschenbach Harness Co.	12 00
69980	3-15-16	5- 5-16	Lyons & Carnahan	68 40	70751	4-13-16		5- 5-16	Thedford Eltz Coal Co.	16 25
69979	2-16-16	5- 5-16	The Corn Exchange Bank, Harlem branch, assignee of the Universal Co.	51 20	70754	4-27-16		5- 5-16	Art Metal Construction Co., Inc.	5 00
70560	1-18-16	5- 5-16	Atkinson, Mentzer & Co.	44 94	70747				George H. Bell, Commr. of Licenses	12 75
70475	2-21-16	5- 5-16	Solidhead Tack Company	2 40					<b>Law Department.</b>	
		5- 4-16	William Zinsner & Co., Inc.	2 25	71588			5- 6-16	Lamar Hardy, Corporation Counsel	\$500 00
70476		5- 5-16	Frank & Marburger	95 00	71416			5- 8-16	Lamar Hardy, Corporation Counsel	150 00
69977		5- 5-16	Silver, Burdett & Co.	4 05	70049	4- 1-16		5- 4-16	Baker, Voorhis & Company	6 50
69976	2-10-16	5- 5-16	Houghton-Mifflin Co.	45 32	70053	5- 1-16		5- 4-16	Johanna Gallagher	7 34
70488	3-21-16	5- 4-16	The J. W. Pratt Co.	7 00	70051	4-26-16		5- 4-16	Harry Raiten	8 00
70494	1-29-16	5- 5-16	The Butterick Publishing Co.	7 00	70050	4-21-16		5- 4-16	A. Rudolph	16 50
70555	2-28-16	5- 5-16	A. L. Brasefield	86 13	69780	4-14-16		5- 3-16	L. D. Powell Company	6 50
69981	2-29-16	4-27-16	Hardman, Peck & Co.	250 00	69781	3-28-16		5- 3-16	West Publishing Co.	57 00
70477	3- 2-16	4-27-16	J. & C. Fischer	350 00	69782	4- 1-16		5- 3-16	West Publishing Co.	43 75
70469	4-13-16	4-27-16	Philp & Paul	169 75				4-26-16	Sheriff, County of New York	3,681 55
67203	12-31-15	4-27-16	William J. Olvany	203 44	67058	12-31-15		4-27-16	Law Reporting Co.	21 85
67193	12-28-15	4-27-16	Robertson & Conry, Inc.	201 64	70832			5- 5-16	Lamar Hardy, Corporation Counsel	200 00
67282	2-23-16	4-27-16	American Book Co.	18,127 44	69788	4-15-16		5- 3-16	Charles S. Findlay	6 50
67288	2-24-16	4-27-16	Royal Co. of New York, assignee of McGreevy Co.	145 00	70199			5- 5-16	Lamar Hardy, Corporation Counsel	500 00
67291	2-16-16	4-27-16	Herman Glasser Co., Inc., assignees of Herman Glasser	485 00	70239			5- 4-16	B. H. Weisker	25 00
67323	1-28-16	4-27-16	J. Friedman	496 00	70241			5- 4-16	Emile Runge	10 00
67196	3- 9-16	4-27-16	Homestead Bank, assignee of James I. Newman	294 00	70240			5- 4-16	B. H. Weisker	80 00
		4-27-16	T. Frederick Jackson, Inc.	457 20					<b>Miscellaneous.</b>	
67047		4-27-16	Eugene Frank	1,205 00	71544			5- 8-16	Emily Schaefer	\$25 35
67049		4-27-16	The A. S. Barnes Co.	1,506 16	71471			5- 8-16	Exempt Firemen's Association of the Town of Newtown	27 31
67324	1-11-16	4-27-16	Ginn & Co.	6,325 33				5- 8-16	Exempt Firemen's Association of the Town of Newtown	491 98
67322	7- 2-15	4-27-16	The Baker							



Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.	Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.
70607	5- 5-16		Ernestine Feig .....	737 26	71411	5- 8-16		The Commissioners of the Sinking Fund for Account of the Sinking Fund for the Payment of the Interest on the City Debt .....	2,958 90
70607	5- 5-16		Ernestine Feig .....	2,361 00	71408	5- 8-16		The Commissioners of the Sinking Fund for Account of the Sinking Fund for the Payment of the Interest on the City Debt .....	3,000,000 00
70618	5- 5-16		Hugh P. Skelly .....	14,154 19	71409	5- 8-16		The Commissioners of the Sinking Fund for Account of the Sinking Fund for the Redemption of the City Debt No. 1 .....	2,000,000 00
70618	5- 5-16		Hugh P. Skelly .....	12,431 33	71308	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	600,000 00
70853	5- 5-16		Eduard Herrmann and Eva Herrmann .....	1 03	71312	5- 8-16		The National City Bank of New York .....	2,967 12
70852	5- 5-16		Eduard Herrmann and Eva Herrmann .....	54 45	71313	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	3,904 20
70854			H. Randolph Lever, as executor of, and Mary E. Lever, as executrix of the Last Will and Testament of Mary E. Lever, deceased .....	900 00	71315	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	1,223 29
70846	5- 5-16		Katharina Kuber .....	104 60	71316	5- 8-16		The National City Bank of New York .....	4,450 68
70849	5- 5-16		William Gleason .....	270 59	71314	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	7,808 40
70855	5- 5-16		Henry D. Lott .....	58 24	71306	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	400,000 00
70848	5- 5-16		Johanna C. Meyer or the Collector of Assessments and Arrears of the City of New York .....	53 99	71307	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	3,000,000 00
70847	5- 5-16		Oliver D. Plott and Mary F. Plott....	16 82	71310	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	125 00
70847	5- 5-16		Oliver D. Plott and Mary F. Plott....	159 30	71589			Lebanon Hospital Association .....	3,000 31
70852	5- 5-16		Edward Herrmann and Eva Herrmann .....	54 45	71590			Lebanon Hospital Association .....	2,986 80
70851	5- 5-16		Vito Sabatiello .....	125 00	71591			Mission of the Immaculate Virgin for the Protection of Homeless and Destitute Children .....	17,491 87
70850	3- 5-16		George H. Walker .....	100 00	71592			St. Mark's Hospital of New York City .....	108 85
71471			Exempt Firemen's Association of the Town of Newtown .....	27 31	71593			St. Joseph's Asylum .....	3,717 90
71471			Exempt Firemen's Association of the Town of Newtown .....	491 98	71594			Seton Hospital, New York City.....	11,779 30
71472	5- 8-16		John J. Danahey and Anna E. Danahey .....	87 57	71038	5- 6-16		Harriet G. Coogan .....	274 11
71473	5- 8-16		James Coughlin .....	225 26	71034	5- 6-16		Rebecca Mayer .....	18 00
71475	5- 8-16		Thomas F. Cassidy .....	25 00	71045	5- 6-16		Winston Realty Co .....	159 00
71476	5- 8-16		Thomas F. Cassidy .....	103 03	71046	5- 6-16		Harold Nathan .....	3 00
71477	5- 8-16		Joseph Bermel .....	104 51	71044	5- 6-16		John P. Kelly .....	2 00
71479	5- 8-16		Charles Bermel .....	169 20	71043	5- 6-16		Alfred R. Starr .....	3 00
71478	5- 8-16		Charles Bermel .....	804 71	71042	5- 6-16		Mary C. Hencken .....	22 00
71482			William H. Barker and Alice U. Barker .....	164 85	71039	5- 6-16		The Estate of William M. Leslie.....	10 35
71482	5- 8-16		William H. Barker and Alice U. Barker .....	308 43	71040	5- 6-16		Max Bierman .....	21 00
71474	5- 8-16		William C. Card .....	545 77	71041	5- 6-16		Estate of Thomas Sileo.....	9 15
71474	5- 8-16		William C. Card .....	533 84	71077	5- 3-16		Central Purchasing Committee.	
71480	5- 8-16		Fredericka Green .....	315 66	71418	5- 5-16		Public Administrator, Bronx County.	
71480	5- 8-16		Fredericka Green .....	595 43	71419	5- 1-16		Ernest E. L. Hammer.....	\$5 00
71481			Frank E. Green .....	629 38				Nickel Towel Supply .....	75
71544	5- 8-16		Emily Schaefer .....	24 65	69919	4-13-16. 4-19-16		Thomas C. Dunham .....	\$95 00
71549	5- 8-16		Thomas S. Payntar .....	400 00	69907	4-20-16. 4-22-16		Albert & Davidson, Inc.....	71 17
71548	5- 8-16		Abraham L. Riker and Margaret E. Riker .....	190 92	71463	4-30-16		Thomas J. Van Wagner .....	2 70
71542	5- 8-16		John W. Raab and Margaret Raab....	15 00	71461	4-30-16		William A. Fraser .....	70
71566	5- 8-16		Alfred H. Mills .....	250 00	71462	4-30-16		John J. Kain .....	4 55
71564	5- 8-16		Emma F. Matthews .....	25 00	71465			N. Y. Botanical Garden, James A. Scrymser, Treasurer .....	7,306 50
71551	5- 8-16		Agnes Marshall .....	317 90	71466			New York Zoological Society, Percy R. Pyne, Treasurer .....	5,426 57
71551	5- 8-16		Agnes Marshall .....	248 82	71464	5- 1-16		N. Y. Botanical Garden, James A. Scrymser, Treasurer .....	338 04
71550	5- 8-16		Thomas S. Payntar .....	409 07	71580	5- 9-16		The American Museum of Natural History, Henry P. Davison, Treasurer....	13,120 72
71550	5- 8-16		Thomas S. Payntar .....	283 80	71579	5- 9-16		The Metropolitan Museum of Art, Howard Mansfield, Treasurer .....	10,566 32
71547	5- 8-16		Joseph W. Schwagerl .....	23 51	67461	4-10-16. 4-12-16		Arthur C. Jacobson & Sons.....	368 00
71547	5- 8-16		Joseph W. Schwagerl .....	317 98	69924	4-20-16. 4-22-16		Jos. Ruppert .....	50 70
71544	5- 8-16		Emily Schaefer .....	24 65	69914	4-20-16		Stumpp & Walter Co.....	8 35
70606	5- 5-16		Frank D. Creamer and Caroline H. Creamer .....	118 43	69909	4-24-16		Stevenson & Marsters, Inc.....	2 74
70619	5- 5-16		Hugh P. Skelly .....	59 89	69926	4-24-16		Charles Tisch .....	25 91
70617	5- 5-16		Hugh P. Skelly .....	11 18	68323	4-20-16		Schieffelin & Co.....	28 25
70616	5- 5-16		Hugh P. Skelly .....	26 05	69912	4-25-16		The Elizabeth Nursery Co.....	9 60
70615	5- 5-16		Hugh P. Skelly .....	26 05	69910	4-25-16		Almond W. Barnes .....	3 25
70613	5- 5-16		Hugh P. Skelly .....	1,802 20	69912	4-22-16		The Elizabeth Nursery Co.....	9 00
70612	5- 5-16		Hugh P. Skelly .....	3,415 16	69915	4- 1-16		The Petroleum Products Co.....	13 00
70611	5- 5-16		Hugh P. Skelly .....	94 29	69918	4-25-16		Electric Hose & Rubber Co.....	23 10
70610	5- 5-16		Samuel Brody .....	186 49	69911	4-24-16		C. W. Keenan .....	50 00
70608	5- 5-16		Georgie Briar Slater and John Briar..	569 67	69921	4-19-15		Henry Bieg .....	2 40
72159			Daniel Douglass or Jones, McKinney & Steinbrink, Attorneys .....	1,100 47	69922	4-24-16		Ross & Snyder, Inc.....	35 06
71522A			Adolph Vogt .....	250 00	69923	4- 8-16		Chicago Pneumatic Tool Co.....	5 10
71520			Lillie Welker .....	135 00	69925	4-24-16		F. W. Devoe & C. T. Reynolds Co....	33 00
71519			Hebrew Benevolent and Orphan Asylum Society, Assignee of Siegmund T. Meyer .....	1,750 00	67459	2-29-16. 3-21-16		Rensselaer Valve Co.....	100 00
69259	2- 3-16	5- 2-16	National Gauge Co. ....	16 00	67295	3-28-16. 4409		Geo. N. Reinhardt & Co.....	187 17
71000	5- 6-16		Sarah Hess .....	4 50	67451			A. P. Dienst Co., Inc.....	242 48
70998			Memorial Committee of the Grand Army of the Republic, Bronx County, Charles L. Roeder as Treasurer.....	1,000 00	67463	3-31-16		Nathan Strauss, Inc.....	414 92
70997			Memorial and Executive Committee of the Grand Army of the Republic, Kings County, Louis Finkelmeyer as Treasurer .....	3,000 00	67466	4-12-16		Thatford & Ackerman .....	168 01
70996			Memorial and Executive Committee of New York County United Spanish War Veterans, Albert Franke as Treasurer.	820 00	67465	4- 4-16		Bacon Coal Co.....	117 50
70995			Bronx Memorial Committee of the United Spanish War Veterans, Charles P. Krauth as Treasurer .....	250 00	67468	4-12-16		Stumpp & Walter Co.....	523 50
70994			Memorial and Executive Committee of the United Spanish War Veterans, Borough of Brooklyn, Jos. B. Hughes as Treasurer .....	950 00	67485	3-27-16. 4- 2-16		Knickerbocker Supply Co.....	128 10
70993			Memorial and Executive Committee of the United Spanish War Veterans, Borough of Queens, John M. Niemeyer as Treasurer .....	335 00	67452	4- 8-16		Buffalo Steam Roller Co.....	182 20
70992			Memorial and Executive Committee of the United Spanish War Veterans, Borough of Richmond, David M. Lavine as Treasurer .....	145 00	71537	4-30-16		Police Department.	
71054	5- 6-16		Charles P. L. Huston Co.....	9 00	71534			Henry L. Barth .....	\$4 25
71055	5- 6-16		Charles P. L. Huston Co.....	9 00	71533	4- 4-16		Charles F. Wallace .....	3 30
71052	5- 6-16		Charles P. L. Huston Co.....	14 00	71535	5- 1-16		Frank J. Batzing .....	9 50
71037			Edward M. Morrison .....	6 00	71538	4-30-16		George D. Barnitz .....	5 50
71048			Vasa K. Bracher .....	49 00	71536	4-30-16		Thomas F. Jenkins .....	1 92
71047			Marie G. Darmstadt .....	52 00	71536	4-30-16		Valentine W. Corell .....	1 01
71057			Charles P. L. Huston Co.....	10 00	70082	4-24-16		Manhattan Elec. Supply Co.....	32
70582	4-26-16	5- 5-16	David Mackay, Jr., Co.....	8 22	70087	4-19-16		E. P. Gleason Mfg. Co.....	5 00
70583	4-26-16	5- 5-16	David Mackay, Jr., Co.....	3 10	70083			S. F. Hayward & Co.....	18 40
71608			Gertrude G. McVay, Executrix of the Estate of George P. H. McVay.....	60 00	67315			William H. Egan .....	2,678 85
71607			William Lipkin .....	3 23	70091	2-16-16. 4-19-16		Western Electric Co.....	86 71
71606			Frank J. Guilfoyle .....	6 00	70078	3- 1-16		The Peerless Towel Supply Co.....	22 14
71311			William A. Prendergast as Comptroller of The City of New York .....	5,921 43	70080	4-13-16. 4-20-16		The Prest-o-Lite Co., Inc.....	7 70
71309	5- 8-16		The Comptroller of The City of New York and the Chamberlain of The City of New York .....	1,834 93	70081	4- 5-16		Standard Oil Co. of N. Y.....	5 25
71410	5- 8-16		The Commissioners of the Sinking Fund for Account of the Sinking Fund for the Redemption of the City Debt No. 1 .....	1,972 60	70090	4-17-16		Johnson & Bertson .....	15 36



Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.	Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.
70095			Pittsburgh Plate Glass Co.....	6 20	71289			Dr. John E. Daugherty, Supt. ....	10 40
67313	42972		The John H. Ferril Co., Inc.....	187 63	71288	5- 4-16	5- 8-16	Joseph F. McCarthy, Bookkeeper....	13 75
			<b>President of the Borough of Manhattan.</b>		69957	2-15-16	5- 4-16	J. L. Hopkins & Co. ....	62 00
70011	3-16-16	5- 4-16	Remington Typewriter Co., Inc.....	\$45 80	70096	3-28-16.	4-10-16	A. P. W. Paper Co. ....	18 00
67144			The Western Union Telegraph Co.....	13 37	70108	3-19-16.	4-13-16	Bramhall, Deane & Co. ....	37 20
70000	3-31-16	5- 4-16	F. F. Fuhrmann .....	61 00	71286		5- 8-16	William J. Doherty, Second Deputy Commissioner	1,029 00
69999	3-31-16	5- 4-16	The Mutual Towel Supply Co.....	81 36			5- 8-16	A. M. Wilson, Director .....	220 00
68617		27816	The Sicilian Asphalt Paving Co.....	97 07	71287		5- 5-16	Belmont Packing & Rubber Company.	18 75
70039	3-31-16	5- 4-16	The Mutual Towel Supply Co.....	31 20	70419	3-27-16	5- 5-16	Godfrey Keeler Co. ....	8 48
70038	3-31-16	5- 4-16	The Mutual Towel Supply Co.....	35 19	70421	3-17-16	5- 5-16	Nason Grashorn .....	9 00
70021	3-31-16	5- 4-16	Nason Manufacturing Co.....	85 88	70422	3-31-16	5- 5-16	Nason Manufacturing Co. ....	1 54
70024	3-31-16	5- 4-16	Nason Manufacturing Co.....	36 46	70426	4- 5-16	5- 5-16	Northwestern Electric Equipment Co.	4 16
67190	4- 1-16	44159	Haverstraw Crushed Stone Co.....	610 36	70427	4- 3-16	5- 5-16	Newtown Creek Towing Co.....	10 00
67189	4-11-16	44161	Warner-Quinlan Asphalt Co.....	2,581 15	70439	3-22-16	5- 5-16	Nanz Clock Company .....	4 00
67188	5-12-15	41470	John A. McCarthy .....	1,426 61	70440	3-11-16	5- 8-16	Postal Telegraph Cable Company....	50
67142	4-14-16		Peter Cramer .....	471 95	71294	12-31-15	5- 5-16	The J. L. Mott Iron Works .....	19 88
67146	4-10-16		Binney & Smith Co.....	120 00	70392	12-14-15	5- 5-16	Rice & Adams .....	2 60
67158	4-10-16		H. Mueller Mfg. Co.....	118 80	70432	3-14-16	5- 5-16	Henry Mann, Jr. ....	25 75
67156	3-31-16		Patterson Brothers .....	113 99	70438	3-28-16	5- 8-16	Postal Telegraph Cable Co.....	1 84
67161	2-29-16.	3-31-16	Patterson Brothers .....	105 80	71293	3-31-16	5- 5-16	The J. Weir Carriage Co.....	4 00
67147	3-31-16		Vacuum Oil Co.....	107 45	70384	4- 1-16	5- 5-16	West End Auto Supply Co.....	7 80
67172	12-24-15		Agent and Warden of Auburn Prison.	251 00	70383	4- 1-16	5- 5-16	Ajax Sheet Metal Auto Parts Co.....	14 50
67134	12-31-15		Goodyear's India Rubber Selling Co..	347 46	70382	3-20-16	5- 5-16	Bosch Magneto Co.....	9 15
70037	3- 6-16	5- 4-16	De Boise Bresnan Co., Inc.....	1 50	70381	3-30-16	5- 4-16	Charles Baessler .....	30 00
70035	4- 1-16	5- 4-16	Art Metal Construction Co.....	2 95	70380	3-14-16	5- 5-16	Joseph D. Duffy.....	28 04
70034	4-10-16	5- 4-16	Holgan Bros.....	13 00	70444	2-29-16	5- 5-16	Otis Elevator Co.....	44 00
70026	3-29-16.	4- 3-16	Revolute Machine Co.....	7 57	70441	4-15-16	5- 5-16	General Electric Co.....	18 96
70027	2-21-16	5- 4-16	John McCarten's Son .....	20 75	70442	3-25-16.	4-11-16	Henry R. Worthington .....	67 00
70025	4- 1-16	5- 4-16	Otis Elevator Co.....	21 90	70423	3-30-16.	4- 7-16	Jacob Willman .....	10 55
70018	1-25-16	5- 4-16	Kalt Lumber Co.....	39 30	70424		5- 5-16	Jenkins Bros.....	10 85
70019	3- 1-16	5- 4-16	Pennsylvania Rubber Co.....	26 74	70431	3- 3-16	3-28-16	Candee Smith & Howland Co.....	2 50
70017	4-11-16	5- 4-16	Montgomery & Co., Inc.....	20 40	70417	4- 1-16	5- 5-16	The Blake & Knowles Steam Pump Works	16 00
70008	4-11-16	5- 4-16	A. Pearson's Sons .....	76 50	70415	3-24-16	5- 5-16	The Babcock & Wilcox Co.....	30
70009	3- 7-16	5- 4-16	Scofield & Co.....	5 25	70414	3-27-16	5- 5-16	John Moonan .....	27 42
70012	3-20-16	5- 4-16	Nathan Lyons .....	10 00	69936		5- 4-16	The Hospital Supply Co.....	38 75
70013	4- 3-16	5- 4-16	Art Metal Construction Company.....	17 60	66251	4- 1-16	5- 5-16	Charles Lawrence Allers .....	90 00
70007	4- 3-16	5- 4-16	Monarch Mining Company.....	2 60	6084		5- 5-16	Harry F. Nimphius .....	5 00
70005	4- 1-16	5- 4-16	Manhattan Electrical Supply Co.....	2 16	6085		5- 5-16	James L. Devlin .....	50 00
70001	3-24-16	5- 4-16	Keuffel & Esser Co.....	18 12	6083		5- 4-16	Munson Supply Co. ....	6 30
70003	3-28-16	5- 4-16	Keuffel & Esser Co.....	7 48	69941	3-30-16	5- 4-16	Theo. Moss & Co.....	4 39
70004	3-28-16.	4-12-16	Eugene Dietzgen Co.....	18 60	69939	3- 8-16	5- 4-16	Metropolitan Hospital Supply Co.....	76 80
70014	3-31-16	5- 4-16	Keuffel & Esser Co.....	15 22	69943	1-20-16	5- 4-16	Otto Schmidt & Son .....	5 00
70036	4- 6-16	5- 4-16	E. Belcher Hyde .....	21 00	70097	4- 3-16	5- 4-16	The Globe-Wernicke Co.....	21 20
68000		4-28-16	Paul S. Bolger and James M. Vincent.	454 86	70101	4- 8-16	5- 4-16	Somerville Brush Co.....	9 00
			<b>President of the Borough of The Bronx.</b>		70107	2-28-16	5- 4-16	Chas. W. Brucher .....	3 20
69282	42897	5- 2-16	Knight & Di Micco, Inc.....	96 53	70105	3-30-16	5- 4-16	John Wanamaker, New York.....	5 18
			<b>President of the Borough of Brooklyn.</b>		70104	3-25-16		<b>Commissioner of Records, New York County.</b>	
66400	4- 8-16	4-26-16	Van Brunt Tandy .....	198 65	70681	5- 2-16	5- 5-16	R. L. Polk & Co., Inc.....	\$12 00
64664		33951	J. F. Cogan Co.....	70,609 24				<b>Register, Kings County.</b>	
68295	3-31-16	4-28-16	M. B. Brown Printing & Binding Co..	82 69	70571	4-29-16	5- 5-16	Great Bear Spring Co.....	\$21 00
6176		5- 8-16	R. E. Waters .....	4 00	70572	5- 3-16	5- 5-16	Patrick Dougherty .....	6 67
69341	4-17-16	5- 2-16	The Long Island Hardware Company.	58 50				<b>Register, New York County.</b>	
68290	3-30-16	4-28-16	Wm. Buchanan .....	45 65	71415	5- 1-16	5- 8-16	George J. Thompson .....	2 15
69339	4-20-16	5- 2-16	The Texas Company.....	22 44				<b>Sheriff, Richmond County.</b>	
69340	4-20-16	5- 2-16	Rutherford Rubber Company.....	29 37	70598	4- 1-16	5- 5-16	Democrat-Herald .....	\$13 68
69342	4-13-16	5- 2-16	Topping Brothers .....	12 60				<b>Sheriff, Bronx County.</b>	
67611	4-10-16	4-27-16	Calvin Tomkins .....	216 20	71281		5- 8-16	John M. Dennerlein .....	\$17 46
66431	3-21-16	4-26-16	Ford Motor Company.....	31 85	71277		5- 8-16	Henry Nimphius .....	9 18
			<b>President of the Borough of Queens.</b>		71280			Edward J. Martin .....	9 55
71317	5- 6-16	5- 8-16	William Andre, Clerk.....	26 00	71275		5- 8-16	Frank H. Becker .....	12 00
70946	11- 4-15	5- 3-16	Dickel Con Co.....	4 97	71276	4-31-16	5- 8-16	Richard J. Connolly .....	1 20
70945			William J. A. McCloskey, Attendant.	8 50	71279		5- 8-16	Jacob H. Gebe .....	12 38
			<b>Public Service Commission.</b>		71278		5- 8-16	Timothy J. Duane .....	18 88
70955		5- 5-16	George S. Rice, Division Engineer....	278 55				<b>Sheriff, New York County.</b>	
			<b>Department of Public Charities.</b>		70844		5- 5-16	Alfred E. Smith, Sheriff.....	\$14 20
70171	3- 6-16	5- 4-16	Bausch & Lomb Optical Co.....	4 20	70843	4-11-16	5- 5-16	The Dispatch Press, Inc.....	12 75
70180	2-16-16	5- 4-16	Hodgman Rubber Company .....	1 50				<b>Department of Street Cleaning.</b>	
70197			C. M. Lane Life Boat Co.....	9 92	33027	1-17-16	2-15-16	John F. Warth .....	\$36 00
70183	3-28-16.	5- 4-16	Hardman Tire & Rubber Co.....	9 88	70931	3-31-16	5- 5-16	Powers Accounting Machine Co.....	38 39
70186	4- 3-16	5- 4-16	Greenhut Co., Inc., assignee, etc., of J. B. Greenhut Company .....	40 15	70919	1-28-16	5- 5-16	Alberto Schreiner .....	37
			C. M. Lane Life Boat Co.....	9 92	70917	1- 7-16.	3-23-16	General Vehicle Co., Inc.....	77 22
70197	3-29-16	5- 4-16	Paul Schaad .....	17 94	70920	4- 7-16	5- 5-16	S. F. Hayward & Co.....	75 00
70194	3- 3-16	5- 4-16	James Y. Watkins & Son, Inc.....	16 50	70932	3-31-16	5- 5-16	The Tabulating Machine Co.....	41 50
70193	3- 1-16	5- 4-16	Hull, Grippen & Co.....	40	70918	2-15-16	5- 5-16	General Vehicle Co., Inc.....	25 36
70192	3-18-16	5- 4-16	Thomas C. Dunham.....	12 26	70916	3-11-16	5- 5-16	Drake Mfg. Co.....	55 55
70191	3-23-16	5- 4-16	Oriental Rubber and Supply Company, Inc.	12 24	70913	4- 5-16.	4-16-16	Alpha Electric Co., Inc.....	15 78
70184	2- 8-16.	4- 1-16	B. McDermott, Inc.....	90 00	70915	3-31-16	5- 5-16	Joseph Tino & Co., Inc.....	4 50
			Maltzyme Co., Inc.....	25 00				<b>Board of Water Supply.</b>	
69937	3-16-16	5- 4-16	Murray, Oxygen Company.....	58 00	70344	4-19-16	5- 4-16	Kolesch & Co.....	\$35 40
69947	3- 7-16	5- 4-16	Michael Mayer .....	7 50	70310	4-18-16	5- 4-16	McGraw-Hill Book Co.....	2 50
69944	2-29-16	4-27-16	New York Telephone Company.....	5 87	70313	4-18-16	5- 4-16	New York Sporting Goods Co.....	14 25
69946	3-13-16	5- 4-16	National Sponge & Chamois Co., Inc.	70 00	70348	4-24-16	5- 4-16	Pacific Motor Car Exch. Co.....	50 00
67129		5- 4-16	The Fairbanks Company.....	33 50	70323	3-30-16	5- 5-16	R. & J. Dick, Ltd.....	7 96
70098	4- 3-16	5- 4-16	James M. Shaw & Co.....	17 02	70335	1- 3-16		Commercial Utilities Manufacturing Co.....	3 00
70198	3- 9-16.	3-20-16	Manhattan Hardware & Bicycle Co..	29 50				Borne, Scrynser Co.....	9 00
70103	3-25-16.	3-30-16	Ch. R. Bard .....	18 72	70333	4-24-16	5- 4-16	Edison Lamp Works .....	3 36
70100	2- 8-16.	3-23-16	Henry Allen .....	2 00	70327	4-20-16	5- 4-16	B. Keenan & Son, Inc.....	65 00
70170	3-13-16	5- 4-16	George Tiemann & Co. ....	6 50	70330	3-30-16	5- 4-16	Engineering Record .....	8 00
70169	2-29-16	5- 4-16	Knauth Bros.....	16 00	70305	4-22-16	5- 4-16	The John Ellice Co.....	7 88
70177	3-11-16	5- 4-16	M. Weiss & Company .....	21 00	70321	4-22-16		New York Belting & Packing Co.....	21 60
70179	3-17-16	5- 4-16	National Oil Company .....	21 21	70312		5- 4-16	Johnson & Johnson .....	35 32
70173	3-11-16	5- 4-16	Belmont Garage .....	54 30	70346	4-11-16	5- 4-16	Merritt & Chapman Derrick & Wrecking Co.....	84 17
70132	3-25-16	5- 4-16	James H. Dunham & Co.....	24 00	70347	2-11-16	5- 4-16	Chas. E. Miller .....	15 62
70134	3-31-16	5- 4-16	Exide Battery Depots, Inc. ....	90				Lithoprint Co., Inc.....	58 86
70109	3-24-16.	3-25-16	E. T. Joyce .....	11 84	70311	4-14-16	5- 4-16	Universal Auto Painting Co.....	40 00
70406	12-30-15	5- 5-16	Syndicate Trading Co.....	81 92	70345	3-31-16	5- 4-16	Rutherford Rubber Co.....	46 89
70110	2-21-16.	4- 5-16	Daniel Pollard .....	16 50	70317	4- 5-16	5- 4-16	Crocker, Wheeler Co.....	57 63
70379	3-31-16	5- 5-16	Landay Bros., Inc.....	16 00	70320	4- 6-16.	4-12-16	Stanley & Patterson, Inc.....	64 42
70396	4-10-16	5- 5-16	Wm. Langbein & Bros.....	9 50	70321	2-29-16	4-20-16	Standard Oil Co. of New York.....	31 27
70411	12-28-15	5- 5-16	Empire Dumbwaiter Guarantee Co.....	50 00	70326	3-31-16.		R. E. Jerome .....	69 92
70410	12-24-15	5- 5-16	Abbott Manufacturing Company .....	5 40	70328	3-31-16.		Lexington Auto Supply Co.....	27 41
70403	9-24-15	5- 5-16	Joseph D. Duffy's Sons .....	28 82	70329	4- 7-16	5- 4-16	L. S. Winne & Co.....	10 91
70445	3-29-16.	4- 3-16	Cornell & Underhill .....	30 70	70341	2-25-16	5- 4-16	Engineering Record .....	9 00
70418	2-20-16.		Yawman & Erbe Mfg. Co.....	5 86	70331	4-15-16			
70136	4-12-16	5- 4-16	Columbia Paper Co.....	2 00	70338	4- 1-16			
70135	4- 1-16	5- 4-16	General Oil Co., Inc.....	11 38					
70133	4- 7-16	5- 4-16	Harolds Motor Car Company .....	28 60	71035				
70131	3-15-16	5- 4-16	Garfield Williamson .....	13 80	69817	3-23-16	5- 6-16	Charles A. Cowen & Co.....	\$25 30
70129	4-15-16	5- 4-16	John Ferretti .....	3 35	70300	3-31-16	5- 3-16	E. F. Keating Company.....	34 25
70125	2-24-16	5- 4-16	W. Chubbuck .....	37 50	70297	4- 4-16	5- 4-16	The Leavitt Machine Co.....	11 05
70147	2-28-16	5- 4-16	Philadelphia Polyclinic .....	89 00	70299	3-20-16	5- 4-16	Alfred Chatwin Supply Co.....	14 85
70145	1-24-16	5- 4-16	H. Planten & Son .....	13 00			5- 4-16	New York Belting and Packing Co..	35 20
70144	3- 9-16	5- 4-16	Peek & Velsor .....	63 00	71036		5- 6-16	Alfred T. Tompkins.....	6 00
70141	3-14-16	5- 4-16	C. D. Smith's Homeopathic Pharmacal Co.	12 00	71062		5- 6-16	Receiver of Taxes .....	2 00
69964	3-10-16	5- 4-16	B. Frank & Sons.....	18 00	71061		5- 6-16	Receiver of Taxes.....	2 00
			E. Machlett & Son .....	14 02	71				



Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.	Finance Voucher No.	Invoice Dates or Contract Number.	Received in Department of Finance.	Name of Payee.	Amount.
71058		5- 6-16	Samuel D. Wohlfeld.....	57 00	70296	3-21-16	5- 4-16	Joseph F. Corcoran .....	11 22
71059		5- 6-16	Rachel Wolff and Peter Morris.....	49 00	70295	3-21-16	5- 4-16	Joseph F. Corcoran .....	13 75
71064		5- 6-16	Receiver of Taxes.....	2 77	70294	2- 1-16	5- 4-16	Henry R. Worthington .....	11 48
71065		5- 6-16	Receiver of Taxes.....	1 77	70288	3-28-16	5- 4-16	The Bristol Company .....	6 16
71063		5- 6-16	Receiver of Taxes.....	3 00	70282	4- 7-16	5- 4-16	Gregg Brothers .....	3 60
70287	4- 8-12	5- 4-16	A. J. Picard & Co.....	9 00	70281	4-15-16	5- 4-16	Burroughs Adding Machine Co. ....	6 25
70289	3-23-16	5- 4-16	Tirrill Gas Machine Lighting Co.....	29 00	69371	3-22-16	3-24-16	Henry R. Worthington .....	6 20
70290	2-10-16. 2-28-16	5- 4-16	E. F. Keating Co.....	53 79	69370	3-17-16	5- 2-16	National Meter Co. ....	4 60
71051		5- 6-16	Charles P. L. Huston Co.....	8 00	69369	3-31-16	5- 2-16	Neptune Meter Co. ....	2 80
71050		5- 6-16	Charles P. L. Huston Co.....	9 00	69373	3-13-16	5- 2-16	John De Lorenzo .....	8 54
71049		5- 6-16	Charles P. L. Huston Co.....	62 00	69385	3- 1-16	5- 2-16	Ford Motor Company .....	18 93
71053		5- 6-16	Charles P. L. Huston Co.....	13 00	69386	3-23-16	5- 2-16	Underhill, Clinch & Co. ....	24 50
71056		5- 6-16	Charles P. L. Huston Co.....	14 00	69357	3-31-16	5- 2-16	Nickel Towel Supply .....	5 12
70277	4-12-16	5- 4-16	Roamer Supply Company .....	2 74	69358	4- 1-16	5- 2-16	John Wanamaker .....	2 54
70276	4- 1-16	5- 4-16	Gramatan Spring Water Co. ....	4 25	69360	4- 8-16	5- 2-16	John Greig .....	16 66
70280	4-12-16	5- 4-16	C. W. Jean Company .....	2 40	69361	3-31-16	5- 2-16	Jere A. McCue .....	6 43
70286	4- 8-16	5- 4-16	A. J. Picard & Co.....	4 50	60363	4-13-16	5- 2-16	Keuffel & Esser Co. ....	56 75
70288	2-15-16	5- 4-16	The Woodhouse Mfg. Co. ....	7 20	69365	4- 1-16	5- 2-16	Monogram Garage; Edward H. Dilger ..	12 50
70292	4- 1-16	5- 4-16	Prof. T. F. Hayes and J. P. Dunn ....	16 00	69367	4-18-16	5- 2-16	Benjamin F. Westervelt .....	3 00
69384	3-22-16. 4- 4-16	5- 2-16	Manhattan Electrical Supply Co. ....	26 30	70284	3-29-16	5- 4-16	National Meter Company .....	10 00
69819	3-31-16	5- 3-16	The Columbia Machine Works and Malleable Iron Co. ....	49 92	70275		5- 4-16	L. E. Stander, Auditor .....	10 85
70298	4-15-16	5- 4-16	Jones Packing Co. ....	20 21	70339	3-31-16. 4- 4-16	5- 4-16	Habirshaw Electric Cable Company, Inc. ....	61 26

**VOUCHERS RECEIVED IN DEPARTMENT OF FINANCE, WEDNESDAY, MAY 10, 1916.**

A statement is herewith submitted of all vouchers filed in the Department of Finance on this date, in which is shown the Department of Finance voucher number, the date of the invoices or the registered number of the contract, the name of the payee and the amount of the claim. Where two or more bills are embraced in one voucher the date of the earliest is given, excepting that when such vouchers are submitted under a contract the registered number of the contract is shown instead.

WILLIAM A. PRENDERGAST, Comptroller.

Finance Voucher No.	Invoice Date or Contract Number.	Name of Payee.	Amount.
<b>Department of Bridges.</b>			
72403		J. P. Duffy .....	\$14 40
72389	4-29-16	Sibley Pitman Elec. Co.....	12 85
72390	4-27-16	John Morton's Sons Co.....	6 70
72391	5- 4-16	J. M. Kohlmeier.....	18 13
72392	5- 4-16	Stanley & Patterson .....	23 69
72393	4-24-16	Sibley Pitman Elec. Corp..	16 50
72394	4-26-16	Johnson Bros. ....	50 05
72395	4-19-16	Cross, Austin & Ireland Lumber Co. ....	4 03
72396	4-25-16	Egleston Bros. & Co.....	62 29
72397	4-30-16	Louis J. Kahn.....	110 00
72398	5- 1-16	John H. Meyer .....	25 00
72399	3- 8-16	Oriental Rubber & Supply Co. ....	35 55
72400	4-13-16	The Petroleum Products Co. ....	3 75
72401	4-13-16	Swan & Fink Co.....	5 25
72402	4- 3-16	John A. McCarthy.....	13 00
72406	44280	S. Tuttle's Sons & Co.....	13 87
72407	44446	New York Telephone Co....	29 53
		New York Telephone Co....	39 30
72404		Olaf M. Kelly .....	4 13
72405		Calvin I. Crocker .....	1 80
<b>City Magistrates' Courts.</b>			
72316	2-21-16	M. B. Scott & Co.....	\$240 00
72317	3- 7-16	Remington Typewriter Co..	76 95
72318	4- 7-16	Fallon Law Book Co.....	129 75
72319	3-27-16	Universal Steel Cabiner Co., Inc. ....	3 20
72320	3-21-16	A. Pearson's Sons .....	312 46
72321	4-21-16	A. Pearson's Sons .....	72 00
72322	4-24-16	Remington Typewriter Co..	76 95
72323	4- 1-16	A. & W., Auburn Prison.....	118 00
<b>County Clerk, Queens County.</b>			
72269	4-13-16	Remington Typewriter Co..	\$0 75
72270	4-30-16	Brooklyn Union Towel Supply Co. ....	3 25
72271	4-29-16	Alex Dujat .....	40 60
72272		Alex Dujat .....	24 20
<b>County Clerk, New York County.</b>			
72417	4-29-16	The Banks Law Pub. Co....	\$6 50
72418	5- 9-16	Century Rubber Stamp Wks.	10 95
72419	4-28-16	R. L. Polk & Co., Inc.....	12 00
<b>Department of Correction.</b>			
72347	41399	New York Telephone Co....	\$582 89
72348	44464	J. Aron & Co., Inc.....	5,718 72
72349	43933	Samuel E. Hunter .....	360 73
72350	43934	Leo Hamburger .....	735 65
72351	44643	Standard Varnish Works....	77 80
72352	44058	Peter J. Constant .....	7 02
72329	4- 5-16	Wm. Goldsmith .....	29 01
72330	4-30-16	John Hayes, Warden .....	2 90
72331		Peter A. Mallom.....	23 70
72332	4-30-16	Richard L. Robinson.....	11 88
72333		Frank W. Fox.....	15 03
72334	4-30-16	Moses Keschnor .....	2 35
72335	4-29-16	Martin J. Feely .....	5 45
72336	5- 5-16	Frank W. Fox .....	5 05
72337	4-30-16	John J. Hanley .....	9 13
<b>District Attorney, Kings County.</b>			
72423		Ralph E. Roberts .....	\$20 00
72424		Anthony M. Duffy.....	23 02
72425	5- 2-16	Patrick Dougherty .....	8 33
72426	5- 1-16	Peerless Towel Supply Co..	11 65
72427	4-29-16	Great Bear Spring Co.....	3 60
72428	4-26-16	Columbia Graphophone Co..	1 00
72429	5- 4-16	Matthew Bender Co.....	5 00
72430	5- 1-16	The General Fireproofing Co. ....	12 00
<b>Board of Building Examiners.</b>			
72268	5- 1-16	Mutual Towel Supply Co....	\$6 40
<b>Department of Education.</b>			
72115	1-12-16	The J. W. Pratt Co.....	\$7 40
72116	4-10-16	The Crowell Pub. Co.....	75 00
72091	1-25-16	Mary J. Day .....	8 40
72092	3- 1-16	The Fairbanks Co.....	16 00
72093	2-14-16	F. W. Devoe & C. T. Raynolds Co. ....	13 80

Finance Voucher No.	Invoice Date or Contract Number.	Name of Payee.	Amount.
72094	2-28-16	Sol Lazarus .....	1 00
72095	2-15-16	B. F. Drakenfeld & Co., Inc.	64 80
72096	2-28-16	Library Bureau .....	3 50
72117	2-29-16	Fred'k Pearce Co.....	44 90
72118	3- 9-16	Maryland Storage Warehouse & Van Co.....	75 00
72119	3- 4-16	Philip Mittleman .....	157 50
72120	2- 4-16	H. Pfund .....	83 00
72121	3- 1-16	C. V. Gedroice & Co.....	158 00
72122	1- 9-16	M. Inkelas .....	121 25
72123	1-10-16	Godfrey Keeley Co.....	50 00
72124	1-28-16	Arnold, Constable & Co., Inc.	54 75
72125	2-29-16	Narragansett Machine Co..	15 00
72126	2- 3-16	The Manhattan Supply Co..	27 00
72127	10-11-15	Greenhut & Co., Inc.....	2 95
72128	1-28-16	J. Friedman .....	420 70
72129	1- 6-16	Walter J. Best, Jr.....	29 00
72058	43031	Daniel J. Rice.....	403 00
72059	43029	Jas. M. Curran Mfg. Co....	536 00
72060	43029	Jas. M. Curran Mfg. Co....	535 00
72061	43029	Jas. M. Curran Mfg. Co....	369 00
72062	43029	Jas. M. Curran Mfg. Co....	583 00
72063	43041	Philp & Paul .....	319 00
72077	2-25-16	Lennon & Co.....	32 50
72078	3- 3-16	Agent and Warden of Auburn Prison .....	13 00
72079	11-27-15	Wm. J. McDermott.....	347 00
72080	3-16-16	T. F. Jackson, Inc.....	200 00
72081	2-11-16	Lighting Studios Co.....	7 50
72082	12-11-15	John Pfuhler .....	135 00
72083	1- 6-16	J. Friedman .....	46 70
72084	12-30-15	Louis Imershein .....	124 00
72085	1-10-16	Agent and Warden of Auburn Prison .....	60 00
72086	3- 2-16	Hyman Bros. ....	21 00
72087		The Manhattan Supply Co..	16 50
72088	8- 4-15	Bloomingdale Bros. ....	684 94
72064	3-13-16	W. R. Ostrander & Co....	12 00
72065	2-28-16	Monroe M. Golding .....	7 50
72066	2- 4-16	J. D. Gordon .....	16 00
72067	3-23-16	S. & P. Krajci .....	30 00
72068	3-23-16	T. Fred'k Jackson, Inc....	29 00
72069	3-29-16	Andrew Gray Co.....	61 75
72070	2-29-16	M. Weinberg .....	22 00
72071	3- 3-16	J. Kurzbach .....	15 90
72072	3-24-16	M. Kalmus .....	67 90
72073	3- 8-16	H. Gold .....	19 50
72074	2-28-16	A. Weiss .....	39 95
72075	2- 6-16	Philip Simberg .....	12 50
72076	1-20-16	Agent and Warden of Auburn Prison .....	610 75
72160	3-17-16	Thos. McKeown.....	58 00
72161	3- 4-16	Henry Saal .....	41 00
72162	3-28-16	W. H. Temple .....	30 00
72163	2-16-16	Jos. B. Brady & Son.....	20 00
72164	2-21-16	B. E. Gfroerer .....	44 50
72165	3- 2-16	Jas. I. Newman.....	58 00
72166	3-23-16	M. P. Allen & Son.....	119 00
72167	3-10-16	John Gelsion .....	16 00
72168	3- 7-16	F. J. McCaragher .....	18 00
72169	3-23-16	T. F. Ferguson .....	24 00
72170	3- 5-16	H. Fortenbach .....	31 00
72171	3- 4-16	E. J. Belford.....	95 00
72172	2-29-16	R. Solomon & Son, Inc....	75 00
72173	3-18-16	Garbutt & Co.....	39 65
72174	3-17-16	Henry Pearl & Sons Co....	59 90
72175	3-14-16	Ohlhausen & Veit.....	158 00
72176	3-13-16	Edward D. Fox.....	58 00
72177	3-22-16	Geo. W. Falger .....	130 00
72150	3-11-16	Philip Simberg .....	5 15
72151	3- 9-16	L. E. Atherton .....	94 25
72152	3-30-16	Emil F. Bertram .....	5 25
72153	4-14-16	Karl Heinrich .....	40 00
72154	4-14-16	Karl Heinrich .....	30 00
72155	4-14-16	Karl Heinrich .....	45 00
72156	4-14-16	Karl Heinrich .....	15 00
72157	4-14-16	Karl Heinrich .....	5 00
72158	2-15-16	Arnold Constable .....	29 50
72140	3-28-16	Lignun Carpenter Works..	26 00
72141	3-21-16	Jos. Spengler .....	15 00
72142	3- 7-16	B. F. Donohoe .....	33 00
72143	3-16-16	Wm. Hahn .....	74 00
72144	3-25-16	R. & A. Isaacson.....	16 00
72145	3-16-16	Henry Pearl & Sons Co..	12 75
72146	3-17-16	Thos. McKeown.....	12 00
72147	3-13-16	Pittsburgh Plate Glass Co..	2 50
72148	3- 1-16	Thos. Styles .....	20 00
72149	2- 8-16	Jos. A. Graf .....	39 90
72130	3-13-16	Herman Sachs Roofing & Contracting Co., assignee to the Royal Co. of N. Y....	80 76
72131	2-26-16	John Gerrard .....	25 65

Finance Voucher No.	Invoice Date or Contract Number.	Name of Payee.	Amount.
72132	3- 9-16	Fred A. Buser .....	30 32
72133	2-16-16	Jos. B. Brady & Son.....	25 47
72134	3- 2-16	George F. Bason.....	49 65
72135	8-16-15	C. Williams .....	55 02
72136	2-10-16	George Gross & Son.....	4 75
72137	2-11-16	McKeon & MacKenzie.....	49 70
72138	2- 7-16	Louis Theiss .....	10 80
72139	3-14-16	G. W. Falger .....	49 69
72338	43183	The Manhattan Supply Co..	242 80
72339	43583	Narragansett Machine Co..	850 00
72340	43583	Narragansett Machine Co..	243 00
72341	44156	Wells & Newton Co. of N. Y. ....	3,420 00
72342	43759	Johnson Service Co.....	481 50
72343	43825	Jandous Electric Equipment Co. ....	450 00
72225	3- 7-16	Eugene Frank .....	174 00
72226	3-15-16	Victor B. Hess.....	4 00
72227	2-29-16	Louis Theiss .....	70 00
72228	2-26-16	Julius Haas' Sons.....	138 56
72229	2-18-16	H. Pfund .....	33 00
72230	3- 6-16	Hanson Bros. ....	58 00
72231	3-21-16	C. M. O'Connor .....	35 00
72232	3-11-16	Wander Iron Works.....	21 75
72233	3-14-16	C. M. O'Connor .....	72 00
72234	2- 5-16	J. D. Gordon .....	9 50
72235	2-14-16	Stephen C. Parker.....	3 00
72236	3-22-16	Henry Pearl & Sons Co....	5 50
72237	3-27-16	Jos. Spengler .....	30 00
72238	3-15-16	Duncan Stewart .....	7 50
72239	3- 4-16	Corbett & Co.....	24 00
72240	3-17-16	Alfred H. Dow Co.....	9 00
72241	3-14-16	Anthony De Mater, Jr....	4 00
72242	3-23-16	Anton Orgelfinger .....	11 50
72243	3-27-16	C. H. & R. C. Peckworth, Inc. ....	77 00
72178	2-11-16	Brooklyn Window Shade Co. ....	24 85
72179	3- 6-16	Philip Simberg .....	17 00
72180	2-28-16	L. E. Atherton .....	17 40
72181	3-16-16	L. E. Atherton .....	29 40
72182	3- 4-16	J. Friedman .....	39 90
72183	3-15-16	S. Zacharkow .....	13



Invoice Finance Date Vouch- or Con- er No. tract Number.	Name of Payee.	Amount.	Invoice Finance Date Vouch- or Con- er No. tract Number.	Name of Payee.	Amount.	Invoice Finance Date Vouch- or Con- er No. tract Number.	Name of Payee.	Amount.
72099 3-11-16	H. Gordon	9 20	72285	Frank M. Walsh	60 00	72433	Wm. J. McDermott	11 95
72100 3-17-16	H. Groswald	44 80	72286	Mrs. A. M. Battcher	51 00	72434	John J. Collins	32 20
72101 3-14-16	H. Gold	14 35	72287	Herbert E. Williams, as at- torney, Betty Norek	90 00	72435	Wm. B. Kenney	3 35
72102 3-18-16	H. Groswald	28 00	72288	Herbert E. Williams as at- torney in fact, P. Leventhal et al.	90 00	72436	Wm. J. McDermott	14 51
72103 3-15-16	J. Friedman	44 00	72289	Jamaica Savings Bank	105 00	72437	E. H. Seehausen	8 35
72104 3-20-16	Jacob D. Ausenberg	10 75	72409	The Commissioners of the Sinking Fund for account of the Water Sinking Fund...	2,000,000 00	72438	John Timlin, Jr.	7 90
72105 3-16-16	F. J. Kloes	14 15	72410	The Commissioners of the Sinking Fund for account of the Sinking Fund for the Redemption of the City Debt No. 1	3,000,000 00	72439	Theodore S. Oxholm	15 10
72106 3-14-16	A. Itzowitz	7 90	72411	The Commissioners of the Sinking Fund for account of the Sinking Fund for the Redemption of the City Debt No. 1	2,712 33	72386 4-19-16	James H. Dunham & Co.	8 92
72107 3-14-16	H. Hanig	83 95	72412	The Commissioners of the Sinking Fund for account of the Water Sinking Fund of the City of New York	1,808 22	72387 4-19-16	A. P. W. Paper Co.	67 50
72108 3- 8-16	Jacob D. Ausenberg	11 25	72414	Jas. A. Donnelly	810 30	72388 4-17-16	Yawman & Erbe Mfg. Co.	6 52
72109 3-22-16	Louis Imershein	10 50	72450	Title Guarantee & Trust Co. of Brooklyn as executor un- der the last will and testa- ment of Margaret V. Mc- Nulty, deceased	1,400 00	72367 3-31-16	Bramhall, Deane Co.	35 10
72110 3-11-16	H. Gordon	49 75				72368 4-12-16	The Manhattan Supply Co.	492 27
72111 3- 1-16	Reid's Express	7 40				72369 4- 5-16	Syndicate Trading Co.	193 95
72112 3- 3-16	Louis Imershein	94 70				72370 4-18-16	Tascarella Bros.	68 50
72113 2-28-16	Glen Rock Desk Co.	27 75				72354 4- 7-16	Jas. M. Shaw & Co.	78 55
72114 2-14-16	The Long Island Hardware Co.	30 00				72355 4-27-16	John Wanamaker	5 84
<b>Fire Department.</b>						72356 4-14-16	Somerville Brush Co.	4 50
72294 44110	J. W. Gasteiger & Son	\$2,058 88				72357	The Lily Cup Co.	3 00
72295 44107	J. & T. Adikes	647 47				72358 4-25-16	The Kny Scheerer Co.	231 18
72296 44104	Edward Wisely & Son	403 91				72359 4- 7-16	Hospital Supply Co.	13 20
72297 44108	Frank J. Lennon & Co.	759 08				72360 4-21-16	Greenhut & Co.	74 75
72298 43881	The Clark & Wilkins Co.	284 00				72361 4- 7-16	R. W. Geldart	768 18
72299 44280	S. Tuttle & Son & Co.	1,898 90				72362 4-25-16	Gimbel Bros.	557 89
72300 44486	M. L. Bird	5,186 38				72363 4-14-16	Department of Correction	14 61
72293	Robt. Adamson	25 00				72364 2- 5-16	J. W. Buckley Rubber Co.	42 50
<b>Department of Health.</b>						72365 4-22-16	Clark & Gibby, Inc.	6 30
72447 44317	G. W. Seiler	\$7,085 66				72366 4-20-16	L. Barth & Son	103 62
72448 44628	New York Telephone Co.	239 87				72381 4-18-16	Columbia Paper Co.	41 15
72449 40159	Wm. E. Austin	3,384 69				72382 4-15-16	D. B. Pershall & Son	30 95
<b>Commissioner of Jurors, Bronx County.</b>						72383 3-29-16	Manhattan Hardware & B. Co.	16 15
72273	M. B. Brown P. & B. Co.	\$204 75				72384 3-30-16	Robert Ferguson	20 44
<b>Law Department.</b>						72385 4- 7-16	Bloomington Bros.	426 19
72422	Lamar Hardy	\$500 00				72371 4-26-16	The J. W. Pratt Co.	3 25
<b>Miscellaneous.</b>						72372 1- 7-16	The Peerless Towel Sup. Co.	11 03
72159	Daniel Douglass	\$1,100 47				72373 4-27-16	R. L. Polk & Co., Inc.	24 00
72043	Jos. W. Krauer	211 69				72374 3-31-16	Henry Romeike, Inc.	28 00
72044	Jos. W. Krauer et al.	4,117 15				72375 4-25-16	The Wabash Cabinet Co.	1 75
72045	John C. Heintz et al.	31,927 16				72376 4-24-16	Apeda Studio, Inc.	13 00
72046 44152	Samuel Rosen	255 00				72377 4-21-16	Shaw Walker Co.	12 00
72047 43161	A. Chaleff & Siegel	505 50				72378 4-15-16	Singer Sewing Machine Co.	22
72048 43495	Karl Schaefer	210 00				72379 4-13-16	Geo. W. Millar & Co.	6 50
72049 40564	Wells & Newton Co.	5,387 50				72380 4-14-16	C. W. Jean Co.	1 80
72050 42503	Bloomington Bros.	489 97				<b>Commissioner of Records.</b>		
72051 44618	Commercial Const. Co.	495 00				72416 5- 8-16	The Lily Cup Co.	\$15 00
72052 40987	Johnson Service Co.	42 50				<b>Sheriff, Queens County.</b>		
72053 40713	F. Rutzler Co.	7,587 40				72415	Samuel J. Mitchell	\$175 93
72054 42836	Bloomington Bros.	190 79				<b>Department of Street Cleaning.</b>		
72055 40837	Eugene Frank	823 00				72353 44110	J. W. Gasteiger & Son	\$23,289 70
72056 42859	Daniel J. Rice	526 00				<b>Department of Water Supply, Gas and Electricity.</b>		
72057 42859	Daniel J. Rice	790 50				72465 4-14-16	The Chapman Valve Mfg. Co.	17 84
72251	Albert W. Brown	493 58				72466 3-31-16	A. F. Brombacher & Co.	11 25
72252	William S. Smith et al.	250 98				72467 3-31-16	Brooklyn Electrical Supply Co.	9 50
72253 4-27-16	Catharine Keefe et al.	18 83				72468 4- 6-16	The Manhattan Supply Co.	66 49
72254	Catherine Brennan	258 00				72469 4- 3-16	Bruce & Cook	810 16
72255	Konstanci Belinski	60 00				72470 3-31-16	Shadbolt Mfg. Co.	10 00
72256	Helen V. Henkel, formerly V. Monteverde	200 00				72471 4-20-16	Bureau of Highways	105 00
72257	John Ciborowski et al.	50 00				72453 3-15-16	H. Arnowsky	5 75
72258	James H. Purdy	1,995 94				72454 4- 4-16	Sheppard & Kellett	2 88
72263	American Fidelity Co.	110 08				72455 4-19-16	Robt. B. Hutchins	4 25
72264	Fidelity & Casualty Co. of New York	20 00				72456 4- 6-16	Benj. Shurack	5 63
72265	American Surety Co.	65 50				72457 3-30-16	Thos. Quinn	15 66
72266	United States Fidelity & Guaranty Co.	150 00				72458 3- 3-16	Jas. W. Bliss & Son	55 54
72267	National Surety Co.	56 00				72459 3- 1-16	Frank A. Ernst	4 67
72258 4-25-16	Estate of John Lyons	100 00				72460 3-31-16	Wm. J. Crosson	8 39
72259 5- 4-16	The Louise Minturn Hospital	98 57				72461 4-13-16	J. W. Gasteiger & Son	36 39
72260	S. G. Waterman, operating as the Electrical Develop- ment and Contracting Co.	12 50				72462 4-29-16	Great Bear Spring Co.	60
72261	I. T. Beaudrias	400 00				72463	Autocar Sales Co.	26 10
72262 4-28-16	Lamar Hardy, as Corpora- tion Counsel	167 00				72464 3-25-16	Stanley, Rule & Level Co.	41 40
72274	United States Express and Realty Co.	150 00				72472 4-12-16	The Record & Guide Co.	5 00
72290	Peter Young	75 00				72473 3-13-16	Hudson Auto Lamp Works, Inc.	6 50
72291	Mrs. Anna C. Becker	50 00				72474 1-12-16	Knickerbocker Towel Sup- ply Co.	2 25
72292	Miss Julia D. Brown	237 50				72475 3-28-16	American Express Co.	44 92
72278	Ollie Scheuer	562 50				72476 4-12-16	The Bristol Co.	5 00
72279	Henry Heissenbittel	300 00				72477 3-23-16	The Bristol Co.	62 13
72280 5-15-16	Philip Braender	500 00				72478 3-17-16	Welsbach Gas Lamp Co.	10 15
72281	Antonio Cappello	120 00				72479 3-14-16	W. W. Cornell	40 00
72282	E. Neufeld	120 00				72480 2- 1-16	Wallace & Tiernan Co.	20 00
72283	P. J. Coppola	120 00				72481 1-13-16	Wallace & Tiernan Co., Inc.	20 00
72284	United Neighborhood Guild	75 00				72482 4-12-16	Schoverling, Daly & Gales, Inc.	22 34

**Borough of The Bronx.**

Extract of Minutes of the Local Board of  
Chester, 23d District.

Pursuant to call by President Mathew-  
son, the members of the Local Board of  
Chester, 23d District, met at Borough  
Hall, 177th st. and 3d ave., on Tuesday,  
May 2, 1916, at 8 p. m.

Present—President Mathewson, Alder-  
man Schweickert and Alderman Moran.

Extract of minutes of the meeting of  
April 4, 1916, as published in the City  
Record of April 19, 1916, was approved.

On motion, seconded, it was  
Resolved, That petitions 1396, 1396A  
and 1530 be taken up out of regular order.

Adopted.  
1396. Laying out on the Map of The  
City of New York an extension of Bruner  
avenue, from Barnes ave. to Byron ave.,  
and

1396A. Changing the Map of The City  
of New York by showing thereon a  
change of lines of Bissel ave. from Bay-  
chester ave. to Barnes ave. and the dis-  
continuing of the street system within  
the limits of the Interborough Rapid  
Transit Storage Yards at White Plains  
rd., between E. 239th st. and Baychester  
ave., in accordance with map dated Nov.  
8, 1913, considered as one matter.

The lay out as recommended in con-  
ference was submitted and, upon motion,  
seconded and adopted, it was recom-  
mended to the favorable consideration of  
the Board of Estimate and Apportion-  
ment with this amendment: That the  
extension of Bruner ave., between Barnes  
ave. and Byron ave., be reduced in width  
so as to avoid encroachments and that  
the southerly line of Camp st. be extended  
westerly so as to include in the street  
area the gore owned by the Interborough  
Rapid Transit Company in order to give  
frontage to the Sound Realty Company.  
1530. Construction of sewer and appur-  
tenances other than relieving sewers in  
Eastchester rd., between Blondell ave. and  
Seymour ave., together with all work in-  
cidental thereto. Resolution to adopt was  
not carried.

At this point Commissioner John G.  
Borgstede took the chair and presided  
for the remainder of the meeting.

1544. Acquiring title to the lands neces-  
sary for Magenta st., from White Plains  
rd. to Bronx Boulevard. Laid over until  
June 6, 1916.

1546. Regulating, grading, setting curb,  
laying sidewalks and crosswalks, build-  
ing inlets, receiving basins, drains, cul-  
verts, approaches and guard rails where

necessary in Purdy st., from Walker ave.  
to Westchester ave., together with all  
work incidental thereto. Denied.

1547. Regulating, grading, setting curb,  
laying sidewalks, crosswalks, building in-  
lets, receiving basins, drains, culverts,  
approaches and guard rails where neces-  
sary in Olmstead ave., from Westchester  
ave. to Turnbull ave., together with all  
work incidental thereto. Adopted.

1548. Regulating, grading, setting curb,  
laying sidewalks and crosswalks, building  
inlets, receiving basins, drains, culverts,  
approaches and guard rails where neces-  
sary in Mansion st., from Rosedale ave.  
to Beach ave., together with all work in-  
cidental thereto. Adopted.

1550. Paving with bituminous concrete  
on a cement concrete foundation (pre-  
liminary pavement), the roadway of Van  
Nest ave., from Walker ave. to Bear  
Swamp rd., adjusting curb where neces-  
sary, together with all work incidental  
thereto. Adopted conditionally upon the  
receipt of petition for and the authoriza-  
tion of the sewers which cannot be re-  
tained in the permanent system.

1551. Laying out on the Map of The  
City of New York a change of grade of  
Lester st., between Barker ave. and Olin-  
ville ave., so as to avoid the heavy cut,

and provide for steps at Olinville ave.  
The grade at Barker ave. to be left un-  
changed. Laid over until June 6, 1916.

FOR RECONSIDERATION AND AMENDMENT.

1041. Regulating, grading, setting curb-  
stones, flagging the sidewalks, laying  
crosswalks, building approaches and  
erecting fences where necessary in  
Gleason ave., from White Plains rd. to  
Zerega ave., and all work incidental  
thereto.

On motion, seconded, the Local Board  
resolution adopted on Dec. 1, 1913, pro-  
viding for the above work, was amended  
so as to provide for: Regulating, grad-  
ing, setting curb, laying sidewalks and  
crosswalks, building inlets, receiving  
basins, drains, culverts, approaches and  
guard rails where necessary in Gleason  
ave., from White Plains rd. to Zerega  
ave., together with all work incidental  
thereto, but omitting curbing and flagging  
in the block between Virginia ave. and  
Pugsley ave.

Adopted as amended.

Laid Over MATTERS:

1125. Acquiring title to the lands  
necessary for Richardson ave., from E.  
236th st. to E. 242d st. Laid over until  
June 6, 1916.

1210. Regulating, grading, setting curb-



stones, flagging and sidewalks, laying crosswalks, building approaches and erecting fences where necessary in Bronx Boulevard from Gun Hill rd. to E. 233d st., together with all work incidental thereto. Laid over until Sept. 12, 1916.

1232. Regulating, grading, setting curbs, flagging the sidewalks, laying crosswalks, building approaches and erecting fences where necessary in Bronx Boulevard, from Gun Hill rd. to E. 238th st., together with all work incidental thereto. Laid over until Sept. 12, 1916.

1292. Change of grade in Bronx Boulevard, from E. 238th st. to E. 242d st., and for the adjustment of the grades of the intersecting avenues and streets necessitated thereby. Laid over until June 6, 1916.

1471. Laying out on the Map of The City of New York Furman ave., at its present width of fifty (50) feet, as shown on Map of Pitman Plot. Laid over until June 6, 1916.

1474. Flagging and reflagging the sidewalk where required in front of property on the south side of Burke ave., west of Barker ave., designated on the Tax Maps of The City of New York as Lot 26, Block 4543, together with all work incidental thereto, in accordance with Section 435 of the Greater New York Charter, as amended. Laid over until June 6, 1916.

1501. For acquiring title to the lands necessary for Sands pl., from Westchester ave. to Eastern Boulevard. Laid over until June 6, 1916.

1536. Regulating, grading, setting curb, laying sidewalks and crosswalks, building inlets, receiving basins, drains, culverts, approaches and guard rails where necessary in Barnes ave., from Paychester ave. to the City Line, together with all work incidental thereto. Denied.

On motion, seconded, the Board adjourned.

EMANUEL FRIENDLICH,  
Secretary.

Report for week ended May 3, 1916, exclusive of Bureau of Buildings.

Permits Issued—Sewer connections and repairs, 23; water connections and repairs, 29; laying gas mains and repairs, 30; placing building material on public highway, 7; crossing sidewalk with team, 6; miscellaneous, 94; total, 189.

Money Received—Permits for sewer connections, \$95; permits for restoring and repaving streets, \$714.77; permits for street signs, \$10; permits for lowering curb, \$98.17; sales of old safes, \$50; maps, \$1.25; total, \$969.49.

Security deposits received on account of permits and transmitted to Comptroller, \$1,317.

Laboring Force Employed—Bureau of Sewers and Highways: Foreman, 40; Assistant Foreman, 2; teams, 74; carts, 16; Mechanics, 53; Laborers, 406; Drivers, 5; total, 596. Bureau of Sewers, Engineering: Foreman, 1; Laborers, 7; total, 8. Bureau of Public Buildings and Offices: Mechanics, 9; Laborers, 26; watchmen, 2; total, 37. Topographical Bureau: Laborers, 3; Driver, 1; total, 4. Administration: Mechanics, 1; Laborers, 5; total, 6.

Contracts Entered Into—Regulating, etc., W. 238th st. from Broadway to Bailey ave., Burnside Contracting Co., 270 E. Burnside ave.; \$4,991.25; surety, National Surety Co. Regulating, etc., Review pl. from W. 238th st. to W. 239th st., Burnside Contracting Co., 270 E. Burnside ave.; \$3,479; surety, National Surety Co. Regulating Kingsbridge ave. from W. 239th st. to line between Boroughs of Manhattan and Bronx, Frank M. Palladino, 2698 Creston ave.; \$5,460.25; surety, National Surety Co. Furnishing and delivering grits, Ames Transfer Co., 236th st. and Kingsbridge ave.; \$7,276.50; surety, U. S. Fidelity & Guaranty Co.

DOUGLAS MATHEWSON,  
President.

#### Department of Bridges.

Contract Awarded—For furnishing and delivering structural steel to the Williamsburg Bridge (bids opened May 4): Vulcan Rail and Construction Company, \$9,948.90, they being the only formal bidder.

F. J. H. KRACKE, Commissioner.

#### Borough of Manhattan.

##### BUREAU OF BUILDINGS.

Report for Week Ended May 6, 1916. Plans filed for new buildings, 21; estimated cost, \$6,267,800; for alterations, 69; estimated cost, \$271,325. Buildings reported as unsafe, 31; other violations of law reported, 177.

#### Department of Education.

Contracts Awarded, May 8, 1916:—Bramhall, Deane Co., 263 W. 36th st.; for furnishing kitchen utensils; surety, American Surety Co. Furniture for new P. S. 54, Bronx: Louis Imersheim, 105 Bowery; surety, National Surety Co. Narragansett Machine Co., Providence, R. I.; surety, Aetna Accident & Liability Co.

Arthur J. LaCroix, Inc., 50 Church st.; surety, Casualty Company of America. New Jersey School and Church Furniture Co., Trenton, N. J.; surety, American Surety Co. B. F. Johnson Publishing Co., Richmond, Va., for furnishing text books; surety, American Surety Co. Furnishing general apparatus, etc., to high schools: Scientific Equipment Co., 70 Fifth ave.; surety, Fidelity & Deposit Co. of Maryland. Lenz & Naumann, Inc., 9 E. 16th st.; surety, American Surety Co.

A. E. PALMER, Secretary.

#### Changes in Departments, Etc.

##### OFFICE OF THE MAYOR.

Appointed—May 9, Milo R. Maltbie, 593 Riverside Drive, Manhattan, Chamberlain, to succeed Henry Bruere, resigned.

##### TENEMENT HOUSE DEPARTMENT.

Salary Increased—William H. Jones, 262 E. 28th st., Brooklyn, Clerk, \$1,500 to \$1,650 per annum, May 1; Mary B. Murphy, 3325 Decatur ave., Bronx, Stenographer and Typewriter, to \$1,320 per annum, April 27.

Appointed—Herman Cohen, 1501 Thirty-ninth st., Brooklyn, Clerk at \$1,200 per annum, May 1.

##### DEPARTMENT OF DOCKS AND FERRIES.

Died—Thomas J. Conway, Laborer, at \$2.50 a day, April 30.

Appointed—Henry W. Steuck, Painter, at \$4 a day, May 3.

Salaries Changed—Marine Stokers, from \$3 a day to \$90 per month: August K. W. Fischer and Herman E. Hoffstadt, May 5; Patrick J. Sheehan, May 8.

Transferred—Tony Aliano, Foreman of Laborers, at \$4 a day, to President, Borough of Brooklyn, May 5.



#### OFFICIAL DIRECTORY.

Unless otherwise stated, the Public Offices of the City are open for business from 9 a. m. to 5 p. m.; Saturday, 9 a. m. to 12 noon.

##### CITY OFFICES.

###### MAYOR'S OFFICE.

City Hall. Telephone, 8020 Cortlandt. John Purroy Mitchel, Mayor. Theodore Rousseau, Secretary. Samuel L. Martin, Executive Secretary. Bureau of Weights and Measures. Municipal Building, 3d floor. Telephone, 1498 Worth.

Joseph Hartigan, Commissioner. COMMISSIONERS OF ACCOUNTS. Municipal Building. Telephone, 4315 Worth. Leonard M. Wallstein, Commissioner of Accounts.

BOARD OF ALDERMEN. Clerk's Office, Municipal Building, 2nd floor. Telephone, 4430 Worth. P. J. Scully, Clerk.

President of the Board of Aldermen. City Hall. Telephone, 6770 Cortlandt. Frank L. Dowling, President.

BOARD OF AMBULANCE SERVICE. Municipal Building, 10th floor. Ambulance Calls, 3100 Spring. Administration Offices, 748 Worth.

ARMORY BOARD. Hall of Records. Telephone, 3900 Worth. C. D. Rhinehart, Secretary.

ART COMMISSION. City Hall. Telephone, 1197 Cortlandt. John Quincy Adams, Assistant Secretary.

BOARD OF ASSESSORS. Municipal Building, 8th floor. Telephone, 29 Worth. William C. Ormond, Chairman. St. George B. Tucker, Secretary.

BELLEVUE AND ALLIED HOSPITALS. 26th st. and 1st ave. Telephone, 4400 Madison Square. Dr. John W. Brannan, President. J. K. Paulding, Secretary.

DEPARTMENT OF BRIDGES. Municipal Building, 18th floor. Telephone, 380 Worth. F. J. H. Kracke, Commissioner.

CENTRAL PURCHASING COMMITTEE. Municipal Building, 12th floor. Telephone, 4315 Worth. Director.

BUREAU OF THE CHAMBERLAIN. Municipal Building, 8th floor. Telephone, 4270 Worth. Milo R. Maltbie, Chamberlain.

BOARD OF CHILD WELFARE. City Hall. Telephone, 7541 Cortlandt. Harry L. Hopkins, Secretary.

CITY CLERK AND CLERK OF THE BOARD OF ALDERMEN. Municipal Building, 2nd floor. Telephone, 4430 Worth. P. J. Scully, City Clerk.

BOARD OF CITY RECORD. Supervisor's office, Municipal Building, 8th floor. Distributing Division, 96 Reade st. Telephone, 3490 Worth. David Ferguson, Supervisor.

DEPARTMENT OF CORRECTION. Municipal Building, 24th floor. Telephone, 1610 Worth. Burdette G. Lewis, Commissioner.

DEPARTMENT OF DOCKS AND FERRIES. Pier "A," North River. Telephone, 300 Rector. E. A. C. Smith, Commissioner.

##### DEPARTMENT OF EDUCATION.

Board of Education. Park ave. and 59th st. Telephone, 5580 Plaza. Stated meetings of the Board are held at 4 p. m. on the first Monday in February, the second Wednesday in August, and the second and fourth Wednesdays in every month, except August. William G. Wilcox, President. A. Emerson Palmer, Secretary.

BOARD OF ELECTIONS. General office and office of the Borough of Manhattan, Municipal Building, 18th floor. Telephone, 1307 Worth. Edward F. Boyle, President. Moses M. McKee, Secretary.

Other Borough Offices. The Bronx. 368 E. 148th st. Telephone, 336 Melrose. Brooklyn. 435-445 Fulton st. Telephone, 1932 Main.

Queens. 64 Jackson ave., L. I. City. Telephone, 3375 Hunters Point. Richmond. Borough Hall, New Brighton, S. I. Telephone, 1000 Tompkinsville.

All offices open from 9 a. m. to 4 p. m. Saturdays to 12 noon.

BOARD OF ESTIMATE AND APPORTIONMENT. Municipal Building, 13th floor. Telephone, 4560 Worth. Joseph Haag, Secretary.

Bureau of Records and Minutes. Municipal Building, 13th floor. Telephone, 4560 Worth. Joseph Haag, Secretary.

Office of the Chief Engineer. Municipal Building, 13th floor. Telephone, 4560 Worth. Nelson P. Lewis, Chief Engineer.

Bureau of Public Improvements. Municipal Building, 13th floor. Telephone, 4560 Worth. Nelson P. Lewis, Chief Engineer.

Bureau of Franchises. Municipal Building, 13th floor. Telephone, 4560 Worth. Harry P. Nichols, Engineer.

Bureau of Contract Supervision. Municipal Building, 13th floor. Telephone, 4560 Worth. Central Testing Laboratory, 123 Worth st. Telephone, 3088 Franklin. Tilden Adamson, Director.

Bureau of Standards. Municipal Building, 13th floor. Telephone, 4560 Worth. George L. Tirrell, Director.

BOARD OF EXAMINERS. Municipal Building, 20th floor, 9 a. m. to 4 p. m. Saturday, to 12 noon. Telephone, 1800 Worth.

Board meets every Tuesday at 2 p. m. Edward V. Barton, Clerk.

DEPARTMENT OF FINANCE. Municipal Building, 5th floor. Telephone, 1200 Worth. Shepard A. Morgan, Secretary to the Department, 5th floor.

William A. Prendergast, Comptroller. Deputy Comptrollers, 7th floor. Alexander Brough, Edmund D. Fisher, Hubert L. Smith.

Receiver of Taxes. Manhattan—Municipal Building, 2nd floor. Telephone, 1200 Worth. Bronx—177th st. and Arthur ave. Telephone, 140 Tremont.

Brooklyn—236 Duffield st. Telephone, 7056 Main. Queens—5 Court Square, L. I. City. Telephone, 3386 Hunters Point.

Richmond—Borough Hall, St. George. Telephone, 100 Tompkinsville. Collector of Assessments and Arrears.

Manhattan—Municipal Building, 3d floor. Telephone, 1200 Worth. Bronx—177th st. and Arthur ave. Telephone, 4 Tremont.

Brooklyn—503 Fulton st. Telephone, 8340 Main. Queens—Municipal Building, Court Square, L. I. City. Telephone, 1553 Hunters Point.

Richmond—Borough Hall, St. George. Telephone, 1000 Tompkinsville. Daniel Moynahan, Collector.

FIRE DEPARTMENT. Municipal Building, 11th floor. Telephone, 4100 Worth. Brooklyn, 365 Jay st. Telephone, 7600 Main. Robert Adamson, Commissioner.

DEPARTMENT OF HEALTH. Centre and Walker sts., Manhattan. Telephone, 4 Tremont. Burial Permit and Contagious Disease offices always open.

Bronx, 3731 Third ave., Brooklyn, Flatbush ave., Willoughby and Fleet sts., Queens, 372 Fulton st., Jamaica, Richmond, 514 Bay st., Stapleton.

Haven Emerson, Commissioner. Eugene W. Scheffer, Secretary.

BOARD OF INEBRIETY. 300 Mulberry st. Telephone, 7116 Spring. Board meets first Wednesday in each month at 3 p. m. Charles Samson, Secretary.

LAW DEPARTMENT. Office of Corporation Counsel. Main office, Municipal Building, 16th floor. Telephone, 4600 Worth.

Lamar Hardy, Corporation Counsel. Brooklyn office, 153 Pierrepont st. Telephone, 2948 Main.

Bureau of Street Openings. Main office, Municipal Building, 15th floor. Telephone, 1380 Worth.

Brooklyn office, 166 Montague st. Telephone, 5916 Main. Queens office, Municipal Building, L. I. City. Telephone, 3886 Hunters Point.

Bureau for the Recovery of Penalties. Municipal Building, 15th floor. Telephone, 4600 Worth.

Bureau for the Collection of Arrears of Personal Taxes. Municipal Building, 17th floor. Telephone, 4585 Worth.

DEPARTMENT OF LICENSES. Main Office, 49 Lafayette st. Telephone, 4490 Franklin. George H. Bell, Commissioner.

Brooklyn—381 Fulton st. Telephone, 1497 Main. Queens—Borough Hall, L. I. City. Telephone, 5400 Hunters Point.

Richmond—Borough Hall, New Brighton. Telephone, 1000 Tompkinsville. Division of Licensed Vehicles—517-519 W. 57th st. Telephone, 6387 Columbus.

Public Employment Bureau—Men's departments, 128 Leonard st. Women's departments, 53 Lafayette st. Telephone, 6100 Franklin.

MUNICIPAL CIVIL SERVICE COMMISSION. Municipal Building, 14th floor. Telephone, 1580 Worth. Henry Moskowitz, President. Robert W. Belcher, Secretary.

MUNICIPAL REFERENCE LIBRARY. Municipal Building, 5th floor. Telephone, 1072 Worth. 9 a. m. to 5 p. m.; Saturday, to 1 p. m.

DEPARTMENT OF PARKS. Municipal Building, 10th floor. Telephone, 4850 Worth. Cabot Ward, Commissioner, Manhattan and Richmond.

Borough of Brooklyn. Litchfield Mansion, Prospect Park, Brooklyn. Telephone, 2300 South. Raymond V. Ingersoll, Commissioner.

Borough of The Bronx. Zbrowski Mansion, Claremont Park. Telephone, 2640 Tremont. Thomas W. Whittle, Commissioner.

##### Borough of Queens.

The Overlook, Forest Park, Richmond Hill, L. I. Telephone, 2300 Richmond Hill.

John E. Weier, Commissioner. PARK BOARD. Municipal Building, 10th floor. Telephone, 4850 Worth. Cabot Ward, President; Louis W. Fehr, Secretary.

PAROLE COMMISSION. Municipal Building, 24th floor. Telephone, 1610 Worth. Thomas R. Minnick, Secretary.

EXAMINING BOARD OF PLUMBERS. Municipal Building, 9th floor. Telephone, 1800 Worth. Janet A. G. Hahn, Clerk.

POLICE DEPARTMENT. 240 Centre st. Telephone, 3100 Spring. Arthur Woods, Commissioner.

DEPARTMENT OF PUBLIC CHARITIES. Principal office, Municipal Building, 10th floor. Telephone, 4440 Worth. Brooklyn and Queens, 327 Schermerhorn st., Brooklyn. Telephone, 2977 Main.

Bureau of Social Investigation, Pearl and Centre sts. Telephone, 4405 Worth. Borough of Richmond. Borough Hall, St. George, S. I. Telephone, 1000 Tompkinsville.

John A. Kingsbury, Commissioner. PUBLIC SERVICE COMMISSION. 120 Broadway, 8 a. m. to 11 p. m. every day, including holidays and Sundays. Telephone 7500 Rector.

Oscar S. Straus, Chairman. James B. Walker, Secretary.

BOARD OF REVISION OF ASSESSMENTS. Municipal Building, 7th floor. Telephone, 1200 Worth. John Korb, Jr., Chief Clerk.

COMMISSIONERS OF SINKING FUND. Office of Secretary, Municipal Building, 7th floor. Telephone, 1200 Worth. John Korb, Jr., Secretary.

DEPARTMENT OF TAXES AND ASSESSMENTS. Municipal Building, 9th floor. Telephone, 1800 Worth. Lawson Purdy, President.

C. Rockland Tyng, Secretary. DEPARTMENT OF STREET CLEANING. Municipal Building, 12th floor. Telephone, 4240 Worth.

John T. Fetherston, Commissioner. TENEMENT HOUSE DEPARTMENT. Manhattan and Richmond office, Municipal Building, 19th floor. Telephone, 1526 Worth.

Brooklyn and Queens office, 503 Fulton st., Brooklyn. Telephone, 3825 Main. Bronx office, 391 E. 149th st. Telephone, 7107 Melrose.

John J. Murphy, Commissioner. BOARD OF WATER SUPPLY. Municipal Building, 22nd floor. Telephone, 3150 Worth.

Charles Strauss, President. George Featherstone, Secretary.

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY. Municipal Building, 23d, 24th and 25th floors. Telephones: Manhattan, 4320 Worth; Brooklyn, 3980 Main; Queens, 3441 Hunters Point; Richmond, 840 Tompkinsville; Bronx, 3400 Tremont.

Brooklyn, 50 Court st. Bronx, Tremont and Arthur aves. Queens, Municipal Building, L. I. City. Richmond, Municipal Building, St. George. William Williams, Commissioner.

#### BOROUGH OFFICES.

##### BOROUGH OF THE BRONX.

President's office, 3d ave. and 177th st. Telephone, 2680 Tremont.

Douglas Mathewson, President. BOROUGH OF BROOKLYN. President's office, 2d floor, Borough Hall.

Commissioner of Public Works, 2d floor, Borough Hall. Assistant Commissioner of Public Works, 2d floor, Borough Hall.

Bureau of Highways, 5th and 12th floors, 50 Court st. Bureau of Public Buildings and offices, 10th floor, 50 Court st.

Bureau of Sewers, 10th floor, 215 Montague st. Bureau of Buildings, 4th floor, Borough Hall. Topographical Bureau, 209 Montague st.

Bureau of Substructures, 11th floor, 50 Court st. Telephone, 3960 Main. Lewis H. Pounds, President.

BOROUGH OF MANHATTAN. President's office, 20th floor, Municipal Building. Commissioner of Public Works, 21st floor, Municipal Building.

Assistant Commissioner of Public Works, 21st floor, Municipal Building. Bureau of Highways, 21st floor, Municipal Building.

Bureau of Public Buildings and offices, 20th floor, Municipal Building. Bureau of Sewers, 21st floor, Municipal Building.

Bureau of Buildings, 20th floor, Municipal Building. Telephone, 4227 Worth. Marcus M. Marks, President.

BOROUGH OF QUEENS. President's Office, Borough Hall, L. I. City. Telephone, 5400 Hunters Point.

Bureau of Public Buildings and Offices, Town Hall, Flushing, L. I. Telephone, 1740 Flushing. Maurice E. Connolly, President.

BOROUGH OF RICHMOND. President's office, New Brighton. Telephone, 1000 Tompkinsville. Calvin D. Van Name, President.

CORONERS. Manhattan, Municipal Building, 2nd floor. Open at all hours of the day and night. Telephone, 3711 Worth.

Bronx—Arthur and Tremont aves. Telephone, 1250 Tremont, 8 a. m. to midnight, every day. Brooklyn, 236 Duffield st. Telephone, 4004 Main. Open at all hours of the day and night.

Queens, Town Hall, Jamaica, 9 a. m. to 10 p. m.; Sundays and holidays, 9 a. m. to 12 noon. Richmond, 175 Second st., New Brighton. Open at all hours of the day and night.

#### COUNTY OFFICES.

Unless otherwise stated, the County offices are open for business from 9 a. m. to 4 p. m.; Saturday, 9 a. m. to 12 noon.

##### NEW YORK COUNTY.

###### COUNTY CLERK.

County Court House. Telephone, 5388 Cortlandt. 9 a. m. to 2 p. m., during July and August. Wm. F. Schneider, County Clerk.

DISTRICT ATTORNEY. Criminal Courts Building, 9 a. m. to 5.15 p. m.; Saturdays, to 12 noon. Telephone, 2304 Franklin.

Edward Swann, District Attorney. COMMISSIONER OF JURORS. 280 Broadway. Telephone, 241 Worth. Frederick O'Byrne, Commissioner.

PUBLIC ADMINISTRATOR. 119 Nassau st. Telephone, 6376 Cortlandt. William M. Hoes, Public Administrator.

COMMISSIONER OF RECORDS. Hall of Records. Telephone, 3900 Worth. Charles K. Lexow, Commissioner.



**REGISTER.**  
Hall of Records, Telephone, 3900 Worth.  
9 a. m. to 2 p. m. during July and August.  
John J. Hopper, Register.

**SHERIFF.**  
51 Chambers st. Telephone, 4300 Worth.  
New York County Jail, 70 Ludlow st.  
Alfred E. Smith, Sheriff.

**SUBROGATES.**  
Hall of Records, Telephone, 3900 Worth.  
John P. Cohan; Robert Ludlow Fowler, Surrogate.  
William Ray De Lano, Chief Clerk.  
John F. Curry, Commissioner of Records.

**KINGS COUNTY.**

**COUNTY CLERK.**  
Hall of Records, Telephone, 4930 Main.  
William E. Kelly, County Clerk.

**COUNTY COURT.**  
County Court House. Court opens at 10 a. m. daily and sits until business is completed. Part I, Room 23; Part II, Room 10; Part III, Room 14; Part IV, Room 1. Court House. Clerk's office, Room 17, 18, 19 and 22; open daily from 9 a. m. to 5 p. m.; Saturday to 12 noon. Telephone, 4154 Main.

John L. Gray, Chief Clerk.

**DISTRICT ATTORNEY.**  
66 Court st., 9 a. m. to 5.30 p. m.; Saturday, to 1 p. m. Telephone, 2954 Main.

Harry E. Lewis, District Attorney.

**COMMISSIONER OF JURORS.**  
381 Fulton st. Telephone, 330-331 Main.  
Jacob Brenner, Commissioner.

**PUBLIC ADMINISTRATOR.**  
44 Court st. Telephone, 2840 Main.  
Frank V. Kelly, Public Administrator.

**COMMISSIONER OF RECORDS.**  
Hall of Records, Telephone, 6988 Main.  
Edmund O'Connor, Commissioner.

**REGISTER.**  
Hall of Records, Telephone, 2830 Main.  
Edward T. O'Loughlin, Register.

**SHERIFF.**  
50 Court st. Telephone, 6845 Main.  
Edward Riegelmann, Sheriff.

**SUBROGATE.**  
Hall of Records, Telephone, at 10 a. m. Telephone, 3951 Main.  
Herbert T. Ketcham, Surrogate.  
John H. McCooney, Chief Clerk.

**BRONX COUNTY.**

**COUNTY CLERK.**  
Civil Records—161st st. and 3d ave. Telephone, 9266 Melrose.  
Criminal Branch, 1918 Arthur ave.  
James Vincent Ganly, County Clerk.

**COUNTY JUDGE.**  
Bergen Building Annex, Tremont and Arthur aves. Telephone, 3205 Tremont.  
Louis D. Gibbs, County Judge.

**DISTRICT ATTORNEY.**  
Tremont and Arthur aves. Telephone, 1100 Tremont.  
Francis Martin, District Attorney.

**COMMISSIONER OF JURORS.**  
1932 Arthur ave. Telephone, 3700 Tremont.  
John A. Mason, Commissioner.

**PUBLIC ADMINISTRATOR.**  
2808 Third ave. Telephone, 9816 Melrose, 9 a. m. to 5 p. m.; Saturday to 12 noon.  
Ernest E. L. Hammer, Public Administrator.

**REGISTER.**  
1932 Arthur ave. Telephone, 6694 Tremont.  
Edward Polak, Register.

**SHERIFF.**  
1932 Arthur ave. Telephone, 6600 Tremont.  
James F. O'Brien, Sheriff.

**SUBROGATE.**  
Bergen Building Annex, 1918 Arthur ave.  
George M. S. Schulz, Surrogate.

**QUEENS COUNTY.**

**COUNTY CLERK.**  
364 Fulton st., Jamaica. Telephone, 151 Jamaica.  
Alexander Dujat, County Clerk.

**COUNTY COURT.**  
County Court House, L. I. City. Telephone, 596 Hunters Point.  
Court opens at 10 a. m. Trial Term begins first Monday of each month, except July, August and September, and on Friday of each week.  
Clerk's office opens 9 a. m. to 5 p. m.; Saturdays to 12.30 p. m. Telephone, 551 Jamaica.  
County Judge's office always open at 336 Fulton st., Jamaica. Telephone, 3871 Hunters Point.  
Burt Jay Humphrey, County Judge.

**DISTRICT ATTORNEY.**  
County Court House, L. I. City, 9 a. m. to 5 p. m.; Saturday, to 12 noon.  
Dennis O'Leary, District Attorney.

**COMMISSIONER OF JURORS.**  
County Court House, L. I. City. Telephone, 963 Hunters Point.  
Thorndyke C. McKenney, Commissioner.

**PUBLIC ADMINISTRATOR.**  
302 Fulton st., Jamaica. Telephone, 223 Jamaica.  
Randolph White, Public Administrator.

**SHERIFF.**  
County Court House, L. I. City. Telephone, 3766 Hunters Point.  
Paul Stier, Sheriff.

**SUBROGATE.**  
364 Fulton st., Jamaica. Telephone, 397 Jamaica.  
Daniel Noble, Surrogate.

**RICHMOND COUNTY.**

**COUNTY CLERK.**  
County Office Building, Richmond. Telephone, 28 New Dorp.  
C. Livingston Postwick, Clerk.

**COUNTY JUDGE AND SUBROGATE.**  
Trial Terms, with Grand and Trial Jury, second Monday of March, first Monday of October.  
Trial Terms, with Trial Jury only, first Monday of May, first Monday of December.  
Special Terms, without Jury—Wednesday of each week, except the last week of July, the month of August and the first week of September.

**Surrogate's Court.**  
Monday and Tuesday of each week at the Borough Hall, St. George, and on Wednesday at the Surrogate's Court at Richmond, except during the session of the County Court. There will be no Surrogate's Court during the month of August.

**Surrogate's Court and Office, Richmond.** Surrogate's Chambers, Borough Hall, St. George.  
J. Harry Tiernan, County Judge and Surrogate.

**DISTRICT ATTORNEY.**  
Borough Hall, St. George. Telephone, 50 Tompkinsville, 9 a. m. to 5 p. m.; Saturday, to 12 noon.  
Albert C. Fach, District Attorney.

**COMMISSIONER OF JURORS.**  
Village Hall, Stapleton. Telephone, 81 Tompkinsville.  
Edward I. Miller, Commissioner.

**PUBLIC ADMINISTRATOR.**  
Port Richmond. Telephone, 704 West Brighton.  
William T. Holt, Public Administrator.

**SHERIFF.**  
County Court House, Richmond. Telephone, 120 New Dorp.  
Spire Pitou, Jr., Sheriff.

**THE COURTS.**

**CITY COURT OF THE CITY OF NEW YORK.**  
City Hall Park. Special Term Chambers held from 10 a. m. to 4 p. m. Clerk's office open from 9 a. m. to 4 p. m. Telephone, 122 Cortlandt.  
Thomas F. Smith, Clerk.

**CITY MAGISTRATES' COURTS.**  
*Boroughs of Manhattan and Bronx.*  
William McAdoo, Chief City Magistrate. 300 Mulberry st. Telephone, 6213 Spring.  
Municipal Term—Room 500, Municipal Building, Manhattan.  
First District—Criminal Courts Building.  
Second District—125 Sixth ave.  
Third District—2d ave. and 1st st.  
Fourth District—151 E. 57th st.  
Fifth District—121st st. and Sylvan pl.  
Sixth District—162d st. and Washington ave.  
Seventh District—314 W. 54th st.  
Eighth District—1014 E. 181st st., Bronx.  
Ninth District (Night Court for Females)—125 Sixth ave.  
Tenth District (Night Court for Males)—151 E. 57th st.  
Eleventh District (Domestic Relations)—151 E. 57th st.  
Thirteenth District (Domestic Relations)—1014 E. 181st st., Bronx.  
Office of the Chief Probation Officer, 300 Mulberry st. Telephone, 8713 Spring.

*Borough of Brooklyn.*  
Office of Deputy Chief Clerk, Wm. F. Delaney, 44 Court st. Telephone, 7411 Main.  
First District—318 Adams st.  
Second District—Court and Butler sts.  
Fifth District—261 Bedford ave.  
Sixth District—495 Gates ave.  
Seventh District—31 Snider ave., Flatbush.  
Eighth District—W. 8th st., Coney Island.  
Ninth District—5th ave. and 29th st.  
Tenth District—133 New Jersey ave.  
Domestic Relations—Myrtle and Vanderbilt aves.

*Borough of Queens.*  
First District—St. Mary's Lyceum, L. I. City.  
Second District—Town Hall, Flushing.  
Third District—Central ave., Far Rockaway.  
Fourth District—Town Hall, Jamaica.

*Borough of Richmond.*  
First District—Lafayette ave., New Brighton.  
Second District—Village Hall, Stapleton.  
All courts open daily from 9 a. m. to 4 p. m., except on Saturdays, Sundays and legal holidays, when only morning sessions are held.

**COURT OF GENERAL SESSIONS.**  
Criminal Court Buildings. Court opens at 10.30 a. m. Clerk's office open from 9 a. m. to 4 p. m., and on Saturdays until 12 noon.  
Edward R. Carroll, Clerk.

**MUNICIPAL COURTS.**  
The Clerks' offices are open from 9 a. m. to 4 p. m.; Saturday, to 12 noon.  
Board of Justices—James J. Devlin, Secretary.  
264 Madison st., Manhattan. Telephone, 2596 Orchard.

*Borough of Manhattan.*  
First District—146 Grand st. Telephone, 9611 Spring. Additional part is held at the southwest corner of 6th ave. and 10th st. Telephone, 2513 Chelsea.  
Second District—264-266 Madison st. Telephone, 4300 Orchard.  
Third District—314 W. 54th st. Telephone, 5450 Columbus.  
Fourth District—207 E. 32d st. Telephone, 4358 Murray Hill.  
Fifth District—2565 Broadway. Telephone, 4006 Riverside.  
Sixth District—155 E. 88th st. Telephone, 4343 Lenox.  
Seventh District—70 Manhattan st. Telephone, 6334 Morningside.  
Eighth District—121st st. and Sylvan pl. Telephone, 3950 Harlem.  
Ninth District—Madison ave. and 59th st. Telephone, 3873 Plaza.

*Borough of The Bronx.*  
First District—Town Hall, 1400 Williamsbridge rd., Westchester. Telephone, 457 Westchester.  
Second District—Washington ave. and 162d st. Telephone, 3042 Melrose.

*Borough of Brooklyn.*  
First District—State and Court sts. Telephone, 7091 Main.  
Second District—495 Gates ave. Telephone, 598 Bedford.  
Third District—6 Lee ave. Telephone, 556 Williamsburg.  
Fourth District—14 Howard ave. Telephone, 4323 Bushwick.  
Fifth District—5220 Third ave. Telephone, 3907 Sunset.  
Sixth District—236 Duffield st. Telephone, 6166 Main.  
Seventh District—31 Pennsylvania ave. Telephone, 904 East New York.

*Borough of Queens.*  
First District, 115 Fifth st., L. I. City. Telephone, 1420 Hunters Point.  
Second District—Broadway and Court st., Elmhurst. Telephone, 87 Newtown.  
Third District—1908 Myrtle ave., Glendale. Telephone, 2352 Bushwick.  
Fourth District—Town Hall, Jamaica. Telephone, 1654 Jamaica.

*Borough of Richmond.*  
First District—Lafayette ave. and 2d st., New Brighton. Telephone, 503 Tompkinsville.  
Second District—Village Hall, Stapleton. Telephone, 313 Tompkinsville.

**COURT OF SPECIAL SESSIONS.**

Court opens at 10 a. m.  
Part I, Criminal Court Building, Manhattan. Telephone, 3983 Franklin.  
Part II, 171 Atlantic ave., Brooklyn. Telephone, Main 4280.  
Part III, Town Hall, Jamaica. Held on Tuesday of each week. Telephone, 2620 Jamaica.  
Part IV, Borough Hall, St. George. Held on Wednesday of each week. Telephone, 324 Tompkinsville.  
Part V, Bergen Building, Tremont and Arthur aves., Bronx. Held on Thursday of each week. Telephone, 6056 Tremont.  
Frank W. Smith, Chief Clerk.

**CHILDREN'S COURT.**

Adolphus Ragan, Chief Clerk, 137 E. 22nd st. Telephone, 3611 Gramercy.  
Bernard J. Fagan, Acting Chief Probation Officer, 137 E. 22nd st. Telephone, 3611 Gramercy.  
Parts I and II, (Manhattan), 137 E. 22nd st. Telephone, 3611 Gramercy. Dennis A. Lambert, Clerk.

Part III, (Brooklyn), 102 Court st. Telephone, 8611 Main. Wm. C. McKee, Clerk.  
Part IV, (Bronx), 355 E. 137th St. Court held on Monday, Thursday and Saturday of each week. Telephone, 9092 Melrose. Michael Murray, Clerk.

Part V, (Queens), 19 Flushing ave., Jamaica. Court held on Tuesday and Friday of each week. Telephone, 2624 Jamaica. Sydney Ollendorf, Clerk.  
Part VI, (Richmond), 14 Richmond Terrace, St. George. Court held on Wednesday of each week. Telephone, 2190 Tompkinsville. Wm. J. Browne, Clerk.

**SUPREME COURT—APPELLATE DIVISION.**  
*First Judicial Department.*  
Madison ave., corner 25th st. Court open from 2 p. m. until 6 p. m. Friday, Motion Day. Court opens at 10.30 a. m. Motions called at 10 a. m. Orders called at 10.30 a. m. Telephone, 3840 Madison Square.  
Alfred Wagstaff, Clerk.

*Second Judicial Department.*  
Borough Hall, Brooklyn. Court meets from 2 p. m. to 5 p. m., excepting that on Fridays Court opens at 10 o'clock a. m. Clerk's office open 9 a. m. Telephone, 1392 Main.  
John B. Byrne, Clerk.

**SUPREME COURT—APPELLATE TERM.**

503 Fulton st., Brooklyn. Court meets 10 a. m. Clerk's office opens 9 a. m. Telephone, 7452 Main.

Joseph H. De Bragga, Clerk.

**SUPREME COURT—CRIMINAL DIVISION.**

Criminal Court Building. Court opens at 10.30 a. m. Clerk's office open from 9 a. m. to 4 p. m.; Saturday, to 12 noon. Telephone, 6064 Franklin.  
William J. Schneider, Clerk.

**SUPREME COURT—FIRST DEPARTMENT.**

Court House. Court open from 10.15 a. m. to 4 p. m. Telephone, 4580 Cortlandt.

**SUPREME COURT—SECOND DEPARTMENT.**

*Kings County.*  
Joralemon and Fulton sts. Clerk's office hours, 9 a. m. to 5 p. m. Seven jury trial parts. Special Term for trials. Special Term for motions. Special Term (ex-parte business). Court opens at 10 a. m. Naturalization Bureau, Hall of Records, Telephone, 5460 Main.  
James F. McGee, General Clerk.

**Queens County.**

County Court House, L. I. City. Court opens at 10 a. m. Trial and Special Term for motions and ex-parte business each month, except July, August and the first two weeks in September, in Part I. Trial Term, Part 2, February, April, June, last two weeks in September, and November. Special Term for Trials, January, April, June and October.

Clerk's Office open 9 a. m. to 5 p. m. Saturdays until 12 noon from October to June. July, August and September until 2 p. m. Telephone, 3896 Hunters Point.  
Thomas B. Seaman, Special Deputy Clerk in Charge.

**Richmond County.**

Trial Term held at County Court House, Richmond. Special Term for trials held at Court room, Borough Hall, St. George. Special Term for motions held at Court House, Borough Hall, St. George.

C. Livingston Postwick, County Clerk.

**DEPARTMENT OF BRIDGES.****Proposals.**

SEALED BIDS OR ESTIMATES WILL BE received by Department of Bridges at Room 1230, Municipal Building, Manhattan, until 12 noon, on

**TUESDAY, MAY 16, 1916.**

**FOR FURNISHING AND DELIVERING CRESOTED WOOD BLOCKS.**

The time for the performance of the contract is on or before Aug. 31, 1916.

The amount of security required is thirty (30) per cent. of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per thousand or other designated unit, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read and awarded, if made, made to the lowest bidder on the class, as stated in the schedules.

Bids must be submitted in duplicate, each in a separate envelope. No bid will be accepted unless this provision is complied with.

Blank forms and further information may be obtained at Room 1230, Municipal Building, Manhattan.

DEPT. OF BRIDGES, F. L. H. KRACKE, Commissioner. m4,16  
See General Instructions to Bidders on last page, last column, of the "City Record," except for the address of the office for receiving and opening bids.

**BOROUGH OF QUEENS.****Proposals.**

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Queens at 3d floor, Borough Hall, 5th st. and Jackson ave., L. I. City, until 11 a. m. on

**THURSDAY, MAY 18, 1916.**

**NO. 1. FOR FURNISHING AND DELIVERING, AS DIRECTED, EIGHTY (80) TONS OF HYDRATED LIME TO THE BUREAU OF SEWERS IN THE BOROUGH OF QUEENS.**

**NO. 2. FOR FURNISHING AND DELIVERING, AS DIRECTED, TWO HUNDRED (200) TONS LIME TO THE BUREAU OF SEWERS IN THE BOROUGH OF QUEENS.**

The time allowed for the completion of this contract is during the year 1916, as directed by the President of the Borough of Queens.

The amount of security for the performance of the contract shall be thirty per cent. (30%) of the total amount of the contract as awarded.

The bidder will state the price per ton for each item on which he desires to bid, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read and the awards, if made, will be to the lowest bidder on each item.

Bids must be submitted in duplicate, each in a separate envelope. No bids will be accepted unless this provision is complied with.

No bid will be considered unless accompanied by a deposit in an amount not less than one and one-half per cent. (1½%) of the amount of the bid.

Blank forms of bids or estimates upon which bids must be made can be obtained upon application therefor.

Specifications may be seen and other information obtained at the said office.  
Dated May 8, 1916.

m8,18 MAURICE E. CONNOLLY, President.

See General Instructions to Bidders on last page, last column, of the "City Record."

**SEALED BIDS OR ESTIMATES WILL BE**

received by the President of the Borough of Queens at his office, 3d floor, Borough Hall, 5th st. and Jackson ave., L. I. City, until 11 a. m., on

**THURSDAY, MAY 18, 1916.**

**CONTRACT PURSUANT TO SECTION 444 OF THE GREATER NEW YORK CHARTER FOR THE RECEPTION, TRANSPORTATION AND FINAL DISPOSITION OF GARBAGE, RUBBISH, ASHES AND STREET SWEEPINGS IN A PORTION OF THE FIFTH WARD OF THE BOROUGH OF QUEENS, CITY OF NEW YORK, DURING THE MONTHS OF MAY, JUNE, JULY, AUGUST, SEPTEMBER AND OCTOBER, 1916, AND FURNISHING AND OPERATING THE NECESSARY DUMPS, SCOWS, TUGS, TOOLS, APPLIANCES AND LABOR THEREFOR.**

The amount of security required will be Forty-five Hundred Dollars (\$4,500).

Bidder will state a lump sum for the above contract, as the contract is entire and for a complete job.

Blank forms and further information may be obtained at the office of the President of the Borough of Queens.

Dated, May 8, 1916.

m8,18 MAURICE E. CONNOLLY, President.

See General Instructions to Bidders on last page, last column, of the "City Record."

**BELLEVUE AND ALLIED HOSPITALS, DEPARTMENT OF PUBLIC CHARITIES, DEPARTMENT OF CORRECTION, DEPARTMENT OF DOCK AND FERRIES.****Proposals.**

SEALED BIDS OR ESTIMATES WILL BE received by Bellevue and Allied Hospitals, Department of Public Charities, Department of Correction, Department of Dock and Ferries, at Room 1230, Municipal Building, Manhattan, until 12 noon on

**TUESDAY, MAY 16, 1916.**

**FOR FURNISHING AND DELIVERING COAL.**

The time for the performance of the contract is on or before May 31, 1916, as stated in the schedules.

The amount of security required is thirty (30) per cent. of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per gross ton, or other designated unit, 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 on each item, as stated in the specifications.

Bids must be submitted in duplicate, each in a separate envelope. No bid will be accepted unless this provision is complied with.

Blank forms and further information may be obtained at Room 1230, Municipal Building, Manhattan.

BOARD OF TRUSTEES, BELLEVUE AND ALLIED HOSPITALS, JOHN W. BRANNAN, M. D., President.

DEPARTMENT OF CORRECTION, BUREAU G. LEWIS, Commissioner.

DEPARTMENT OF DOCKS AND FERRIES, R. A. C. SMITH, Commissioner.

DEPARTMENT OF PUBLIC CHARITIES, JOHN A. KINGSBURY, Commissioner. m4,16

See General Instructions to Bidders on last page, last column, of the "City Record," except for the address of the office for receiving and opening bids.

**DEPARTMENT OF FINANCE.**

**Corporation Sales of Buildings and Appurtenances Thereon on City Real Estate by Sealed Bids.**

AT THE REQUEST OF THE PRESIDENT of the Borough of Queens, 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 by sealed bids certain encroachments standing upon property owned by The City of New York, acquired by it for street opening purposes in the

**Borough of Queens.**

BEING the buildings, parts of buildings, etc., standing within the lines of 3rd st., from Groat ave. to Greenpoint ave., and 4th st., from Groat ave. to Skillman ave., in the Borough of Queens, which are more particularly described on a certain map on file in the office of the Collector of City Revenue, Department of Finance, Room 368, Municipal Building, Borough of Manhattan.

PURSUANT to a resolution of the Commissioners of the Sinking Fund adopted at a meeting held May 4, 1916, the sale by sealed bids, at the upset or minimum prices named in the description of each parcel, of the above described buildings and appurtenances thereto will be held by direction of the Comptroller on

**FRIDAY, MAY 26, 1916.**

at 11 a. m., in lots and parcels, and in manner and form and at upset prices as follows:

**PARCEL NO. 6.**—Part of one-story frame bowling alley on the west side of 4th st., 200 feet north of Groat ave. Cut 33.71 feet on south side by 40.11 feet on north side. Upset price, \$5.

**PARCEL NO. 7.**—Part of shed 200 feet north of Parcel No. 6. Cut 4.03 feet on south side by 10.97 feet on east side. Upset price, \$2.

**PARCEL NO. 9.**—Rear part of two and one-half story frame house, 19 Greenpoint ave. Cut 15.76 feet on east side by 4.38 feet on rear. Upset price, \$5.

**PARCEL NO. 10.**—Part of two and one-half story frame house, 17 Greenpoint ave. Cut 15 feet on front by 15 feet on west side. Upset price, \$200.

**PARCEL NO. 12.**—Two-story frame house, 15 Greenpoint ave. Upset price, \$250.

**PARCEL NO. 14.**—Part of shed east of Parcel No. 12. Cut 5.08 feet on front by 13.21 feet on west side. Upset price, \$2.

**PARCEL NO. 24.**—Two-story frame barn and part of porch of two-story frame house on the west side of 3rd st., 300 feet north of Groat ave. Upset price, \$25.

**PARCEL NO. 25.**—Part of Dance Pavilion north of Parcel No. 24. Cut 46 feet on south side by 61 feet on the north side. Upset price, \$100.

**PARCEL NO. 26.**—Part of two-story frame house and one-story stable, 41 Greenpoint ave. Cut house 18.07 feet on front by 5.14 feet on rear of stable. Upset price, \$50.

**PARCEL NO. 27.**—Two-story frame house, 39 Greenpoint ave. Upset price, \$100.

**PARCEL NO. 28.**—Part of two-story frame house, 35 Greenpoint ave. Cut 7.49 feet on front by 21 feet on west side. Cut rear part 3.5 feet on front by 9 feet on west side. Cut 4.5 feet on front by 1 foot on rear. Upset price, \$5.

Sealed bids (blank forms of which may be obtained upon application) will be received by the Comptroller at the office of the Collector of City Revenue, Room 368, Municipal Building, Borough of Manhattan, until 11 a. m. on the 26th day of May, 1916, and then publicly opened for the sale for removal of the above-described buildings and appurtenances thereto, and the award will be made to the highest bidder within twenty-four hours, or as soon as possible thereafter.

Each parcel must be bid for separately and will be sold in its entirety, as described in above advertisement.

Each and every bid must be accompanied by a deposit of cash or certified check in a sum equal to 25 per cent. of the amount of the bid, except that a minimum deposit of \$50 will be required with all bids, and that a deposit of \$500 will be sufficient to entitle bidders to bid on any or all of the buildings.

Deposits of unsuccessful bidders will be returned within twenty-four hours after successful bidders have paid purchase price in full and given security, and those of successful bidders may be declared forfeited to The City of New York by the Comptroller upon the failure of the successful bidder to further comply with the requirements of the terms and conditions of the sale as set forth hereinafter.

Successful bidders will be required to pay the purchase money and deposit the required security within twenty-four hours of the receipt of notification of the acceptance of their bids.

The Comptroller reserves the right to reject any and all bids and to waive any defects or informalities in any bid should it be deemed in the interest of The City of New York to do so.

All bids must state clearly (1) the number or



description of the building or buildings bid for, (2) the amount of the bid, (3) the full name and address of the bidder.

All bids must be inclosed in properly sealed envelopes, marked "Proposals to be opened May 26, 1916," and must be delivered, or mailed in time for their delivery, prior to 11 a. m. of that date to the "Collector of City Revenue, Room 368, Municipal Building, New York City," from whom any further particulars regarding the buildings to be disposed of may be obtained.

**THE BUILDINGS WILL BE SOLD FOR IMMEDIATE REMOVAL ONLY, SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE LAST PAGE OF THIS ISSUE OF THE "CITY RECORD."**

WM. A. PRENDERGAST, Comptroller, City of New York, Department of Finance, Comptroller's Office, May 8, 1916. m10,26

#### Sales of Tax Liens.

**Notice of Continuation of Manhattan Tax Sale.**

**THE SALE OF THE LIENS FOR UNPAID taxes, assessments and water rents for the Borough of Manhattan as to the liens remaining unsold at the termination of the sale of Aug. 26, Oct. 7, Nov. 18, 1915; Jan. 6, Feb. 17, and April 13, 1916, has been continued to**

**THURSDAY, JULY 13, 1916.**

At 2 p. m. pursuant to Section 1028 of the Greater New York Charter, and will be continued at that time on the fifth floor of the Municipal Building (room 512), Manhattan, City of New York.

DANIEL MOYNAHAN, Collector of Assessments and Arrears.

a14,20,27,m11,18,25,j1,8,15,22,29,jy6,13

**Corporation Sales by Sealed Bids of the Lease of Certain City Real Estate.**

**UPON THE AUTHORIZATION OF THE Commissioners of the Sinking Fund, and pursuant to a resolution adopted by them at a meeting held May 4, 1916, the Comptroller of The City of New York will sell by sealed bids on**

**THURSDAY, MAY 25, 1916,**

at 12 o'clock noon, in Room 368, Municipal Building, Borough of Manhattan, the lease of premises bounded and described as follows:

All that certain piece or parcel of land situated at Massapequa in the town of Oyster Bay, County of Nassau, State of New York, and known as part of Parcels 1 and 5, and all of Parcels 3 and 4, on Sheet 41 of "Atlas of Lands Used for Water Supply Purposes, on Long Island," on file in the office of the Commissioner of Water Supply, Gas and Electricity, and more fully described as follows:

Beginning at a monument located at the southeast corner of the Massapequa Lake lands of The City of New York, said corner being formed by the intersection of the easterly line of said Massapequa lands of The City of New York and the Merrick road, running thence westerly along the northerly line of said Merrick Road, north 80° 24' west, 1,119.3 feet to a point; thence northerly along the westerly boundary of the lands of The City of New York the following six courses and distances: North 6° 10' east, 1,255.8 feet; north 19° 57' 30" east, 314.1 feet; north 36° 19' 30" east, 210 feet; north 14° 16' east, 463 feet; north 18° 06' east, 957.7 feet; north 70° 55' east, 156 feet, to a point on a monument; thence north 29° 49' east, about 175 feet, more or less, to a point 300 feet southerly, measured at right angles from the prolongation of the southerly line of the Long Island Railroad right of way; thence easterly parallel to the Long Island Railroad right of way, south 87° 06' east, 1,600 feet to the easterly line of lands of The City of New York, said point being located 300 feet southerly, measured at right angles from the above mentioned southerly property line of the Long Island Railroad right of way; thence south 40° 20' 30" west, about 275 feet, more or less, to a point on a monument; thence southerly along the easterly boundary of the lands of The City of New York, the following ten courses and distances: South 1° 04' west, 368.8 feet; south 30° 32' west, 746 feet; south 16° 05' west, 398.7 feet; south 20° 35' 30" west, 369.5 feet; south 0° 01' west, 335.8 feet; south 32° 50' west, 105.4 feet; south 80° 03' west, 123.5 feet; south 52° 42' 30" west, 271.4 feet; south 18° 19' 30" west, 271.8 feet; south 8° 52' 30" west, 156 feet; south 27° 14' 30" west, 445.8 feet, to the point or place of beginning, containing within said bounds 121.295 acres, more or less, excepting therefrom the lower Massapequa Lake, containing 42.022 acres, making a total of 79.273 acres, also.

All that certain piece or parcel of land situated at Massapequa, in the Town of Oyster Bay, County of Nassau, State of New York, shown on Sheets Nos. 41, 42 and 43 of "Atlas of Lands Used for Water Supply Purposes on Long Island," more fully described as follows:

Beginning at Monument No. 75 on the northerly property line of the Brooklyn Conduit lands at Massapequa, Long Island; running thence northerly along the easterly property line of lands of The City of New York the following five courses and distances: North 32° 19' east, 1,335.5 feet; north 55° 49' 30" east, 633.8 feet; north 35° 31' east, 3,005.8 feet; north 27° 16' 30" east, 3,115.4 feet; north 8° 35' east, 449.6 feet; thence westerly the following two courses and distances: North 39° 58' 30" west, 1,010 feet; north 78° 27' west, 565.1 feet, to a monument; running thence north 39° 18' 30" east, 266.5 feet, to a monument; thence easterly the following two courses and distances: South 76° 27' 30" east, 400 feet; south 54° 52' east, 1,035.9 feet; running thence north 41° 18' 30" east, 229 feet, to a monument; running thence northerly the following ten courses and distances: North 20° 40' 30" east, 358.3 feet; north 3° 43' 30" east, 921.6 feet; north 33° 42' west, 475.2 feet; north 19° 14' 30" east, 480.7 feet; north 38° 36' 30" west, 354.9 feet; north 15° 33' east, 462 feet; north 2° 33' east, 1,020.1 feet; north 11° 54' 30" west, 1,533.6 feet; north 46° 42' west, 302.7 feet; north 0° 42' east, 927.2 feet, to a monument on the most northerly end of the property of lands of The City of New York; thence easterly along said northerly line south 83° 12' east, 225.7 feet, to a monument; thence southerly along the easterly line of lands of The City of New York the following six courses and distances: South 23° 14' 30" east, 773.8 feet; south 8° 18' 30" east, 703.7 feet; south 25° 10' 30" east, 590 feet; south 2° 21' west, 477.8 feet; south 20° 36' 30" east, 803.5 feet; south 47° 38' east, 542.1 feet, thence northerly along the line of lands of The City of New York the following seven courses and distances: North 41° 34' 30" east, 359 feet; north 7° 25' 30" east, 691.8 feet; north 23° 51' east, 501.9 feet; north 5° 13' east, 439.5 feet; north 32° 22' east, 409.5 feet; north 7° 58' west, 709.1 feet; north 35° 13' west, 494 feet, to a monument on the northerly line of lands of The City of New York; running thence northerly along the easterly line of said northerly line of lands of The City of New York; south 82° 44' east, 221.2 feet, to the center line of a brook; running thence southerly along the thread of said brook, as it winds and turns, about 5,400 feet to a point; running thence south 25° 0' east, 1,057.8 feet to easterly line of lands of The City of New York; running thence southerly along said easterly line of lands of The City of New York the following seven courses and distances: South 20° 45' 30" west, 206.7 feet; south 31° 16' 30" west, 1,367 feet; south 26° 56' 30" west, 996.7 feet; south 7° 41' 30" west, 408.7 feet; south 33° 52' west, 2,775.2 feet; south 37°

21° 30' west, 1,828.9 feet; south 25° 04' west, 1,363.8 feet, to a monument, No. 76, on the northerly line of lands of the Long Island Railroad; running thence westerly along the northerly line of said Long Island Railroad lands north 87° 06' west, 1,786.2 feet, to a point; running thence north 32° 07' east, 128.4 feet, to a point or place of beginning, containing within said bounds 422 acres, from which is excepted the area contained in the upper Massapequa Lake and the lands contained in the Conduit, consisting of about 42 acres, more or less.

—for a period of ten years from June 1, 1916, with the privilege of renewal for an additional term of ten years.

The Comptroller will receive sealed bids for the lease of the said premises for the said period at the minimum or upset rental of Seventeen Hundred and Fifty Dollars (\$1,750) per annum, payable quarterly in advance, and the rental for the renewal period to be ten per cent. (10%) per annum in advance of the annual rental of the first ten-year term, and the said sale will be made upon the following

#### TERMS AND CONDITIONS:

1.—The highest bidder will be required to pay twenty-five per cent. (25%) of the amount of the yearly rental bid at the time and place of sale; the amount so paid for one quarter's rent shall be forfeited if the successful bidder does not execute the lease when notified it is ready for execution.

2.—He will also be required to give an undertaking in the amount of the annual rental bid, with sufficient surety, to be approved by the Comptroller, for the payment of the rent quarterly in advance and for the performance of the terms and covenants of the lease.

3.—No person shall be received as lessee or surety who is a delinquent on any former lease from the corporation, and no bid shall be accepted from any person who is in arrears to the corporation upon debt or contract, or who is a defaulter as surety or otherwise upon any obligation to the City, as provided by law.

4.—The lease will be in the usual form of leases of like property and will contain, in addition to other terms, covenants and conditions, as follows:

1.—The lease to be subject to the reservations contained in a certain deed from William F. Jones to the City of New York, dated Oct. 29, 1885, of the premises to be demised.

2.—No buildings of any sort shall be erected upon, and any plan of development to the premises to be demised shall be submitted to the Department of Water Supply, Gas and Electricity for their approval, and the work shall be done under the supervision of said Department.

3.—The City reserves the right to enter into or upon the premises at all times; the lessee shall maintain the premises to be demised in a proper sanitary condition to the satisfaction of the Department of Water Supply, Gas and Electricity at its own cost and expense.

4.—No sand or gravel shall be removed from the premises to be demised except with the consent of the Department of Water Supply, Gas and Electricity.

5.—It is distinctly understood that the City shall not be held liable for damages to person or property from any use to which the premises to be demised is made by the lessee.

6.—The lessee shall not disturb or remove any pipes, pipe lines or wells from the premises to be demised without the consent of the Department of Water Supply, Gas and Electricity.

7.—The lessee to pay taxes and assessments upon the premises to be demised during the term of the lease.

The Comptroller shall have the right to reject any or all bids if deemed to be to the interest of the City of New York.

EDMUND D. FISHER, Deputy and Acting Comptroller, City of New York, Department of Finance, Comptroller's Office, May 6, 1916. m9,25

**UPON THE AUTHORIZATION OF THE Commissioners of the Sinking Fund, and pursuant to a resolution adopted by them at a meeting held March 30, 1916, the Comptroller of The City of New York will sell by sealed bids on**

**WEDNESDAY, MAY 17, 1916,**

at 12 o'clock noon, in Room 368, Municipal Building, Borough of Manhattan, the lease of the following described property belonging to the City of New York, situate, lying and being in the Borough of Richmond, City of New York, bounded and described as follows:

BEGINNING at a point distant 247 feet northerly of the established bulkhead line along the southerly side of South st. approach, Borough of Richmond, and 160 feet west of the established bulkhead line along the easterly side of St. George Ferry Terminal; running thence northerly along a line parallel with the last mentioned bulkhead line a distance of 115 feet, more or less; running thence westerly and along a line at right angles to last mentioned bulkhead line 100 feet; running thence southerly and at right angles to last mentioned line 115 feet, more or less, to a point 247 feet northerly of the established bulkhead line along the southerly side of South st. approach; running thence easterly and along a line distant 247 feet northerly of and parallel to the last mentioned bulkhead line a distance of 100 feet to the point or place of beginning;

—for a period of ten years from June 1, 1916, with the privilege of renewal for a further period of ten years at an increased rental of ten (10) per cent. per annum on the rental for the first period.

The Comptroller will receive sealed bids for the lease of the said premises for the said period at the minimum or upset rental of \$805 per annum, payable quarterly in advance, and the said sale will be made upon the following

#### TERMS AND CONDITIONS:

1.—The highest bidder will be required to pay twenty-five per cent. (25%) of the amount of the yearly rental at the time and place of sale; the amount so paid for one quarter's rent shall be forfeited if the successful bidder does not execute the lease when notified that it is ready for execution.

2.—He will also be required to give an undertaking in the amount of the annual rental bid with sufficient surety to be approved by the Comptroller for the payment of the rent quarterly in advance and for the performance of the terms and covenants of the lease.

3.—No person shall be received as lessee or surety who is a delinquent on any former lease from the corporation, and no bid shall be accepted from any person who is in arrears to the corporation upon debt or contract, or who is a defaulter as surety or otherwise upon any obligation to the City, as provided by law.

4.—The lease to be in the usual form of leases of like property, and will contain, in addition to other terms, covenants and conditions, as follows:

1.—The City reserves the right for itself, its agents or contractors to enter upon and use said premises, or any part thereof, for the purpose of carrying on any public improvement, or making examinations or doing work preparatory thereto, or for the purpose of making repairs, alterations or additions to the columns, supports, drains or drainage pipes and appurtenances, which are now or may hereafter be placed by the City or its agents or contractors upon the premises and for the repairs, maintenance, alterations or additions to the platform over the property leased.

And in any and all such cases the lessee shall at his own expense remove any and all structures erected under the provisions of the lease which may be required to be removed for the purpose of doing such work.

The persons or corporations using the surface of the platform over the property leased shall have the right of access at all times to the premises for the purpose of repairs or maintenance of said platform or altering, repairing or maintaining the railroad tracks, drains and drainage pipes and other appurtenances, and the lessee shall remove any and all structures erected under the provisions of the lease, which may be required to be removed, for the purpose of doing such work. The reasonable cost of such removal and replacement to be borne by the parties doing the work.

The lessee may construct an approach or right of way from the ferry entrance to the proposed street; adjacent to the rear wall of the ferry building, in order to provide access to the building, to be demised, as shown on a map prepared by the Department of Docks and Ferries, and on file in the office of said Department at Pier A, North River. The cost of such construction to be credited to the lessee as rent, to an amount not exceeding \$1,000; the work to be done under the supervision of the Department of Docks and Ferries. Said approach or right of way to be used by the lessee and its subtenants only as a means of access to the property to be leased. In all other respects the said right of way shall be maintained free and clear for use as a passageway for the City and its employees, and for other persons desiring ingress and egress over and across said right of way.

The lessee shall not in any event sell or dispose of or derive any revenue from any of the following articles or privileges upon the demised premises during the term of the lease or renewal thereof:

Automatic machines, books, bootblacking, Cent-a-drink fountains, cigars, confectionery, flowers, fruit, lunch counter and checking privilege, mineral water (bottled) and soda water; news bureau, newspapers, periodicals, telephone booths, tobacco, use of premises for any purposes in connection with wireless telegraphy, barber shop, handling of express matter, ice cream and soda water, Post Office, restaurant, telegraph office.

The lessee shall not erect or construct any building or buildings or other alterations or improvements upon the demised premises unless the plans thereof have first been approved by the Commissioner of Docks and Ferries.

The Comptroller shall have the right to reject any and all bids if deemed to be to the interest of the City of New York.

WM. A. PRENDERGAST, Comptroller, City of New York, Department of Finance, Comptroller's Office, April 29, 1916. m1,17

**UPON THE AUTHORIZATION OF THE Commissioners of the Sinking Fund, and pursuant to a resolution adopted by them at a meeting held April 20, 1916, the Comptroller of The City of New York will sell by sealed bids on**

**MONDAY, MAY 15, 1916,**

at 12 o'clock noon, in Room 368, Municipal Building, Borough of Manhattan, the lease of premises known as 160 E. 33rd st., Borough of Manhattan, City of New York, for a period of ten years from Sept. 1, 1916.

The Comptroller will receive sealed bids for the lease of the said premises for the said period at the minimum or upset rental of Six Hundred and Fifty Dollars (\$650) per annum, payable quarterly in advance, and the said sale will be made upon the following

#### TERMS AND CONDITIONS:

1.—The highest bidder will be required to pay twenty-five per cent. (25%) of the amount of the yearly rental at the time and place of sale; the amount so paid for one quarter's rent shall be forfeited if the successful bidder does not execute the lease when notified it is ready for execution.

2.—He will also be required to give an undertaking in the amount of the annual rental bid, with sufficient surety, to be approved by the Comptroller, for the payment of the rent quarterly in advance and for the performance of the terms and covenants of the lease.

3.—No person shall be received as lessee or surety who is a delinquent on any former lease from the corporation, and no bid shall be accepted from any person who is in arrears to the corporation upon debt or contract, or who is a defaulter as surety or otherwise upon any obligation to the City, as required by law.

The lease will be in the usual form of leases of like property and will contain, in addition to other terms, covenants and conditions, as follows:

First.—A clause providing that the lessee shall pay the usual rates for water, per meter measurements, and comply with the rules and regulations of the Department of Water Supply, Gas and Electricity.

Second.—A clause providing that the lessee shall not make any alterations or improvements on the property, except with the consent and approval of the Comptroller.

Third.—A clause providing that during the term of the lease the lessee shall keep the building in proper repair, both inside and outside, at his own cost and expense, and shall comply with all the laws and ordinances of The City of New York.

Fourth.—A clause providing that all repairs, alterations and improvements made on or to the property by the lessee during the period of the lease shall become the property of The City of New York at the expiration of said lease.

Fifth.—A clause providing that the lessee shall have possession of the premises immediately upon the execution of the lease without the necessity of paying rent until the date of the commencement of the lease, but he shall be liable for any damages which may occur in or to the premises to be demised from the date of possession.

The Comptroller shall have the right to reject any or all bids if deemed to be to the interest of the City of New York.

WM. A. PRENDERGAST, Comptroller, City of New York, Department of Finance, Comptroller's Office, April 27, 1916. a28,m15

#### Confirmation of Assessments.

#### NOTICES 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 BROOKLYN:**

**SECTION 4.**

**SEWER IN EASTERN PARKWAY,** south side, from Classon ave. to the Brighton Beach Railroad, and an outlet sewer in Classon ave., across Eastern Parkway, from the south side to the north side of said parkway. Area of assessment affects block 1185.

**SECTION 14.**

**SEWER IN PENNSYLVANIA AVE.,** from New Lots ave. to Hegeman ave., with a temporary connection at Hegeman ave. Area of assessment affects blocks 4298 and 4299.

**SECTION 15.**

**EAST 35TH ST.—SEWER** from Farragut rd. northerly to line of the Flatbush Water Works. Area of assessment affects blocks 4998 and 4999.

**SECTION 23.**

**EAST 27TH ST.—SEWER** from Avenue M to Kings Highway. Area of assessment affects blocks 7680 and 7681.

—that the above entitled assessments were confirmed by the Board of Assessors on May 2, 1916, and entered May 2, 1916, in the Record of Titles and Assessments kept in the Bureau for the Col-

lection 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 on or before July 1, 1916, which is sixty days after the date of said entry of the assessment, interest will be collected thereon at the rate of seven per centum per annum, to be calculated from ten days after the date of entry to the date of payment, as provided by Sections 159 and 1019 of the Greater New York Charter.

The above assessments are payable to the Collector of Assessments and Arrears at his office in the Offerman Building, 503 Fulton st., Brooklyn, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 m. noon. WILLIAM A. PRENDERGAST, Comptroller, Dated May 2, 1916. m5,16

**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 QUEENS:**

#### FIRST WARD.

**INLET BASINS** at the foot of WEBSTER AVE. on both northerly and southerly sides. Area of assessment affects blocks 47 to 51, inclusive.

**BORDEN AVE.—REGULATING AND GRADING, SIDEWALKS AND CROSSWALKS** from Van Alst ave. to Dutchkill st. Area of assessment affects blocks 69, 105 and 109.

#### SECOND WARD.

**TOLEDO ST.—SEWER** from Queens Boulevard to Corona ave., with temporary dry weather flow connections at Maurice ave., Horton st. and Ivy st. Area of assessment affects blocks 705, 922, 923, 932 to 946, 948, 951 to 962 and 980.

**SEWER IN GROVE ST.** from Seneca ave. to Fairview ave., and in FAIRVIEW AVE. from Linden st. to Ralph st. Area of assessment affects blocks 2485, 2488, 2489, 2492, 2522, 2523, 2526, 2529, 2532 and 2534.

#### FOURTH WARD.

**LIBERTY AVE.—SEWER** from Nebraska ave. to Van Wyck ave.; in NEBRASKA AVE., from Liberty ave. to Garden st.; in VAN WYCK AVE., from Liberty ave. to Atlantic ave.; in CHICHESTER AVE., from Maure ave. to Van Wyck ave.; in BEAUFORT AVE., from Maure ave. to Van Wyck ave.; and in JEROME AVE., from Maure ave. to Van Wyck ave. Area of assessment affects blocks 213, 214, 235, 236, 292, 293, 294, 295, 301, 508 to 522, 578 to 573, 649, 651, 653, 1018, 1019, 1020, 1034, 1056, 1060, 1066, 1067 and 1068.

—that the above assessment was confirmed by the Board of Assessors on May 2, 1916, and entered May 2, 1916, 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 on or before July 1, 1916, which is sixty days after the date of said entry of the assessments, interest will be collected thereon at the rate of seven per centum per annum, to be calculated from ten days after the date of said entry to the date of payment, as provided by Sections 159 and 1019 of the Greater New York Charter.

The above assessment is payable to the Collector of Assessments and Arrears at his office in the Municipal Building, Court House Square, L. I. City, Borough of Queens, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

WILLIAM A. PRENDERGAST, Comptroller, Dated, New York, May 2, 1916. m5,16

**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:**

#### SECTION 10.

**BRYANT AVE.—SEWER** from the end of the existing sewer north of E. 167th st. to the existing sewer at the intersection of E. 167th st. and Bryant ave. Area of assessment affects blocks 2751 and 2754.

**RECEIVING BASIN** on the southwest corner of LONGWOOD AVE. and TRUXTON ST. Area of assessment affects block 2736.

#### SECTION 11.

**AQUEDUCT AVE. (UNIVERSITY AVE.)—SEWER** on the west side, between W. 176th and 174th sts. Area of assessment affects blocks 2877 and 2878.

**E. 174TH STREET—PAVING THE ROADWAY AND SETTING CURB**, from the westerly side of Bryant ave. to Boone ave. Area of assessment affects blocks 2991, 2998, 3002, 3003, 3010, 3011, 3015 and 2997.

**PLYMPTON AVE.—SEWER** between Boscobel ave. and Featherbed Lane. Area of assessment affects blocks 2874 and 2875.

#### SECTION 13.

**SPENCER AVE.—SEWER**, between W. 261st st. and summit south of W. 261st st. Area of assessment affects block 3423.

#### SECTION 15.

**POPLAR ST.—SEWER** between Luring ave. and Roselle st. Area of assessment affects blocks 4069, 4070, 4078 and 4084.

—that the above assessments were confirmed by the Board of Assessors May 2, 1916, and entered May 2, 1916, 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 on or before July 1, 1916, which is sixty days after the date of said entry of the assessments, interest will be collected thereon at the rate of seven per centum per annum, to be calculated from ten days after the date of said entry to the date of payment, as provided by Sections 159 and 1019 of the Greater New York Charter.

The above assessments are payable to the Collector of Assessments and Arrears at his office in the Bergen Building, 4th floor, southeast corner of Arthur and Tremont aves., Borough of The Bronx, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

WILLIAM A. PRENDERGAST, Comptroller, Dated, New York, May 2, 1916. m5,16

**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:**

#### SECTION 1.

**BASIN** adjoining the southeast corner of FRONT ST. and JONES LANE. Area of assessment affects block 35.



from Ngle ave. to Sherman ave. Area of assessment affects block 2174.

BASIN adjoining the southwest corner of 161ST ST. and FORT WASHINGTON AVE. Area of assessment affects block 2136.

BASINS adjoining the northeast corner of W. 179TH ST. and HAVEN AVE. and the northwest corner of W. 179TH ST. and NORTH-ERN AVE. Area of assessment affects block 2177.

—that the above assessments were confirmed by the Board of Assessors on May 2, 1916, and entered May 2, 1916, 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 on or before July 1, 1916, which is sixty days after the date of said entry of the assessments, interest will be collected thereon at the rate of seven per centum per annum to be calculated from ten days after the date of said entry to the date of payment, as provided by Sections 159 and 1019 of the Greater New York Charter.

The above assessment is payable to the Collector of Assessments and Arrears at his office in the Municipal Building, north side, third floor, Borough of Manhattan, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

WILLIAM A. PRENDERGAST, Comptroller.  
Dated, New York, May 2, 1916. m5,16

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 RICHMOND:

FIRST WARD.  
FIRST AVE.—REGULATING, GRADING, ETC., from Jersey st. to Pine st. Area of assessment affects plot 6, blocks 1, 2 and 3.  
BELMONT PL.—REGULATING, GRADING AND PAVING THE ROADWAY AND SETTING CURB AND GUTTERS from Vine st. to Fort pl. Area of assessment affects plot 6, blocks 2, 3 and 4.

—that the above assessments were confirmed by the Board of Assessors on May 2, 1916, and entered May 2, 1916, 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 on or before July 1, 1916, which is sixty days after the date of said entry of the assessments, interest will be collected thereon at the rate of seven per centum per annum, to be calculated from ten days after the date of said entry to the date of payment, as provided by Sections 159 and 1019 of the Greater New York Charter.

The above assessment is payable to the Collector of Assessments and Arrears at his office in the Borough Hall, Rooms Nos. 15 and 19, St. George, New Brighton, Borough of Richmond, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

WILLIAM A. PRENDERGAST, Comptroller.  
Dated, New York, May 2, 1916. m5,16

IN PURSUANCE OF SECTION 986 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 THE BRONX:

TWENTY-THIRD WARD, SECTIONS 9 and 10.  
E. 161st st.—OPENING from Brook ave. to 3d ave. Confirmed March 13, 1916. Entered April 29, 1916. Area of assessment includes all those lands, tenements and hereditaments and premises situate 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 on the centre line of Brook ave., where it is intersected by the prolongation of a line midway between E. 157th st. and E. 158th st., as laid out between Brook ave. and Park ave., and running thence westwardly along the said line midway between E. 157th st. and E. 158th st., and the prolongation thereof, to a point midway between Sheridan ave. and Mott ave.; thence northwardly and parallel with Sheridan ave. to the intersection with a line which bisects the angle formed by the intersection of the prolongation of the westerly line of Sheridan ave. and the easterly line of Mott ave., as laid out between E. 158th st. and E. 161st st.; thence northwardly along the said bisecting line to the intersection with the prolongation of a line midway between Sheridan ave. and Mott ave., as laid out between E. 161st and E. 164th sts.; thence northwardly along the said line midway between Sheridan and Mott aves. to the intersection with a line distant 150 feet, northerly from and parallel with the northerly line of E. 163d st., as laid out between Mott ave. and Park ave., the said distance being measured at right angles to the line of E. 163d st.; thence eastwardly along the said line parallel with E. 163d st., and the prolongation thereof, to the intersection with a line always distant 100 feet easterly from and parallel with the easterly line of Boston rd.; thence southwardly parallel with and always distant 100 feet easterly from the easterly lines of Boston rd., 3d ave. and St. Ann's ave., respectively, to the intersection with the prolongation of a line midway between E. 157th st. and E. 158th st., as laid out between German pl. and St. Ann's ave.; thence westwardly along the said line midway between E. 157th st. and E. 158th st., and the prolongation thereof to the centre line of Brook ave.; thence northwardly along the centre line of Brook ave. to the point or place of beginning.

—that the above assessment was entered on the day hereinafore 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, and unless the amount assessed for benefit on any person or property shall be paid on or before June 28, 1916, which is sixty days after the date of said entry of the assessment, interest will be collected thereon at the rate of seven per centum per annum, to be calculated from ten days after the date of said entry to the date of payment, as provided by Sections 159 and 987 of the Greater New York Charter. The above assessment is payable to the Collector of Assessments and Arrears at his office in the Bergen Building, 4th floor, southeast corner of Arthur and Tremont aves., Bronx, between the hours of 9 a. m. and 2 p. m. and on Saturdays from 9 a. m. to 12 noon.

WILLIAM A. PRENDERGAST, Comptroller.  
Dated April 29, 1916. m2,12

#### Corporation Sale of Real Estate.

BRYAN L. KENNELLY, AUCTIONEER.

PUBLIC NOTICE IS HEREBY GIVEN THAT the Commissioners of the Sinking Fund of The City of New York, by virtue of the powers vested in them by law, will offer for sale at public auction on

TUESDAY, MAY 23, 1916,  
at 12 o'clock noon, at the New York Real Estate

Exchange, 14-16 Vesey st., Borough of Manhattan, City of New York, the following parcels of land, being part of the former bed of the Spuyten Duyvil and Port Morris Railroad, which was conveyed to the City by deed dated Feb. 13, 1907, more particularly bounded and described as follows:

Parcel No. 1.  
All that piece or parcel of land situate, lying and being in the Borough of The Bronx, City of New York, County of Bronx and State of New York, and shown on the map attached to the deed made Feb. 13, 1907, by the Spuyten Duyvil and Port Morris Railroad Company and the New York Central and Hudson River Railroad Company, lessee of the Spuyten Duyvil and Port Morris Railroad Company, a corporation organized and existing under the laws of the State of New York, to the City of New York, recorded in the office of the Register of the County of New York on the 17th day of April, 1907, in Section 13, Liber 8, page 385 of Conveyances, said map being dated April 20, 1904, and entitled: "Map showing the lands forming that part of the present route or roadway of the Spuyten Duyvil and Port Morris Railroad Company to be abandoned, all of the right, title and interest in and to which the New York Central and Hudson River Railroad Company and the Spuyten Duyvil and Port Morris Railroad Company is to be conveyed to the City of New York, pursuant to chapter 423 of the Laws of 1903," bounded and described as follows:

Beginning at the point of intersection of the northeasterly line of W. 230th st., as now legally opened, and the original centre line of the original location of the Spuyten Duyvil and Port Morris Railroad, as shown monumented on the above mentioned map and running thence northwesterly along the said northeasterly line of W. 230th st. to the westerly boundary line of the original right of way of said railroad and at a point 25 feet westerly at right angles from the original centre line of said railroad; running thence in a northerly direction along the westerly boundary line of the said right of way on a curve deflecting to the left, whose radius is 930 feet, to the easterly line of Broadway, as now legally opened; running thence northwesterly along the said easterly line of Broadway to its intersection with the easterly boundary line of the original right of way of said railroad; running thence in a southerly direction along the easterly boundary line of the said right of way and on a curve deflecting to the right, whose radius is 980 feet, to the northeasterly line of W. 230th st.; running thence northwesterly along the northeasterly line of W. 230th st., as now legally opened, to its intersection with the original centre line of said railroad at the point or place of beginning.

Being all that part of the former bed of the Spuyten Duyvil and Port Morris Railroad Company conveyed by Joseph H. Godwin and wife to said Spuyten Duyvil and Port Morris Railroad Company by deed dated the 7th day of October, 1869, and recorded in the office of the Register of Westchester County on the 22nd day of October, 1869, in Liber 731 of Deeds, at page 1, and further conveyed by the said above mentioned railroad company and the New York Central and Hudson River Railroad Company, its lessee, to the City of New York by deed dated Feb. 13, 1907, and recorded in the office of the Register of New York County on the 17th day of April, 1907, in Section 13, Liber 8 of Conveyances at page 385, which is located within the block of land designated upon the present tax map of the said City and Borough by the number 3266.

Parcel No. 2.  
And also all that piece or parcel of land situate, lying and being in the Borough of The Bronx, City of New York, County of Bronx and State of New York, and shown on the map attached to the above mentioned deed as aforesaid, bounded and described as follows:

Beginning at the point of intersection of the northwesterly line of Broadway, as now legally opened, and the original centre line of the original location of the Spuyten Duyvil and Port Morris Railroad, as shown on the above mentioned map and running thence northwesterly along the said northwesterly line of Broadway to the northeasterly boundary line of said right of way, running thence northwesterly along the northeasterly boundary of said right of way on a curve deflecting to the left, whose radius is 980 feet, to the southwesterly line of W. 231st st., as now legally opened, between Broadway and Kingsbridge ave.; running thence northwesterly along the said southwesterly line of W. 231st st. to the easterly line of Kingsbridge ave., as now legally opened; running thence southwesterly along the southeasterly line of Kingsbridge ave. to the southerly boundary line of the said right of way of the said railroad, as shown on the above mentioned map, and running thence southeasterly along the said southerly boundary line of said right of way on a straight line to the point of tangency opposite the Station 532+36.74 of said centre line of the said railroad, as shown on the map attached to the above mentioned deed as aforesaid; running thence southeasterly and along the southerly and westerly boundary line of said right of way, as shown on said map on a curve deflecting to the right, whose radius is 930 feet, to the northwesterly line of Broadway; running thence northwesterly along the said northwesterly line of Broadway to the centre line of said right of way at the point or place of beginning.

Being all that part of the former bed of the Spuyten Duyvil and Port Morris Railroad Company conveyed by Joseph H. Godwin and wife to said Spuyten Duyvil and Port Morris Railroad Company by deed dated the 7th day of October, 1869, and recorded in the office of the Register of Westchester County on the 22nd day of October, 1869, in Liber 731 of Deeds, at page 1, and further conveyed by the said above mentioned railroad company and the New York Central and Hudson River Railroad Company, its lessee, to the City of New York by deed dated Feb. 13, 1907, and recorded in the office of the Register of New York County on the 17th day of April, 1907, in Section 13, Liber 8 of Conveyances, at page 385, which is located within the block of land designated upon the present Tax Map of the said City and Borough by the Number 3404.

The minimum or upset price at which said property shall be sold is hereby fixed at the sum of Sixty-five Thousand Dollars (\$65,000), the sale to be made upon the following

TERMS AND CONDITIONS:  
The highest bidder will be required to pay ten per cent. (10%) of the amount of the bid, together with the auctioneer's fees, at the time of the sale, the balance to be paid upon the delivery of the deed, which shall be within sixty (60) days from the date of the sale.

The deed to be delivered shall be in the form of a bargain and sale deed without covenants. The premises to be sold subject to whatever restrictions are on record in regard to the same.

The Comptroller may at his option resell the property if the successful bidder shall fail to comply with the terms of the sale, and the person so failing to comply therewith will be held liable for any deficiency which may result from such resale.

The right is reserved to reject any and all bids. Maps of said real estate may be seen on application at the Department of Finance (Division of Real Estate), Room 733, Municipal Building, Borough of Manhattan.

By order of the Commissioners of the Sinking

Fund under resolution adopted at meeting of the Board held May 4, 1916.

WM. A. PRENDERGAST, Comptroller, City of New York.  
Department of Finance, Comptroller's Office, May 5, 1916. m6,23

#### Corporation Sale of the Lease of Certain Real Estate at Public Auction.

UPON THE AUTHORIZATION OF THE Commissioners of the Sinking Fund, and pursuant to a resolution adopted by them at a meeting held April 20, 1916, the Comptroller of the City of New York will sell at public auction on

WEDNESDAY, MAY 17, 1916,  
at 11 o'clock a. m., in Room 368, Municipal Building, Borough of Manhattan, the lease of premises known as Nos. 29-33 Lafayette st. and 63 Centre st., Borough of Manhattan, for a period of ten years from Aug. 1, 1916.

The minimum or upset rental at which such lease shall be sold is hereby fixed at the sum of Eight Thousand Five Hundred Dollars (\$8,500) per annum, payable quarterly in advance, for the first five years of such term; the rental per annum for the remainder of the term to be 30% over and above the amount bid. The sale to be made upon the following

TERMS AND CONDITIONS:  
The highest bidder will be required to pay twenty-five per cent. (25%) of the amount of the yearly rental at the time and place of sale; the amount so paid for one quarter's rent shall be forfeited if the successful bidder does not execute the lease when notified it is ready for execution.

He will also be required to give an undertaking in the amount of the annual rental bid, with sufficient surety to be approved by the Comptroller, for the payment of the rent quarterly in advance and for the performance of the covenants and terms of the lease.

No person shall be received as lessee or surety who is a delinquent on any former lease from the corporation, and no bid shall be accepted from any person who is in arrears to the corporation upon debt or contract, or who is a defaulter as surety or otherwise upon any obligation to the City, as provided by law.

The lease will be in the usual form of leases of like property and will contain in addition to other terms, covenants and conditions, as follows:

First—A clause providing that the lessee shall pay the usual rates for water per meter measurements, and comply with the rules and regulations of the Department of Water Supply, Gas and Electricity.

Second—A clause providing that the lessee shall not make any alterations or improvements on the property except with the consent and approval of the Comptroller.

Third—A clause providing that during the term of the lease the lessee shall keep the building in proper repair, both inside and outside, and shall comply with all the laws and ordinances of The City of New York.

Fourth—A clause providing that all repairs, alterations and improvements made on or to the property by the lessee during the period of the lease shall become the property of The City of New York at the expiration of the lease.

Fifth—A clause providing that the lessee shall have possession of that portion of the premises not occupied, immediately upon the execution of the lease, without the necessity of paying rent until the date of the commencement of the lease, but he shall be liable for any damages which may occur in or to the premises to be demised from the date of possession.

Sixth—A clause providing that the City may cancel the lease at the expiration of the first five years thereof, upon giving six months' notice in writing to the lessee in advance of its intention so to do, and a further clause whereby the City may cancel the lease at any time after the expiration of the first five years of the term upon giving the lessee six months' notice in writing in advance of its intention so to do.

The Comptroller shall have the right to reject any or all bids if deemed to be to the interest of The City of New York.

WM. A. PRENDERGAST, Comptroller, City of New York.  
Department of Finance, Comptroller's Office, April 29, 1916. m1,17

#### Sureties on Contracts.

UNTIL FURTHER NOTICE SURETY COMPANIES will be accepted as sufficient upon the following contracts to the amounts named: Supplies of Any Description, Including Gas and Electric.

One company on a bond up to \$50,000.

When such company is authorized to write that amount as per letter of Comptroller to the surety companies, dated Jan. 1, 1914.

Construction.

One company on a bond up to \$25,000. Including regulating, grading, paving, sewers, maintenance, dredging, construction of parks, parkways, docks, buildings, bridges, tunnels, aqueducts, repairs, heating, ventilating, plumbing, etc.

When such company is authorized to write that amount as per letter of Comptroller to the surety companies, dated Jan. 1, 1914.

Asphalt, Asphalt Block and Wood Block Paving.

Two companies will be required on any and every bond up to amount authorized by letter of Comptroller to the surety companies, dated Jan. 1, 1914.

Jan. 1, 1914.

WILLIAM A. PRENDERGAST, Comptroller.

#### Interest on City Bonds and Stock.

THE INTEREST DUE JUNE 1, 1916, ON REGISTERED and Coupon bonds and stock of The City of New York, and of the former corporations now included therein, will be paid on that day by the Comptroller at his office (Room 851), Municipal Building, Chambers and Centre sts., Manhattan.

The books for the transfer of bonds and stock on which interest is payable June 1, 1916, will be closed from May 15, 1916, to June 1, 1916.

WILLIAM A. PRENDERGAST, Comptroller, City of New York, Department of Finance, Comptroller's Office, May 1, 1916. m1,1

#### BOROUGH OF MANHATTAN.

##### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m., on

FRIDAY, MAY 19, 1916,  
NO. 1. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF CEDAR ST. FROM NASSAU ST. TO BROADWAY, TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—210 linear feet new 6-inch granite curbstone.

Item 4—10 linear feet old curb, redressed.

Item 5—10 square feet concrete sidewalk, Class A.

Item 6—20 linear feet granite headers.

Item 6a—10 linear feet temporary headerstone.

Item 7—150 cubic yards concrete.

Item 8—600 square yards sheet asphalt pavement.

Item 9—20 square yards sheet asphalt pavement in approaches.

Item 12—3 cubic yards brick masonry.

Item 13—1 water manhole head and cover, complete.

Item 14—110 linear feet platform flag cut to line.

Item 20—11,000 feet B. M. planking on concrete.

The time allowed for the full completion of the work will be ten (10) consecutive working days. The amount of security required will be Six Hundred Dollars (\$600) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

NO. 2. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF CLAREMONT AVE. FROM 116TH ST. TO 127TH ST. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—5,160 linear feet new 6-inch granite curbstone.

Item 3b—190 linear feet new 6-inch granite corner curbstone.

Item 4—10 linear feet old curb, redressed.

Item 5—50 square feet concrete sidewalk, Class A.

Item 6—90 linear feet granite headers.

Item 6a—10 linear feet temporary headerstone.

Item 7—2,740 cubic yards concrete.

Item 8—14,700 square yards sheet asphalt pavement.

Item 9—50 square yards sheet asphalt pavement in approaches.

Item 9a—100 square yards granite block pavement in approaches.

Item 10—17 sewer manhole heads and covers, complete.

Item 11—6 covers for sewer manholes.

Item 11a—6 rings for sewer manholes.

Item 12—3 cubic yards brick masonry.

Item 13—5 water manhole heads and covers, complete.

The time allowed for the full completion of the work will be forty (40) consecutive working days. The amount of security required will be Ten Thousand Dollars (\$10,000), and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

NO. 3. FOR REGULATING AND REPAVING WITH GRANITE BLOCK PAVEMENT ON A CONCRETE FOUNDATION THE ROADWAY OF PARK ROW FROM DUANE ST. TO CHATHAM SQUARE; CHATHAM SQUARE AND BOWERY FROM CHATHAM SQUARE TO GRAND ST., FROM CURB TO RAIL, TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—5,670 linear feet new 6-inch granite curbstone.

Item 3b—260 linear feet new 6-inch granite corner curbstone.

Item 4—10 linear feet old curb, redressed.

Item 5—100 square feet concrete sidewalk, Class A.

Item 6—10 linear feet granite headers.

Item 6a—10 linear feet temporary headerstone.

Item 7—2,570 cubic yards concrete outside of railroad area.

Item 8—13,700 square yards granite block pavement outside of railroad area.

Item 9—20 square yards wood block pavement in approaches.

Item 10—20 sewer manhole heads and covers, complete.

Item 11—7 covers for sewer manholes.

Item 11a—7 rings for sewer manholes.

Item 12—3 cubic yards brick masonry.

Item 13—14 water manhole heads and covers, complete.

Item 14—400 linear feet platform flag, cut to line.

Work in Railroad Area.

Item 7—280 cubic yards concrete.

Item 8a—1,670 square yards granite block pavement.

The time allowed for the full completion of the work will be sixty (60) consecutive working days.

The amount of security required will be Eighteen Thousand Dollars (\$18,000), and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

NO. 4. FOR REGULATING AND REPAVING WITH GRANITE BLOCK PAVEMENT ON A CONCRETE FOUNDATION THE ROADWAY OF HOUSTON ST. FROM BEDFORD ST. TO EAST HOUSE LINE OF SEVENTH AVE. EXTENSION, TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—1,010 linear feet new 5-inch bluestone curbstone.

Item 4—60 linear feet old curb, redressed.

Item 5—10 square feet concrete sidewalk, Class A.

Item 6—10 linear feet granite headers.

Item 6a—30 linear feet temporary headerstone.

Item 7—320 cubic yards concrete outside of railroad area.

Item 8—1,570 square yards granite block pavement outside of railroad area.

Item 10—3 sewer manhole heads and covers, complete.

Item 11—1 cover for sewer manhole.

Item 11a—1 ring for sewer manhole.

Item 12—3 cubic yards brick masonry.

Item 13—1 water manhole head and cover, complete.

Work in Railroad Area.

Item 7a—40 cubic yards concrete.

Item 8a—240 square yards granite block pavement.

The time allowed for the full completion of the work will be twenty-five (25) consecutive working days.

The amount of security required will be Two Thousand Dollars (\$2,000), and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

NO. 5. FOR REGULATING AND REPAVING WITH GRANITE BLOCK PAVEMENT ON A CONCRETE FOUNDATION THE ROADWAY OF ELEVENTH AVE. FROM 22ND ST. TO 27TH ST. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—1,860 linear feet new 6-inch granite curbstone.

Item 3b—190 linear feet new 6-inch granite corner curbstone.



Item 5—50 square feet concrete sidewalk, Class A.  
Item 6—10 linear feet granite headers.  
Item 6a—10 linear feet temporary headerstone.  
Item 7—1,220 cubic yards concrete outside of railroad area.  
Item 8—6,680 square yards granite block pavement outside of railroad area.  
Item 9—60 square yards sheet asphalt pavement in approaches.  
Item 10—9 sewer manhole heads and covers, complete.  
Item 11—3 covers for sewer manholes.  
Item 11a—3 rings for sewer manholes.  
Item 12—3 cubic yards brick masonry.  
Item 13—9 water manhole heads and covers, complete.

#### Work in Railroad Area.

Item 7a—130 cubic yards concrete.  
Item 8a—760 square yards granite block pavement.

The time allowed for the full completion of the work will be forty-five (45) consecutive working days.

The amount of security required will be Eight Thousand Dollars (\$8,000), and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 9, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

WEDNESDAY, MAY 17, 1916.

NO. 1. FOR THE ALTERATION AND IMPROVEMENT TO SEWER IN 151ST ST. BETWEEN THE HARLEM RIVER AND 7TH AVE.

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:

Item 1—56 linear feet of 9' 6" circular brick sewer, complete.  
Item 2—324 linear feet of 24", Class "A," cast iron sanitary outlet pipe, complete.  
Item 3—2 manholes on 9' 6" sewer, complete.  
Item 4—1 overflow box and reducer and appurtenances, complete.  
Item 5—5 cubic yards of brick masonry.  
Item 6—70 cubic yards of concrete, Class "B."  
Item 7—50 cubic yards of rubble masonry in mortar.  
Item 8—25 cubic yards of additional rip-rap, other than that shown on the drawings.  
Item 9—5 cubic yards of rock excavation, Class "A."  
Item 10—9,200 pounds of special 24-inch cast iron pipe, hand holes and curve lengths, complete.  
Item 11—1,000 feet B. M. of timber and planking for sheeting and bracing.  
Item 12—17,000 feet B. M. of timber and flooring in foundation.  
Item 13—40 linear feet of guard fence.  
Item 14—5,000 linear feet of piles in place.  
Item 15—100 linear feet of sheet piling.  
Item 16—100 linear feet of sheet piling.  
Item 17—100 linear feet of sheet piling.  
Item 18—100 linear feet of sheet piling.  
Item 19—100 linear feet of sheet piling.  
Item 20—100 linear feet of sheet piling.  
Item 21—100 linear feet of sheet piling.  
Item 22—100 linear feet of sheet piling.  
Item 23—100 linear feet of sheet piling.  
Item 24—100 linear feet of sheet piling.  
Item 25—100 linear feet of sheet piling.  
Item 26—100 linear feet of sheet piling.  
Item 27—100 linear feet of sheet piling.  
Item 28—100 linear feet of sheet piling.  
Item 29—100 linear feet of sheet piling.  
Item 30—100 linear feet of sheet piling.  
Item 31—100 linear feet of sheet piling.  
Item 32—100 linear feet of sheet piling.  
Item 33—100 linear feet of sheet piling.  
Item 34—100 linear feet of sheet piling.  
Item 35—100 linear feet of sheet piling.  
Item 36—100 linear feet of sheet piling.  
Item 37—100 linear feet of sheet piling.  
Item 38—100 linear feet of sheet piling.  
Item 39—100 linear feet of sheet piling.  
Item 40—100 linear feet of sheet piling.  
Item 41—100 linear feet of sheet piling.  
Item 42—100 linear feet of sheet piling.  
Item 43—100 linear feet of sheet piling.  
Item 44—100 linear feet of sheet piling.  
Item 45—100 linear feet of sheet piling.  
Item 46—100 linear feet of sheet piling.  
Item 47—100 linear feet of sheet piling.  
Item 48—100 linear feet of sheet piling.  
Item 49—100 linear feet of sheet piling.  
Item 50—100 linear feet of sheet piling.

The time allowed for the full completion of the work will be twenty (20) consecutive working days.

The amount of security required will be Seven Thousand Dollars (\$7,000), and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 9, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

WEDNESDAY, MAY 17, 1916.

NO. 2. FOR THE ALTERATION AND IMPROVEMENT TO SEWER IN PARK AVE. WEST SIDE, BETWEEN 81ST AND 82ND STS.

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:

Item 1—212 linear feet of 4' 0" x 2' 8" (Type "A") brick sewer, complete.  
Item 2—50 linear feet of 4' 0" x 2' 8" (Type "B") brick sewer, complete.  
Item 3—6 linear feet of 12" vitrified pipe culvert, complete.  
Item 4—12 spurs for house connections.  
Item 5—1 manhole, complete.  
Item 6—1 receiving basin (Type "B"), complete.  
Item 7—60 cubic yards of rock excavation (Class "A").  
Item 8—30 cubic yards of rock excavation (Class "B").  
Item 9—2 cubic yards of concrete (Class "A").  
Item 10—2 cubic yards of brick masonry.  
Item 11—5 cubic yards of extra earth excavation.  
Item 12—15,000 feet B. M. of timber and planking for bracing and sheeting.  
Item 13—100 linear feet of sheet piling.  
Item 14—100 linear feet of sheet piling.  
Item 15—100 linear feet of sheet piling.  
Item 16—100 linear feet of sheet piling.  
Item 17—100 linear feet of sheet piling.  
Item 18—100 linear feet of sheet piling.  
Item 19—100 linear feet of sheet piling.  
Item 20—100 linear feet of sheet piling.  
Item 21—100 linear feet of sheet piling.  
Item 22—100 linear feet of sheet piling.  
Item 23—100 linear feet of sheet piling.  
Item 24—100 linear feet of sheet piling.  
Item 25—100 linear feet of sheet piling.  
Item 26—100 linear feet of sheet piling.  
Item 27—100 linear feet of sheet piling.  
Item 28—100 linear feet of sheet piling.  
Item 29—100 linear feet of sheet piling.  
Item 30—100 linear feet of sheet piling.  
Item 31—100 linear feet of sheet piling.  
Item 32—100 linear feet of sheet piling.  
Item 33—100 linear feet of sheet piling.  
Item 34—100 linear feet of sheet piling.  
Item 35—100 linear feet of sheet piling.  
Item 36—100 linear feet of sheet piling.  
Item 37—100 linear feet of sheet piling.  
Item 38—100 linear feet of sheet piling.  
Item 39—100 linear feet of sheet piling.  
Item 40—100 linear feet of sheet piling.  
Item 41—100 linear feet of sheet piling.  
Item 42—100 linear feet of sheet piling.  
Item 43—100 linear feet of sheet piling.  
Item 44—100 linear feet of sheet piling.  
Item 45—100 linear feet of sheet piling.  
Item 46—100 linear feet of sheet piling.  
Item 47—100 linear feet of sheet piling.  
Item 48—100 linear feet of sheet piling.  
Item 49—100 linear feet of sheet piling.  
Item 50—100 linear feet of sheet piling.

The time allowed for the full completion of the work will be twenty (20) consecutive working days.

The amount of security required will be Three Thousand Dollars (\$3,000), and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 9, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

WEDNESDAY, MAY 17, 1916.

NO. 3. FOR THE CONSTRUCTION OF RECEIVING BASINS IN BRADHURST AVE. ADJACENT TO THE SOUTHEAST CORNERS OF 146TH, 147TH, 148TH, 149TH AND 150TH STS.

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:

Item 1—5 receiving basins (Type "A"), complete.  
Item 2—100 linear feet of basin connections, complete.  
Item 3—1 cubic yard of rock (Class "A"), excavated and removed.  
Item 4—5 cubic yards of rock (Class "B"), excavated and removed.  
Item 5—1 cubic yard of concrete (Class "A").  
Item 6—1 cubic yard of brick masonry.  
Item 7—2 cubic yards of extra earth excavation.  
Item 8—150 square feet of concrete sidewalk pavement laid.  
Item 9—30 square feet of flagstone sidewalk pavement redressed and relaid.  
Item 10—16 square feet of flagstone sidewalk pavement furnished and laid.  
Item 11—100 linear feet of sheet piling.  
Item 12—100 linear feet of sheet piling.  
Item 13—100 linear feet of sheet piling.  
Item 14—100 linear feet of sheet piling.  
Item 15—100 linear feet of sheet piling.  
Item 16—100 linear feet of sheet piling.  
Item 17—100 linear feet of sheet piling.  
Item 18—100 linear feet of sheet piling.  
Item 19—100 linear feet of sheet piling.  
Item 20—100 linear feet of sheet piling.  
Item 21—100 linear feet of sheet piling.  
Item 22—100 linear feet of sheet piling.  
Item 23—100 linear feet of sheet piling.  
Item 24—100 linear feet of sheet piling.  
Item 25—100 linear feet of sheet piling.  
Item 26—100 linear feet of sheet piling.  
Item 27—100 linear feet of sheet piling.  
Item 28—100 linear feet of sheet piling.  
Item 29—100 linear feet of sheet piling.  
Item 30—100 linear feet of sheet piling.  
Item 31—100 linear feet of sheet piling.  
Item 32—100 linear feet of sheet piling.  
Item 33—100 linear feet of sheet piling.  
Item 34—100 linear feet of sheet piling.  
Item 35—100 linear feet of sheet piling.  
Item 36—100 linear feet of sheet piling.  
Item 37—100 linear feet of sheet piling.  
Item 38—100 linear feet of sheet piling.  
Item 39—100 linear feet of sheet piling.  
Item 40—100 linear feet of sheet piling.  
Item 41—100 linear feet of sheet piling.  
Item 42—100 linear feet of sheet piling.  
Item 43—100 linear feet of sheet piling.  
Item 44—100 linear feet of sheet piling.  
Item 45—100 linear feet of sheet piling.  
Item 46—100 linear feet of sheet piling.  
Item 47—100 linear feet of sheet piling.  
Item 48—100 linear feet of sheet piling.  
Item 49—100 linear feet of sheet piling.  
Item 50—100 linear feet of sheet piling.

The time allowed for the full completion of the work will be twenty-five (25) consecutive working days.

The amount of security required will be Six Hundred (\$600) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 9, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

tent, as near as possible, of the work required is as follows:

Item 1—4 receiving basins, altered and improved (Method "A"), complete.  
Item 2—8 receiving basins, altered and improved (Method "B"), complete.  
Item 3—13 inlets (Type "C"), complete.  
Item 4—5 inlets (Type "C"), complete.  
Item 5—240 linear feet of 12" vitrified pipe culvert, complete.  
Item 6—2 cubic yards of rock (Class "B"), excavated and removed.  
Item 7—1 cubic yard of concrete (Class "A").  
Item 8—1 cubic yard of brick masonry.  
Item 9—5 cubic yards of extra earth excavation.

Item 10—240 linear feet of 6" granite curb (Class "A") set in concrete.  
Item 11—84 linear feet of 6" granite curb (Class "B") set in concrete.  
Item 12—24 linear feet of curb reset in concrete.

Item 13—200 square feet of flagstone sidewalk pavement, furnished and laid.  
Item 14—1,450 square feet of flagstone sidewalk pavement redressed and relaid.  
Item 15—1,650 square feet of concrete sidewalk laid.

Item 16—20 square yards of roadway pavement, all kinds, for which double deposit is required.  
Item 17—500 feet B. M. of timber and planking for bracing and sheeting.

The time allowed for constructing and completing the alteration and improvement of the basins will be twenty-five (25) consecutive working days.

The amount of security required will be Fifteen Hundred (\$1,500) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the drawings, form of specification and contract may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Sewers, Room 2103, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

TUESDAY, MAY 16, 1916.

NO. 4. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF 30TH ST. FROM 7TH AVE. TO 8TH AVE. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—950 linear feet new 5-inch bluestone curbstone.  
Item 3b—20 linear feet new 6-inch granite corner curbstone.  
Item 4—630 linear feet old curb, redressed.  
Item 5—10 square feet concrete sidewalk, Class A.  
Item 6—10 linear feet granite headers.  
Item 6a—10 linear feet temporary headerstone.  
Item 7—520 cubic yards concrete.  
Item 8—2,650 square yards sheet asphalt pavement.  
Item 9—10 square yards sheet asphalt pavement in approaches.  
Item 10—5 sewer manhole heads and covers complete.  
Item 11—1 cover for sewer manhole.  
Item 11a—1 ring for sewer manhole.  
Item 12—3 cubic yards brick masonry.  
Item 13—1 water manhole head and cover complete.

The time allowed for the full completion of the work will be twenty (20) consecutive working days.

The amount of security required will be Two Thousand Dollars (\$2,000), and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

TUESDAY, MAY 16, 1916.

NO. 5. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF 30TH ST. FROM 7TH AVE. TO 8TH AVE. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—1,520 linear feet new 5-inch bluestone curbstone.  
Item 3b—100 linear feet new 6-inch granite corner curbstone.  
Item 4—1,020 linear feet old curb, redressed.  
Item 5—10 square feet concrete sidewalk, Class A.  
Item 6—10 linear feet granite headers.  
Item 6a—10 linear feet temporary headerstone.  
Item 7—860 cubic yards concrete.  
Item 8—4,220 square yards sheet asphalt pavement.  
Item 9—140 square yards sheet asphalt pavement in approaches.  
Item 10—20 square yards granite block pavement in approaches.  
Item 11—7 sewer manhole heads and covers, complete.  
Item 11a—2 covers for sewer manholes.  
Item 11b—2 covers for sewer manholes.  
Item 12—3 cubic yards brick masonry.  
Item 13—2 water manhole heads and covers, complete.

The time allowed for the full completion of the work will be twenty-five (25) consecutive working days.

The amount of security required will be Three Thousand Dollars (\$3,000) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

TUESDAY, MAY 16, 1916.

NO. 6. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF 30TH ST. FROM 7TH AVE. TO 8TH AVE. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—2,380 linear feet new 6-inch granite curbstone.  
Item 3b—190 linear feet new 6-inch granite corner curbstone.  
Item 4—10 linear feet old curb, redressed.  
Item 5—50 square feet concrete sidewalk, Class A.  
Item 6—10 linear feet granite headers.  
Item 6a—10 linear feet temporary headerstone.  
Item 7—1,140 cubic yards concrete.  
Item 8—6,020 square yards sheet asphalt pavement.  
Item 9—60 square yards sheet asphalt pavement in approaches.  
Item 10—2 sewer manhole heads and covers, complete.  
Item 11—1 cover for sewer manhole.  
Item 11a—1 ring for sewer manhole.

The time allowed for the full completion of the work will be thirty-three (33) consecutive working days.

The amount of security required will be Five Thousand Dollars (\$5,000) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

Item 10—8 sewer manhole heads and covers complete.

Item 11—2 covers for sewer manholes.  
Item 11a—2 rings for sewer manholes.  
Item 12—3 cubic yards brick masonry.  
Item 13—4 water manhole heads and covers complete.

The time allowed for the full completion of the work will be thirty (30) consecutive working days.

The amount of security required will be Four Thousand Dollars (\$4,000) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

TUESDAY, MAY 16, 1916.

NO. 7. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF 30TH ST. FROM 7TH AVE. TO 8TH AVE. TOGETHER WITH ALL WORK INCIDENTAL THERETO.

The Engineer's estimate of the amount of work to be done is as follows:

Item 3—930 linear feet new 5-inch bluestone curbstone.  
Item 3b—60 linear feet new 6-inch granite corner curbstone.  
Item 4—200 linear feet old curb, redressed.  
Item 5—10 square feet concrete sidewalk, Class A.  
Item 6—10 linear feet granite headers.  
Item 6a—10 linear feet temporary headerstone.  
Item 7—340 cubic yards concrete.  
Item 8—1,660 square yards granite block pavement.  
Item 9—40 square yards sheet asphalt pavement in approaches.  
Item 10—4 sewer manhole heads and covers complete.  
Item 11—1 cover for sewer manhole.  
Item 11a—1 ring for sewer manhole.  
Item 12—3 cubic yards brick masonry.  
Item 13—3 water manhole heads and covers complete.

The time allowed for the full completion of the work will be twenty-three (23) consecutive working days.

The amount of security required will be Two Thousand Dollars (\$2,000) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 6, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

TUESDAY, MAY 16, 1916.

NO. 8. FOR REGULATING AND REPAVING WITH SHEET ASPHALT ON A CONCRETE FOUNDATION THE ROADWAY OF 30TH ST. FROM 7TH AVE. TO 8TH AVE. TOGETHER WITH ALL WORK INCIDENTAL THERETO.



Item 12—3 cubic yards brick masonry.  
The time allowed for the full completion of the work will be twelve (12) consecutive working days.

The amount of security required will be Seven Hundred and Fifty Dollars (\$750) and the amount of deposit accompanying the bid shall be five (5) per cent. of the amount of security.

The bidder must deposit with the Borough President, on or before the time of making his bid, samples and affidavit, or the letter in regard to samples and affidavit, as required by the specifications.

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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the plans and drawings may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Highways, Room 2124, Manhattan.

MARCUS M. MARKS, President.

Dated, May 5, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Manhattan at Room 2032, Municipal Building, Manhattan, until 2 p. m. on

FRIDAY, MAY 12, 1916.

NO. 1. FOR THE RECEIVING BASINS ALTERED AND IMPROVED ON E. 4TH ST., FROM BROADWAY TO SECOND AVE., WITH INLETS AND ALL WORK INCIDENTAL THERETO.

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:

- Item 1—1 receiving basin, altered and improved, Method "A," complete.
- Item 2—1 receiving basin, altered and improved, Method "B," complete.
- Item 3—2 inlets, Type "A," complete.
- Item 4—3 inlets, Type "B," complete.
- Item 5—1 inlet, Type "C," complete.
- Item 6—85 linear feet of 12" vitrified pipe culvert, complete.
- Item 7—1 cubic yard of concrete, Class "A."
- Item 8—1 cubic yard of brick masonry.
- Item 9—2 cubic yards of extra earth excavation.

Item 10—80 linear feet of 6" granite curb (Class "A"), set in concrete.

Item 11—44 linear feet of 6" granite curb (Class "B"), set in concrete.

Item 12—12 linear feet of curb reset in concrete.

Item 13—50 square feet of flagstone sidewalk pavement furnished and laid.

Item 14—600 square feet of flagstone sidewalk pavement redressed and relaid.

Item 15—450 square feet of concrete sidewalk pavement laid.

Item 16—20 square yards of roadway pavement, all kinds, for which double deposit is required.

Item 17—500 feet B. M. of timber and plank for bracing and sheeting.

The time allowed for constructing and completing the alterations and improvements to basins will be twenty (20) consecutive working days.

The amount of security required shall be Five Hundred (\$500) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

NO. 2. FOR THE RECEIVING BASINS ALTERED AND IMPROVED ON 25TH ST., FROM 8TH AVE. TO 10TH AVE., WITH INLETS AND ALL WORK INCIDENTAL THERETO.

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:

- Item 1—1 receiving basin, altered and improved, Method "A."
- Item 2—3 receiving basins, altered and improved, Method "B."
- Item 3—5 inlets, Type "B," complete.
- Item 4—2 inlets, Type "C," complete.
- Item 5—90 linear feet of 12" vitrified pipe culvert, complete.
- Item 6—2 cubic yards of rock, Class "A," excavated and removed.
- Item 7—2 cubic yards of rock, Class "B," excavated and removed.
- Item 8—1 cubic yard of concrete, Class "A."
- Item 9—2 cubic yards of extra earth excavation.

Item 10—1 cubic yard of brick masonry.

Item 11—80 linear feet of 6" granite curb (Class "A"), set in concrete.

Item 12—41 linear feet of 6" granite curb (Class "B"), set in concrete.

Item 13—12 linear feet of curb reset in concrete.

Item 14—100 square feet of flagstone sidewalk pavement, furnished and laid.

Item 15—1,200 square feet of flagstone sidewalk pavement redressed and relaid.

Item 16—30 square yards of roadway pavement, all kinds, for which double deposit is required.

Item 17—500 feet B. M. of timber and plank for bracing and sheeting.

The time allowed for constructing and completing the alteration to receiving basins and appurtenances will be twenty-five (25) consecutive working days.

The amount of security required will be Six Hundred (\$600) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

NO. 3. FOR THE RECEIVING BASINS ALTERED AND IMPROVED ON 120TH ST., FROM PARK AVE. TO 1ST AVE., WITH INLETS AND ALL WORK INCIDENTAL THERETO.

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:

- Item 1—3 receiving basins, altered and improved (Method "A"), complete.
- Item 2—7 receiving basins, altered and improved (Method "B"), complete.
- Item 3—10 inlets, Type "B," complete.
- Item 4—6 inlets, Type "C," complete.
- Item 5—200 linear feet of 12" vitrified pipe culvert, complete.
- Item 6—1 cubic yard of rock (Class "A"), excavated and removed.
- Item 7—1 cubic yard of rock (Class "B"), excavated and removed.
- Item 8—1 cubic yard of concrete (Class "A").
- Item 9—1 cubic yard of extra earth excavation.

Item 10—200 linear feet of 6" granite curb (Class "A"), set in concrete.

Item 11—84 linear feet of 6" granite curb (Class "B"), set in concrete.

Item 12—24 linear feet of curb reset in concrete.

Item 13—125 square feet of flagstone sidewalk pavement furnished and laid.

Item 14—1,800 square feet of flagstone sidewalk pavement redressed and relaid.

Item 15—650 square feet of concrete sidewalk laid.

Item 16—90 square yards of roadway pavement, all kinds, for which double deposit is required.

Item 17—1 ton of cast-iron water pipes and special water pipe iron castings removed and relaid.

Item 18—500 feet B. M. of timber and plank for bracing and sheeting.

The time allowed for constructing and completing the alteration and improvement of the basins will be twenty (20) consecutive working days.

The amount of security required will be Fourteen Hundred (\$1,400) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

NO. 4. FOR THE RECEIVING BASINS ALTERED AND IMPROVED ON STANTON ST., FROM GOERCK ST. TO TOMPKINS ST., WITH INLETS AND ALL WORK INCIDENTAL THERETO.

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:

- Item 1—2 receiving basins, altered and improved, Method "A."
- Item 2—4 receiving basins, altered and improved, Method "B."
- Item 3—2 inlets, Type "A," complete.
- Item 4—8 inlets, Type "B," complete.
- Item 5—3 inlets, Type "C," complete.
- Item 6—113 linear feet of 12" vitrified pipe culvert, complete.
- Item 7—1 cubic yard of concrete, Class "A."
- Item 8—1 cubic yard of brick masonry.
- Item 9—2 cubic yards of extra earth excavation.
- Item 10—1 ton of cast-iron water pipes and special water pipe iron castings removed and relaid.

Item 11—160 linear feet of 6" granite curb (Class "A") set in concrete.

Item 12—20 linear feet of 6" granite curb (Class "B") set in concrete.

Item 13—24 linear feet of curb reset in concrete.

Item 14—200 square feet of flagstone sidewalk pavement furnished and laid.

Item 15—500 square feet of flagstone sidewalk pavement redressed and relaid.

Item 16—1,000 square feet of concrete sidewalk pavement laid.

Item 17—26 square yards of roadway pavement, all kinds, for which double deposit is required.

Item 18—1,000 feet B. M. of timber and plank for bracing and sheeting.

The time allowed for altering and improving these basins and appurtenances will be twenty-five (25) consecutive working days.

The amount of security required will be One Thousand (\$1,000) Dollars, and the amount of deposit accompanying the bid shall be five per cent. (5%) of the amount of security.

The bidder will state the price for 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 bid will be tested. Each contract, if awarded, will be awarded for the whole work at a lump sum.

Blank forms may be had and the drawings, form of specification and contract may be seen at the offices of the Commissioner of Public Works, Municipal Building, Bureau of Sewers, Room 2103, Manhattan.

Dated, May 2, 1916.

m2,12 MARCUS M. MARKS, President.

See General Instructions to Bidders on last page, last column, of the "City Record."

## MUNICIPAL CIVIL SERVICE COMMISSION.

### Notices of Examinations.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

WEDNESDAY, MAY 10, 1916, TO WEDNESDAY, MAY 24, 1916,

for the position of

### GARDENER.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m. WEDNESDAY, MAY 24, 1916, will be accepted. Application blanks will be mailed upon request, provided a self-addressed stamped envelope or sufficient postage is enclosed to cover the mailing.

The Commission will not guarantee the delivery of the same. Postage on applications forwarded by mail must be fully prepaid.

Applicants must be citizens of the United States and residents of the State of New York. The requirement that every application shall bear the certificates of four reputable citizens whose residences or places of business are within the City of New York is waived for applicants for this examination whose previous occupation or employment has been wholly or in part outside the City of New York, and the said certificates will be accepted from persons resident or engaged in business elsewhere.

The subjects and weights of the examination are: Experience, 4; Practical Test, 6. A percentage of 70 is required in each subject.

A qualifying physical examination will be given. Candidates failing to pass the physical test will not be summoned for the mental test.

Applications for this examination must be filed on a special blank, Form B.

Requirements: Candidates should have had practical experience in the various branches of gardening. Each candidate will be tested as to his practical knowledge of pruning, planting, seeding, the naming of plants and the use of gardening implements.

Candidates must be at least 21 years of age on the closing date for the receipt of applications. The salary is \$2 and \$3 a day. Vacancies occur from time to time in the various city parks.

The term of the eligibility of the list resulting from this examination is fixed at not less than one year nor more than four years.

m10,24 R. W. BELCHER, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

THURSDAY, MAY 4, 1916, TO THURSDAY, MAY 18, 1916,

for the position of

### CHIEF MUNICIPAL EXAMINER

### (Pensions).

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m. THURSDAY, MAY 18, 1916, will be accepted. Application blanks will be mailed upon request, provided a self-addressed stamped envelope or sufficient postage is enclosed to cover the mailing.

The Commission will not guarantee the delivery of the same. Postage on applications forwarded by mail must be fully prepaid.

Applicants must be citizens of the United States. The requirement that every application shall bear the certificates of four reputable citizens whose residences or places of business are within the City of New York is waived for applicants for this examination whose previous occupation or employment has been wholly or in part outside

the City of New York, and the said certificates will be accepted from persons resident or engaged in business elsewhere.

The subjects and weights of the examination are: Experience, 4; 75% required. Thesis, 3; 70% required. Oral, 3; 70% required.

A qualifying physical test will be given on the same day as the oral examination. Candidates failing to qualify in any part of the examination will not be summoned for the ensuing tests.

Applications for this examination must be filed on a special blank, Form C, with insert.

Duties: (1) To supervise and be responsible for the entire staff engaged in pension work. (2) To conduct investigations of current pension systems operative in the City of New York and to formulate plans for the co-ordination thereof. (3) To construct reports showing in a scientific manner the condition of current pension funds for the information of the public and for possible legislative action. (4) To formulate plans in detail for the sound financial organization of pension funds, the determination of proper benefits, the distribution of costs and methods of the fund's administration.

Requirements: (1) Experience: Extended experience in supervising the work of a staff engaged in the investigation of pension systems is required; in lieu of such experience, evidence that the candidate has independently investigated and reported on the condition of a large pension fund may be accepted. (2) Knowledge: Thorough knowledge of the history and development of foreign and domestic public pension funds, their organization, requirements and defects. Thorough understanding of the purpose, plan and scope of pension and retirement systems, public and private, with the requisite capacity to frame a sound pension plan and to provide for its proper administration.

Candidates must be at least 25 years of age on the closing date for the receipt of applications. There is one vacancy in the Commission on Pensions at \$3,600 per annum. An increase in the rate of compensation is contemplated, within the salary limits of this grade, which range from \$4,140 to \$4,740 per annum.

The term of the eligibility of the list resulting from this examination is fixed at not less than one year nor more than four years.

m4,18 R. W. BELCHER, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

TUESDAY, MAY 2, 1916, TO TUESDAY, MAY 16, 1916,

for the position of

### CHIEF ACTUARY (PENSIONS).

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m. TUESDAY, MAY 16, 1916, will be accepted. Application blanks will be mailed upon request, provided a self-addressed stamped envelope or sufficient postage is enclosed to cover the mailing.

The Commission will not guarantee the delivery of the same. Postage on applications forwarded by mail must be fully prepaid.

Applicants must be citizens of the United States. The requirement that every application shall bear the certificates of four reputable citizens whose residences or places of business are within the City of New York is waived for applicants for this examination whose previous occupation or employment has been wholly or in part outside the City of New York, and the said certificates will be accepted from persons resident or engaged in business elsewhere.

The subjects and weights of the examination are: Experience, 4; 75% required. Thesis, 3; 70% required. Oral, 3; 70% required.

A qualifying physical test will be given on the same day as the oral examination. Candidates failing to qualify in any part of the examination will not be summoned for the ensuing tests.

Applications for this examination must be filed on a special blank, Form C, with insert.

Duties: (1) To supervise the force engaged on actuarial work in the Commission on Pensions; (2) To outline the work, and to prepare actuarial formulae and valuations; (3) To direct the investigation of service, mortality and salary experience, and to devise adequate records showing such experience. (4) To prepare premium and contribution rates.

Requirements: (1) Experience: Extended experience in a supervisory capacity in the practice of actuarial science is required. In lieu of such experience, evidence that the candidate has independently prepared rates of contribution, actuarial valuation of existing pension funds or other actuarial data may be accepted. (2) Technical: A knowledge of those branches of higher mathematics employed in actuarial work and a familiarity with actuarial formulae for calculating reserves and contribution rates are required.

Candidates must be at least 21 years of age on the closing date for receipt of applications. There is one vacancy in the Commission on Pensions at \$3,600 per annum. It is contemplated, however, to increase this rate of compensation within the salary limits of this grade, which are from \$4,140 to \$4,740 per annum.

The term of the eligibility of the list resulting from this examination is fixed at not less than one year nor more than four years.

m2,16 R. W. BELCHER, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

THURSDAY, APRIL 27, 1916, TO THURSDAY, MAY 11, 1916,

for the position of

### SUPERINTENDENT OF GARAGE.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m. THURSDAY, MAY 11, 1916, will be accepted. Application blanks will be mailed upon request, provided a self-addressed stamped envelope or sufficient postage is enclosed to cover the mailing.

The Commission will not guarantee the delivery of the same. Postage on applications forwarded by mail must be fully prepaid.

Applicants must be citizens of the United States and residents of the State of New York. The requirement that every application shall bear the certificates of four reputable citizens whose residences or places of business are within the City of New York is waived for applicants for this examination whose previous occupation or employment has been wholly or in part outside the City of New York, and the said certificates will be accepted from persons resident or engaged in business elsewhere.

The subjects and weights of the examination are: Duties, 5; 70% required. Experience, 5; 70% required.

A qualifying physical examination will be given. Candidates failing to pass the physical test will not be summoned for the mental test.

Applications for this examination must be filed on a special blank, Form C.

Duties: The duties of a Superintendent of Garage which involve supervision of the entire Municipal Garage system are to render prompt automobile service to city departments, to be responsible for the operation, care and maintenance of the garage and automobiles, to direct the work of the drivers, mechanics and others and to order and properly store all supplies and accessories.

Requirements: Candidates must present evidence of at least three years' experience in an executive position, such as manager or superintendent of garage or of traffic for taxicab or transportation companies or in related work, requiring active supervision over a large force of drivers, mechanics and other subordinates, or the equivalent of such experience. Candidates must have a thorough knowledge of the methods of caring for and maintaining a considerable amount of garage and motor equipment.

Candidates must be not less than 21 nor more than 50 years of age on the closing date for the receipt of applications.

The salary is \$3,000 per annum and there is one vacancy in the Department of Bridges.

The term of the eligibility of the list resulting from this examination is fixed at not less than one year nor more than four years.

a27, m11 R. W. BELCHER, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

FRIDAY, APRIL 28, 1916, TO FRIDAY, MAY 12, 1916,

for the position of

### STATIONARY ENGINEER (HOIST).

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m. FRIDAY, MAY 12, 1916, will be accepted. Application blanks will be mailed upon request, provided a self-addressed stamped envelope or sufficient postage is enclosed to cover the mailing.

The Commission will not guarantee the delivery of the same. Postage on applications forwarded by mail must be fully prepaid.

Applicants must be citizens of the United States and residents of the State of New York. The subjects and weights of the examination are: Experience, 5; 70% required. Technical, 5; 75% required.

The technical examination will consist of a practical test and a written examination, each counting 50%. 75% will be required on the practical test.

A qualifying physical examination will be given. Candidates failing to pass the physical test will not be summoned for the mental test.

Applications for this examination must be filed on a special blank, Form B.

Duties: The duties of a Stationary Engineer (Hoist) are to operate and repair hoisting machinery used at the shafts of the Board of Water Supply. The hoisting engines are used to convey men and materials to and from the tunnels which are several hundred feet below the surface.

The Stationary Engineer (Hoist) will be required to make small field repairs to the apparatus and must have a knowledge of the construction, operation and repair of gears, drums, cables, electric controllers and appurtenances relating to hoisting machinery.

Requirements: Candidates must present evidence of at least one year's experience in the operation of steam, electric, hydraulic or pneumatic hoists or similar machinery.

Candidates must be at least 21 years of age on the closing date for the receipt of applications. The salary is \$4.50 a day and there are three vacancies in the Board of Water Supply.

The term of the eligibility of the list resulting from this examination is fixed at not less than one year nor more than four years.

a28,m12 R. W. BELCHER, Secretary.

## BELLEVUE AND ALLIED HOSPITALS, DEPARTMENT OF PUBLIC CHARITIES, DEPARTMENT OF CORRECTION AND DEPARTMENT OF HEALTH.

### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by Bellevue and Allied Hospitals, Department of Public Charities, Department of Correction and Department of Health, at Room 1230, Municipal Building, Manhattan, until 12 noon, on

THURSDAY, MAY 18, 1916.

FOR FURNISHING AND DELIVERING MILK AND CREAM.

The time for the performance of the contract is on or before Dec. 31, 1916.

The amount of security required is thirty (30) per cent. of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per quart, or other designated unit, 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 on each item or class, as stated in the specifications.

Bids must be submitted in duplicate, each in a separate envelope. No bid will be accepted unless this provision is complied with.

Blank forms and further information may be obtained at room 1230, Municipal Building, Manhattan.

BOARD OF TRUSTEES, BELLEVUE AND ALLIED HOSPITALS, JOHN W. BRAUNMAN, M. D., President.

DEPARTMENT OF PUBLIC CHARITIES, JOHN A. KINGSBURY, Commissioner.

DEPARTMENT OF CORRECTION, BURETTE G. LEWIS, Commissioner.

DEPARTMENT OF HEALTH, H. EMERSON, Commissioner.

See General Instructions to Bidders on last page, last column, of the "City Record," except for the address of the office for receiving and opening bids.

## FIRE DEPARTMENT.

### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the Fire Commissioner at his office, 11th floor, Municipal Building, Manhattan, until 10.30 a. m., on

TUESDAY, MAY 16, 1916.

FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED FOR REPAIRS AND ALTERATIONS TO THE QUARTERS OF ENGINE COMPANIES NOS. 202, 210, 212, 220, 225, 229, 238, 239, 240, 251, 256, 276, 279, 280, 281, 282, 283, 284 AND HOOK AND LADDER COMPANIES NOS. 101, 105, 114, 119, 131, 132, 146, 147 AND 148, BOROUGH OF BROOKLYN.

The time for the completion of the work and the full performance of the contract is forty (40) consecutive working days for each item.



at the office of the Fire Department, 11th floor, Municipal Building, Manhattan.  
ROBERT ADAMSON, Fire Commissioner.  
m4,16  
See General Instructions to Bidders on last page, last column, of the "City Record."

## BOROUGH OF BROOKLYN.

## Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the President of Borough of Brooklyn at Room 2, Borough Hall, Brooklyn, until 11 a. m., on

THURSDAY, MAY 11, 1916.

NO. 1. FOR FURNISHING ALL THE LABOR AND MATERIALS FOR CONSTRUCTING SEWERS IN HOWARD AVE. FROM A POINT ABOUT 250 FEET SOUTH OF HERKIMER ST. TO HERKIMER ST. AND IN HERKIMER ST. FROM HOWARD AVE. TO RALPH AVE. AND IN RALPH AVE. FROM HERKIMER ST. TO CHAUNCEY ST.

The Engineer's preliminary estimate of the quantities is as follows:

1,145 linear feet of 42-inch sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$9.20 ..... \$10,534.00

1,002 linear feet of 30-inch sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$6.25 ..... 6,262.50

1 storm overflow connection No. 1, laid complete, including all incidentals and appurtenances; per storm overflow connection No. 1, \$180.00 ..... 180.00

1 storm overflow connection No. 2, laid complete, including all incidentals and appurtenances; per storm overflow connection No. 2, \$116.00 ..... 116.00

1 storm overflow connection No. 3, laid complete, including all incidentals and appurtenances; per storm overflow connection No. 3, \$194.00 ..... 194.00

12 manholes complete, with standard iron heads and covers, including all incidentals and appurtenances; per manhole, \$70 ..... 840.00

222,000 feet, B. M., of sheeting and bracing driven and left in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$18 ..... 3,996.00

13,500 feet, B. M., of foundation planking, laid in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$25 ..... 337.50

110 cubic yards of concrete, Class "B," laid in place complete, including extra excavation and all incidentals and appurtenances; per cubic yard, \$7 ..... 770.00

10 barrels of Portland cement, furnished and delivered, in place in the work, including all incidentals and appurtenances; per barrel, \$15.00 ..... 150.00

2 sewer basins, reconnected complete, with iron basin hoods, connecting culverts and all incidentals and appurtenances; per reconnection, \$50.00 ..... 100.00

1,000 linear feet of piles, driven in place complete, including all incidentals and appurtenances; per linear foot, \$0.40 ..... 400.00

2,000 pounds steel bars, in place complete, including all incidentals and appurtenances; per pound, \$0.03 ..... 60.00

Total ..... \$23,805.00

The time allowed for the completion of the work and full performance of the contract will be one hundred and twenty (120) working days.

The amount of security required will be Ten Thousand Dollars (\$10,000).

NO. 2. FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED FOR CONSTRUCTING SEWERS IN SARATOGA AVE. FROM HULL ST. TO CHAUNCEY ST.

The Engineer's preliminary estimate of the quantities is as follows:

252 linear feet of 42-inch sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$6.25 ..... \$1,575.00

733 linear feet of 30-inch sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$5.00 ..... 3,915.00

9 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$3 ..... 27.00

1 manhole, Class "D," complete, with standard iron head and special cover, including all incidentals and appurtenances; per manhole, \$50.00 ..... 50.00

8 manholes, Class "E," complete, with standard iron heads and covers, including all incidentals and appurtenances; per manhole, \$50.00 ..... 400.00

4 sewer basins reconnected, complete, with iron basin hoods, connecting culverts, and all incidentals and appurtenances; per reconnection, \$50 ..... 200.00

20 house connection drains reconnected, complete, with all pipes and fittings, including all incidentals and appurtenances; per reconnection, \$5 ..... 100.00

50,000 feet, B. M., of sheeting and bracing, driven and left in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$18 ..... 900.00

6,000 feet, B. M., of foundation planking, laid in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$25 ..... 150.00

180 linear feet of 8-inch house connection drain, laid complete, including all incidentals and appurtenances; per linear foot, \$2 ..... 360.00

100 cubic yards of Class "B" concrete, laid in place complete, including extra excavation and all incidentals and appurtenances; per cubic yard, \$7 ..... 700.00

10 barrels of Portland cement, furnished and delivered, in place in the work, including all incidentals and appurtenances; per barrel, \$15.00 ..... 150.00

1,000 linear feet of piles, driven in place complete, including all incidentals and appurtenances; per linear foot, \$0.40 ..... 400.00

2,000 pounds steel bars, in place complete, including all incidentals and appurtenances; per pound, \$0.03 ..... 60.00

Total ..... \$8,852.00

The time allowed for the completion of the work and full performance of the contract will be sixty (60) working days.

The amount of security required will be Four Thousand Dollars (\$4,000).

NO. 3. FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED TO CONSTRUCT A SEWER IN AVENUE J BETWEEN OCEAN AVE. AND BEDFORD AVE. AND OUTLET SEWER IN BEDFORD AVE. BETWEEN AVENUE J AND AVENUE K.

The Engineer's preliminary estimate of the quantities is as follows:

858 linear feet of 60-inch brick and concrete sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$13.50 ..... \$11,840.40

64 linear feet of 48-inch brick sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$7 ..... 448.00

274 linear feet of 36-inch brick sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$5.60 ..... 1,534.40

258 linear feet of 30-inch brick sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$4.90 ..... 1,264.20

272 linear feet of 24-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$3.50 ..... 952.00

260 linear feet of 18-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$2.50 ..... 650.00

170 linear feet of 15-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$1.85 ..... 314.50

310 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$1.60 ..... 496.00

276 linear feet of 6-inch house connection drain, laid complete, including all incidentals and appurtenances; per linear foot, \$0.80 ..... 220.80

17 manholes complete, with iron heads and covers, including all incidentals and appurtenances; per manhole, \$50.00 ..... 850.00

15 sewer basins complete, of either standard design, with iron pans or gratings, iron basin hoods and connecting culverts, including all incidentals and appurtenances; per basin, \$125.00 ..... 1,875.00

2,000 feet, B. M., of sheeting and bracing, driven in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$18 ..... 36.00

4,000 feet, B. M., of foundation planking, laid in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$25 ..... 100.00

Total ..... \$20,581.30

The time allowed for the completion of the work and full performance of the contract will be one hundred (100) working days.

The amount of security required will be Ten Thousand Dollars (\$10,000).

NO. 4. FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED TO CONSTRUCT A SEWER IN ROCKAWAY AVE. FROM FULTON ST. TO CHAUNCEY ST.

The Engineer's preliminary estimate of the quantities is as follows:

763 linear feet of 30-inch sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$5.50 ..... \$4,196.50

282 linear feet of 24-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$6.50 ..... 1,833.00

460 linear feet of 18-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$4 ..... 1,840.00

120 linear feet of 12-inch pipe sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$2.50 ..... 300.00

12 manholes complete, with standard iron heads and covers, including all incidentals and appurtenances; per manhole, \$50 ..... 600.00

13 house connection drains, reconnected, complete, with all pipes and fittings, including all incidentals and appurtenances; per reconnection, \$5 ..... 65.00

12 sewer basins reconnected, complete, with iron basin hoods, connecting culverts and all incidentals and appurtenances; per reconnection, \$50 ..... 600.00

10,000 feet, B. M., of sheeting and bracing, driven and left in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$25 ..... 250.00

85,000 feet, B. M., of foundation planking, pile capping and stringers, laid in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$18 ..... 1,530.00

100 cubic yards of Class "B" concrete, laid in place complete, including extra excavation and all incidentals and appurtenances; per cubic yard, \$7 ..... 700.00

10 barrels of Portland cement, furnished and delivered, in place in the work, including all incidentals and appurtenances; per barrel, \$15.00 ..... 150.00

1,000 linear feet of piles, driven in place complete, including all incidentals and appurtenances; per linear foot, \$0.40 ..... 400.00

2,000 pounds of steel rods, in place complete, including all incidentals and appurtenances; per pound, \$0.03 ..... 60.00

Total ..... \$12,389.50

The time allowed for the completion of the work and full performance of the contract will be ninety (90) working days.

The amount of security required will be Six Thousand Dollars (\$6,000).

NO. 5. FOR FURNISHING ALL THE LABOR AND MATERIAL REQUIRED FOR CONSTRUCTING SEWER IN W. 11TH ST. FROM AVENUE Q TO 86TH ST.

The Engineer's preliminary estimate of the quantities is as follows:

398 linear feet of 114-inch storm sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$40 ..... \$15,920.00

5 linear feet of 102-inch storm sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$37 ..... 185.00

1,711 linear feet of 78-inch storm sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$20 ..... 34,220.00

842 linear feet of 72-inch storm sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$16.50 ..... 13,893.00

20 linear feet of 36-inch storm sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$7 ..... 140.00

39 linear feet of 24-inch pipe storm sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$3.25 ..... 126.75

920 linear feet of 66-inch combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$14.50 ..... 13,340.00

11 linear feet of 60-inch combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$12.50 ..... 137.50

51 linear feet of 42-inch combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$7.65 ..... 390.15

56 linear feet of 36-inch combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$6.65 ..... 372.40

15 linear feet of 24-inch pipe combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$3.50 ..... 52.50

51 linear feet of 22-inch pipe combined sewer, laid complete, including

all incidentals and appurtenances; per linear foot, \$3.30 ..... 168.30

38 linear feet of 12-inch pipe combined sewer, laid complete, including all incidentals and appurtenances; per linear foot, \$1.75 ..... 66.50

345 linear feet of 36-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$18.50 ..... 6,382.50

42 linear feet of 30-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$14.00 ..... 588.00

856 linear feet of 22-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$9.75 ..... 8,346.00

858 linear feet of 20-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$8.00 ..... 6,864.00

825 linear feet of 18-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$7.00 ..... 5,775.00

36 linear feet of 10-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$4.25 ..... 153.00

21 linear feet of 8-inch pipe sanitary sewer, laid complete, including concrete cradle and all incidentals and appurtenances; per linear foot, \$4.00 ..... 84.00

20 linear feet of 6-inch storm house connection drain, laid complete, including all incidentals and appurtenances; per linear foot, \$0.50 ..... 10.00

252 linear feet of 6-inch combined house connection drain, laid complete, including all incidentals and appurtenances; per linear foot, \$0.70 ..... 176.40

2,652 linear feet of 8-inch sanitary house connection drain, laid complete, including all incidentals and appurtenances; per linear foot, \$1.50 ..... 3,978.00

537 linear feet of stand pipes, complete, including concrete casing, covers, specials, extra excavation and all incidentals and appurtenances; per linear foot, \$2 ..... 1,074.00

3 float chambers, complete, including all incidentals and appurtenances; per Float Chamber, \$250.00 ..... 750.00

3 drop manholes complete, with standard manhole heads and special covers, including all incidentals and appurtenances; per manhole, \$145.00 ..... 435.00

9 manholes on storm sewers, complete, with special manhole heads and covers, including all incidentals and appurtenances; per manhole, \$45.00 ..... 405.00

7 manholes on combined sewers, complete, with standard manhole heads and covers, including all incidentals and appurtenances; per manhole, \$45.00 ..... 315.00

14 manholes on sanitary sewers, complete, with standard manhole heads and special covers, including all incidentals and appurtenances; per manhole, \$95 ..... 1,330.00

11 manholes on sanitary house connection drains, complete, with standard manhole heads and special covers, including all incidentals and appurtenances; per manhole, \$40.00 ..... 440.00

9 sewer basins complete, of either standard design, with iron pans or gratings, iron basin hoods, and connecting culverts, including all incidentals and appurtenances; per basin, \$115 ..... 1,035.00

130,000 feet, B. M., of foundation planking, pile capping and stringers, laid in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$30 ..... 3,900.00

300,000 feet, B. M., of sheeting and bracing, driven in place complete, including all incidentals and appurtenances; per thousand feet, B. M., \$18 ..... 5,400.00

35,000 linear feet of piles, driven in place, complete, including all incidentals and appurtenances; per linear foot, \$0.35 ..... 12,250.00

20 cubic yards of concrete, Class "A," laid in place complete, including extra excavation and all incidentals and appurtenances; per cubic yard, \$8 ..... 160.00

20 cubic yards of concrete, Class "B," laid in place complete, including extra excavation and all incidentals and appurtenances; per cubic yard, \$7.50 ..... 150.00

10 barrels of Portland cement, furnished and delivered, in place in the work, including all incidentals and appurtenances; per barrel, \$1.75 ..... 17.50

12,000 pounds of steel bars, in place complete, including all incidentals and appurtenances; per pound, \$0.04 ..... 480.00

Total ..... \$139,510.50

The time allowed for the completion of the work and full performance of the contract will be two hundred and fifty (250) working days.

The amount of security required will be Sixty Thousand Dollars (\$60,000).

The foregoing Engineer's preliminary estimates of the total cost for the completed work are to be taken as the 100 per cent. basis and test for bidding. Proposals shall each state a single percentage of such 100 per cent. (such as 95 per cent., 100 per cent. or 105 per cent.) for which all materials and work called for in the proposed contract and the notices to bidders are to be furnished to the City. Such percentage as bid for each contract 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.

Blank forms and further information may be obtained and the plans and drawings may be seen at the office of the Bureau of Sewers, 215 Montague st., Brooklyn.

L. H. POUNDS, President.  
a29,m11  
See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President, Borough of Brooklyn, at Room 2, Borough Hall, Brooklyn, until 11 a. m., on

THURSDAY, MAY 11, 1916.

FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED FOR CONSTRUCTING TEMPORARY STORM RELIEF SEWER IN THE RIGHT OF WAY OWNED BY THE CITY LOCATED IN WHAT WAS FORMERLY PAERDEGAT BASIN, BETWEEN E. 37TH ST. AND E. 51ST ST. TOGETHER WITH A TEMPORARY STORM OVERFLOW CONNECTION AT FLATBUSH AVE. AND FOSTER AVE.

The Engineer's estimate of the quantities is as follows:

3,810 linear feet of 72-inch sewer.

27 linear feet of 66-inch brick and concrete sewer.

4 manholes.

70,000 feet, B. M., of foundation planking and pile capping.

100 cubic yards concrete, Class "A."

2,000 lbs. steel bars.

10,000 feet, B. M., of sheeting and bracing.

7,500 linear feet of piles.

250 cubic yards of extra excavation.

15,000 cubic yards of embankment.

The time allowed for the completion of the work and full performance of the contract is one hundred and ten (110) working days.

The amount of security required is Twenty Thousand Dollars (\$20,000).

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per pound, 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.

Blank forms and further information may be obtained and the plans and drawings may be seen at the office of the Bureau of Sewers, Brooklyn, 215 Montague st., Brooklyn.

L. H. POUNDS, President.  
a29,m11  
See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the President, Borough of Brooklyn, at Room 2, Borough Hall, Brooklyn, until 11 a. m., on

THURSDAY, MAY 11, 1916.

NO. 1. FOR REGULATING, GRADING, CURBING AND LAYING SIDEWALKS ON BAY 37TH ST. FROM BATH AVE. TO BENSON AVE.

The Engineer's estimate is as follows:

16,780 cubic yards fill to be furnished.

1,670 linear feet steel bound cement curb (1 year maintenance).

8,320 square feet cement sidewalks (1 year maintenance).

8,320 square feet 6-inch cinder or gravel sidewalk foundation.

Time allowed, 130 working days. Security required, \$3,300.

NO. 2. FOR REGULATING, GRADING, CURBING, LAYING SIDEWALKS AND PAVING WITH PERMANENT GRADE 1 GRANITE PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF BOERUM ST. FROM WHITE ST. TO BOGART ST. THE BLOCKS USED ON THIS CONTRACT SHALL BE NEW GRANITE BLOCKS.

The Engineer's estimate is as follows:

2,735 cubic yards excavation.

20 linear feet old curbstone reset in concrete.

990 linear feet new curbstone set in concrete.

30 linear feet granite heading stones set in concrete.

5,130 square feet cement sidewalks (1 year maintenance).

5,130 square feet 6-inch cinder or gravel sidewalk foundation.

277 cubic yards concrete.

1,659 square yards grade 1 granite pavement with joint filler of coal tar pitch and sand (no maintenance).

Time allowed, 40 working days. Security required, \$3,200.

NO. 3. FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF BUSHWICK AVE. FROM ARION PL. TO MYRTLE AVE.

The Engineer's estimate is as follows:

50 linear feet old curbstone reset in concrete.

100 linear feet new curbstone set in concrete.

55 linear feet granite heading stones set in concrete.

510 cubic yards concrete, outside railroad area.



The Engineer's estimate is as follows:  
50 linear feet old curbstone reset in concrete.  
50 linear feet new curbstone set in concrete.  
10 cubic yards concrete.  
1,450 square yards asphalt pavement (5 years maintenance).

Time allowed, 20 working days. Security required, \$700.

NO. 10. FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF ST. JOHN'S PL. FROM ROGERS AVE. TO NEW YORK AVE.

The Engineer's estimate is as follows:  
400 linear feet old curbstone reset in concrete.  
400 linear feet new curbstone set in concrete.  
30 linear feet cement curb (1 year maintenance).

400 cubic yards concrete, outside railroad area.  
70 cubic yards concrete, within railroad area.  
2,410 square yards asphalt pavement, outside railroad area (5 years maintenance).  
635 square yards asphalt pavement, within railroad area (no maintenance).

Time allowed, 35 working days. Security required, \$2,200.

NO. 11. FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF THROOP AVE. FROM FLOYD ST. TO MYRTLE AVE.

The Engineer's estimate is as follows:  
40 linear feet old curbstone reset in concrete.  
890 linear feet new curbstone set in concrete.  
35 linear feet granite heading stones set in concrete.

320 cubic yards concrete.  
1,910 square yards asphalt pavement (5 years maintenance).

5 square yards adjacent pavement to be relaid.  
7 new covers and heads for sewer manholes.

Time allowed, 30 working days. Security required, \$1,500.

NO. 12. FOR REGULATING, PAVING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY AND CURBING AND LAYING SIDEWALKS ON THE WEST SIDE OF 7TH AVE. FROM 76TH ST. TO 77TH ST.

The Engineer's estimate is as follows:  
480 cubic yards excavation to subgrade.  
130 linear feet bluestone heading stones set in concrete.

245 linear feet steel bound cement curb (1 year maintenance).  
1,280 square feet cement sidewalks (1 year maintenance).

1,280 square feet 6-inch cinder or gravel sidewalk foundation.  
320 cubic yards concrete.

1,920 square yards asphalt pavement (5 years maintenance).

Time allowed, 30 working days. Security required, \$1,500.

NO. 13. FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT AND GRADE 1 GRANITE PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF 60TH ST. FROM 18TH AVE. TO 19TH AVE. THE BLOCKS USED ON THIS CONTRACT SHALL BE NEW GRANITE BLOCKS.

The Engineer's estimate is as follows:  
210 linear feet old curbstone reset in concrete.  
60 linear feet granite heading stones set in concrete.

1,215 linear feet steel bound cement curb (1 year maintenance).

580 cubic yards concrete.  
2,295 square yards asphalt pavement (5 years maintenance).

1,185 square yards grade 1 granite pavement with joint filler of coal tar pitch and sand (no maintenance).

Time allowed, 35 working days. Security required, \$3,300.

NO. 14. FOR REGULATING, GRADING, CURBING, LAYING SIDEWALKS AND PAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF 71ST ST. FROM 15TH AVE. TO NEW UTRICHT AVE.

The Engineer's estimate is as follows:  
900 cubic yards excavation.

30 cubic yards fill (not to be bid for).  
10 linear feet old curbstone reset in concrete.

80 linear feet bluestone heading stones set in concrete.

1,090 linear feet steel bound cement curb (1 year maintenance).

3,970 square feet cement sidewalks (1 year maintenance).

3,970 square feet 6-inch cinder or gravel sidewalk foundation.

310 cubic yards concrete.  
1,870 square yards asphalt pavement (5 years maintenance).

Time allowed, 30 working days. Security required, \$1,800.

NO. 15. FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF 79TH ST. FROM 17TH AVE. TO 18TH AVE.

The Engineer's estimate is as follows:  
70 linear feet bluestone heading stones set in concrete.

1,580 linear feet steel bound cement curb (1 year maintenance).

470 cubic yards concrete.  
2,830 square yards asphalt pavement (5 years maintenance).

Time allowed, 30 working days. Security required, \$2,100.

The bidder will state the price of each item or article contained in the specifications or schedules herein contained or hereto annexed, per linear foot, square foot, square yard, 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 and the plans and drawings may be seen at the office of the Bureau of Highways, Brooklyn, Room 502, No. 50 Court st., Brooklyn.

L. H. FOUNDS, President.

See General Instructions to Bidders on last page, last column, of the "City Record."

## POLICE DEPARTMENT.

### Owners Wanted for Unclaimed Property.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of The City of New York, 72 Poplar st., Brooklyn, for the following property, now in custody, without claimants: Boats, 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.

ARTHUR WOODS, Police Commissioner.

OWNERS WANTED BY THE PROPERTY Clerk of the Police Department of The City of New York, 240 Centre st., Manhattan, for the following property now in custody without claimants: Automobiles, baby carriages, bags, bicycles, boats, cameras, clothing, furniture, jewelry, junk, machinery, merchandise, metals, optical goods, silverware, tools, trunks, typewriters, umbrellas, etc.; also sums of money feloniously obtained by prisoners, or found abandoned by Patrolmen of this Department.

ARTHUR WOODS, Police Commissioner.

## DEPARTMENT OF BRIDGES, DEPARTMENT OF PARKS.

### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by Department of Bridges, Department of Parks, Manhattan and Richmond, at Room 1230, Municipal Building, Manhattan, until 12 noon, on

THURSDAY, MAY 18, 1916.

FOR FURNISHING AND DELIVERING LUMBER.

The time for the performance of the contract is on or before Sept. 30, 1916, as stated in the schedules.

The amount of security required is thirty (30) per cent. of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per thousand feet B. M. or other designated unit, 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, if made, made to the lowest bidder on each item or class, as stated in the specifications.

Bids must be submitted in duplicate, each in a separate envelope. No bid will be accepted unless this provision is complied with.

Blank forms and further information may be obtained at Room 1230, Municipal Building, Manhattan.

DEPT. OF BRIDGES, F. J. H. KRACKER, Commissioner of Bridges.

PARK BOARD, CAROL WARD, President; THOS. W. WHITTLE, RAYMOND V. INGERSOLL, JOHN E. WEIER, Commissioners of Parks. m6,18

See General Instructions to Bidders on last page, last column, of the "City Record," except for the address of the office for receiving and opening bids.

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY.

### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the Commissioner of Water Supply, Gas and Electricity at room 2351, Municipal Building, Manhattan, until 2 p. m., on

TUESDAY, MAY 16, 1916.

FOR HAULING AND LAYING WATER MAINS AND APPURTENANCES IN HICKS, WEST, E. 10TH, E. 26TH, E. 31ST, 37TH, 62ND, 67TH, 68TH, 80TH AND 81ST STS., IN 21ST AND 24TH AVES., IN AVENUES "N," "Q," AND "R."

The time allowed for doing and completing the entire work is sixty (60) consecutive working days.

The amount in which security is required for the performance of the contract is Four Thousand Dollars (\$4,000).

The bidder will state the price, per unit, of each item of work, materials or supplies contained in the specifications or schedule, by which the bids will be tested. The bids will be compared and the award made to the lowest formal bidder in a lump or aggregate sum.

Blank forms of bid, proposals and contract, including specifications, approved as to form by the Corporation Counsel, can be obtained at Room 2351, Municipal Building, Manhattan.

Dated, May 1, 1916.

m4,16 WILLIAM WILLIAMS, Commissioner.

See General Instructions to Bidders on last page, last column, of the "City Record."

## BOARD MEETINGS.

### Board of Aldermen.

The Board of Aldermen meets in the Aldermanic Chamber, City Hall, every Tuesday, at 1.30 p. m.

P. J. SCULLY, City Clerk and Clerk to the Board of Aldermen.

Board of Estimate and Apportionment.

The Board of Estimate and Apportionment meets in the Old Council Chamber, Room 16, City Hall, Fridays at 10.30 a. m.

JOSEPH HAAG, Secretary.

Commissioners of Sinking Fund.

The Commissioners of the Sinking Fund meet in the Meeting Room (Room 16), City Hall, on Thursdays, at 11 a. m., at call of the Mayor.

JOHN KORB, Jr., Secretary.

Board of Revision of Assessments.

The Board of Revision of Assessments meets in the Meeting Room (Room 16), City Hall, upon notice of the Secretary.

JOHN KORB, Jr., Secretary.

Board of City Record.

The Board of City Record meets in the City Hall at call of the Mayor.

DAVID FERGUSON, Supervisor, Secretary.

## COMMISSIONERS OF THE SINKING FUND.

### Notice of Public Hearing.

PUBLIC NOTICE IS HEREBY GIVEN THAT the Commissioners of the Sinking Fund, pursuant to the provisions of Chapter 172 of the Laws of 1907, will hold a public hearing at 11 o'clock in the forenoon on Thursday, June 1, 1916, in Room 16, City Hall, Borough of Manhattan, in the matter of the alteration and amendment of the amended new plan for improvement of the waterfront between W. 38th and W. 42nd sts., North River, Borough of Manhattan, adopted by the Commissioner of Docks in accordance with law May 1, 1916, and transmitted to the Commissioners of the Sinking Fund for approval.

Technical Description.

The proposed alteration and amendment of the Amended New Plan for improving the waterfront and harbor of The City of New York on the North River between W. 38th and W. 42nd sts., Borough of Manhattan, consists in:

FIRST—The discontinuing of that part of the bulkhead line adopted by the Board of Docks in 1871 between the northerly side of W. 38th st. and the southerly side of W. 42nd st.

SECOND—The establishing of a proposed bulkhead line beginning at a point in the bulkhead line adopted by the Board of Docks in 1871 where the westerly prolongation of the southerly side of W. 42nd st. intersects the same; running thence easterly and along the westerly prolongation of the southerly side of W. 42nd st. to a point in same distant 50 feet west of the westerly side of 12th ave.; running thence southerly and along the line 50 feet west of and parallel with the westerly side of 12th ave. to an intersection with the westerly prolongation of the northerly side of W. 38th st.; running thence westerly and along the westerly prolongation of the northerly side of W. 38th st. to an intersection with the bulkhead line adopted by the Board of Docks in 1871.

THIRD—The inshore extension to W. 41st st., W. 40th st. and W. 39th st. piers between the bulkhead line adopted by the Board of Docks in 1871 and now discontinued, and the proposed bulkhead line above described.

FOURTH—The establishment of a marginal street, wharf or place 50 feet in width extending from the northerly side of W. 38th st. to the southerly side of W. 42nd st. and between the westerly side of 12th ave. and the proposed bulkhead line.

JOHN PURROY MITCHEL, Mayor and Chairman, Commissioners of the Sinking Fund. m8,13

Dated May 4, 1916.

See General Instructions to Bidders on last page, last column, of the "City Record."

southerly side of W. 42nd st. and between the westerly side of 12th ave. and the proposed bulkhead line.

JOHN PURROY MITCHEL, Mayor and Chairman, Commissioners of the Sinking Fund. m8,13

Dated May 4, 1916.

## BOARD OF ASSESSORS.

### Notice to Present Claims for Damages.

PUBLIC NOTICE IS HEREBY GIVEN TO all persons claiming to have been injured by a change of grade in the regulating and grading of the following named streets to present their claims, in writing, to the Secretary of the Board of Assessors, Room 809, Municipal Building, Borough of Manhattan, New York, on or before Thursday, May 18, 1916, at 10 o'clock a. m. Claimants are requested to make their claims for damages upon the blank form prepared by the Board of Assessors, copies of which may be obtained upon application at the above office:

Borough of Manhattan.

5142. Haven ave. from 179th st. to 180th st.

Borough of Queens.

5143. Jamaica ave., south side, from Shaw ave. to Snedeker ave. (Oak st.) from Freedom ave. (Union pl.) to a 460 feet easterly thereof; Yaphank st., north side, from Shaw ave. to Yarmouth st., Fourth Ward.

5144. Britton (Orchard) ave. from Broadway to Forley ave., Second Ward.

5145. Fourth ave. from Jackson ave. to Washington ave., First Ward.

5146. North Morris (Morris) ave. from Fulton pl. (ave.) to Jamaica ave., Fourth Ward.

5147. Sutphin rd. from Jamaica ave. to Lamberville ave. (Pacific st.), Fourth Ward.

Borough of Richmond.

5152. Havenwood rd. from Barrett Boulevard to Castleton ave.

5153. Barrett Boulevard from Havenwood rd. to Duer Lane.

5154. Frelinghuysen rd. from Havenwood rd. to Duer Lane.

WILLIAM C. ORMOND, JACOB J. LESSER, ST. GEORGE B. TUCKER, Board of Assessors. m6,17

May 6, 1916.

### Completion of Assessments.

PUBLIC NOTICE IS HEREBY GIVEN TO the owner or owners of all houses and lots, improved and 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 Manhattan.

5071. Regulating, paving, curbing, etc., Haven ave. from W. 170th st. to W. 172nd st. Together with a list of awards for damages caused by a change of grade. Affecting Block 2139.

5139. Sewer and appurtenances in Ellwood st. between Nagle and Sherman aves. Affecting Blocks 2172 and 2174.

5141. Basin adjacent to the northeast corner of 178th st. and Haven ave. Affecting Block 2177.

Borough of The Bronx.

4750. Regulating, grading, curbing, flagging, paving, etc., Tremont ave. (177th st.) from the Bronx River and West Farms rd. to Fort Schuyler rd.; Beacon st. from Rosedale ave. to Beach ave., and Haviland ave. from Tremont ave. to Castle Hill ave. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 2623, 3698 to 3701, 3704 to 3707, 3759, 3763 to 3768, 3779 to 3785, 3790 to 3796, 3799 to 3805, 3807 to 3833, 3835 to 3844, 3849 to 3852, 3861 to 3904, 3906 to 3908, 3910 to 3916, 3928 to 3938, 3944 to 3948, 3963 to 3968, 5289 to 5304, 5306 to 5308, 5435 to 5456, 5487, 5491 to 5510, 5512, 5514, 5518, 5522, 5530 and 5534 to 5622.

4900. Regulating, grading, curbing, flagging, paving, etc., West Farm rd. (Walker ave.) from Morris Park ave. to the intersection of Westchester ave. and former Main st. in the old Village of Westchester. Affecting Blocks 3833, 3834, 3844 to 3849, 3852 to 3860, 3865, 3869 to 3902, 3906, 3908 to 3910, 3913 to 3927, 3936 to 3938, 3944 to 3950, 3952, 3959 to 3962, 3965, 3967 to 4002, 4004 to 4009, 4014 to 4030, 4038 to 4043, 4057 to 4069, 4071 to 4093, 4097 to 4100, 4105 to 4107, 4111 to 4113, 4117, 4118, 4133 to 4150, 4179, 4180, 4209, 4224 to 4227, 5303 to 5307, 5309, 5311 to 5381, 5383, 5384, 5387, 5390 to 5393, 5397, 5398, 5402, 5403, 5406 to 5410, 5412, 5418 to 5438, 5442, 5457 to 5477, 5479 to 5490, 5531 to 5535, 5543 to 5546 and 5561.

4925. Relief Sewer and appurtenances in Webster Ave. from Wendover ave. (Clermont Parkway) to a point 200 feet north of Tremont ave. Affecting Blocks 2788 to 2792, 2798 to 2804, 2809 to 2815, 2888 to 2892, 2897 to 2900, 2905 to 2909, 2914 to 2918, 2920 to 2924, 2930, 2941, 2943 to 2947, 3022 to 3065, 3067 to 3070, 3079, 3142 to 3159, 3164 to 3168, 3172 to 3177, 3189 to 3191, 3246, 3272 to 3313, 3315, 3318 to 3321, 3323 to 3339, 3341 to 3360, 3362 to 3398, 3400, 3401, 4336, 4427 to 4429, 4506 to 4508, 4540 to 4545, 4591 to 4595, 4620 to 4630, 4640 to 4657, 4661 to 4669, 4675 to 4680, 4690 to 4692, 4819 to 4865, 4992 to 5001, 5032 to 5049, 5064 to 5070, 5073 to 5084, 5087 and 5102 to 5116.

5073. Regulating, grading, curbing, flagging, building steps and appurtenances, etc., in Unnamed st. from Rogers pl. and E. 165th st. westerly to 165th st. Affecting Blocks 2649, 2650, 2659, 2660, 2669, 2670, 2678, 2679, 2680, 2690, 2691, 2698 to 2700, 2704, 2705, 2715 to 2717 and 2726.

5135. Sewers and appurtenances in Westchester ave. north side, between Metcalf and St. Lawrence aves.; both sides, between Taylor and Thieriot aves., and Beach ave. between Westchester and Randolph aves. Affecting Blocks 3747 to 3749, 3760 to 3762, 3765, 3780 to 3786 and 3872 to 3878.

5137. Sewers and appurtenances in St. Raymond ave. between Odell st. and Olmstead ave., and in Olmstead ave. between St. Raymond ave. and Benedict ave. Affecting Blocks 3932 to 3934, 3938, 3944 to 3946, 3959 and 3960.

Borough of Richmond.

5124. Reregulating, regrading, curbing, flagging, etc., Innis st. between Nicholas ave. and John st. Third Ward. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 70, 75, 77, 90C, 91C and 101C.

Borough of Queens.

5026. Laying Sidewalks on the east side of Murray st. from Broadway to Mitchell ave. and on the west side of Bathgate (12th) st. from Mitchell ave. to Bayside ave. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 22, 22A, 23, 32 and 35, Third Ward.

5028. Regulating and grading Custer (15th) st. from Bayreuth (Beach) st. to Sanford ave., Third Ward. Together with a list of awards for damages caused by a change of grade. Affecting Block 123A.

5091. Regulating, grading, curbing, flagging, etc., Clinton ave. from Clermont ave. to Broad st., Second Ward. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 2179 and 2180.

5094. Regulating, grading, curbing, flagging, etc., Hancock ave. from a point 100 feet north of Thomson ave. to Greenpoint ave. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 506, 507 and 510, First Ward.

Borough of Brooklyn.

4796. Regulating, grading, curbing and flagging Canarsie Lane between Flatbush and Norstrand aves. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 5165 to 5173.

4861. Regulating, grading, curbing, flagging, etc., Union pl. from Railroad ave. to Grant ave. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 4121 and 4122.

5003. Paving and curbing 64th, 65th and 66th sts., each from 20th ave. to Bay Parkway. Affecting Blocks 5542, 5543, 5549, 5550, 5557 and 5564.

5109. Regulating, grading, curbing, flagging, etc., Kings Highway from Coney Island ave. to E. 16th st. Together with a list of awards for damages caused by a change of grade. Affecting Blocks 6776 to 6778 and 6794 to 6798.

5131. Sewer and appurtenances in E. 26th st. from avenue M to avenue N. Affecting Blocks 7661 and 7662.

5132. Sewer and appurtenances in Hemlock st. from the end of the existing sewer north of Ridgewood ave. northerly to Danforth st. Affecting Blocks 4119 and 4120.

5133. Sewer and appurtenances in Shore rd. from 83rd st. to 79th st. Affecting Blocks 5925, 5975, 5994, 6003, 6004, 6013, 6014, 6031, 6040, 6041, 6046, 6058 and 6059.

5134. Basins at the northeast and northwest corners of Hegeman and New Jersey aves. Affecting Blocks 4299 and 4300.

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, Room 809, Municipal Building, Manhattan, New York, on or before Tuesday, June 6, 1916, at 10 a. m., at which time and place the said objections will be heard and testimony received in reference thereto.

WILLIAM C. ORMOND, JACOB J. LESSER,



of the Seventh Avenue-Lexington Avenue Rapid Transit Railroad beginning at a point under Lexington Avenue near the southerly building line of East 43rd street and extending thence northerly under Lexington Avenue to a point about seventy (70) feet south of the center line of East 106th street.

The work to be done will also include other finish work along the line of the Railroad.

The Contractor must begin work within thirty (30) days after the delivery of the contract on such station or stations or other parts of said Railroad as the Engineer of the Commission may direct and shall begin work on any of the remaining stations or other parts of said Railroad within ten (10) days after notice and shall complete all work within six (6) months from the delivery of the contract, except as otherwise provided in the form of contract.

A fuller description of the work and other requirements, provisions and specifications are given in the Information for Contractors and in the form of contract, contract drawings, bond and Contractor's Proposal, which are to be deemed a part of this invitation and copies of which may be inspected and purchased at said office of the Commission.

The receipt of bids will be subject to the requirements specified in said Information for Contractors.

New York, May 1, 1916.  
PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT, by OSCAR S. STRAUS, Chairman.  
JAMES B. WALKER, Secretary. m3,25

#### Part of the Fourteenth Street-Eastern Rapid Transit Railroad.

SEALED BIDS OR PROPOSALS FOR THE construction of Section No. 5 of Route No. 8, a part of the Fourteenth Street-Eastern Rapid Transit Railroad, will be received by the Public Service Commission for the First District (hereinafter called the "Commission") at the office of the Commission at No. 120 Broadway, Borough of Manhattan, New York City, until the 22d day of May, 1916, at twelve fifteen (12:15) o'clock p. m., at which time and place or at a later date to be fixed by the Commission, the proposals will be publicly opened.

The said Section No. 5 of Route No. 8 is to be a two-track subsurface railroad extending under Metropolitan and Bushwick aves., in the Borough of Brooklyn, from a point near Manhattan ave. to Meserole st.

The work to be done will include the care and support of surface, subsurface and overhead structures, the maintenance of traffic and the restoration of street surfaces.

The method of construction will be by trench excavation under cover, unless otherwise permitted by the Commission.

The Contractor must within 22 months from the delivery of the contract complete the Railroad and such other work covered by the contract as may be necessary to put the Railroad in condition for operation and must complete all other work covered by the contract within 26 months from the delivery of the contract.

A fuller description of the work and other requirements, provisions and specifications are given in the Information for Contractors and in the form of contract, contract drawings, bond and Contractor's Proposal, which are to be deemed a part of this invitation and copies of which may be inspected and purchased at the office of the Commission.

The receipt of bids will be subject to the requirements specified in said Information for Contractors.

New York, April 20, 1916.  
PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT, by OSCAR S. STRAUS, Chairman.  
JAMES B. WALKER, Secretary. a26,m22

#### Part of the Fourteenth Street-Eastern Rapid Transit Railroad.

SEALED BIDS OR PROPOSALS FOR THE construction of Section No. 1 of Route No. 8, a part of the Fourteenth Street-Eastern Rapid Transit Railroad, will be received by the Public Service Commission for the First District (hereinafter called the "Commission") at the office of the Commission at No. 120 Broadway, Borough of Manhattan, New York City, until the 18th day of May, 1916, at twelve fifteen (12:15) o'clock p. m., at which time and place or at a later date to be fixed by the Commission the proposals will be publicly opened.

The said Section No. 1 of Route No. 8 is to be a two-track subsurface railroad extending under E. and W. 14th st., in the Borough of Manhattan, from a point about 300 feet west of the center line of 6th ave. to a point about opposite the easterly building line of Irving pl.

The work to be done will include the care and support of surface, subsurface and overhead structures, the maintenance of traffic and the restoration of street surfaces.

The method of construction will be partly by tunneling and partly by excavation from the surface.

The Contractor must within 22 months from the delivery of the contract complete the Railroad and such other work covered by the contract as may be necessary to put the Railroad in condition for operation and must complete all other work covered by the contract within 26 months from the delivery of the contract.

A fuller description of the work and other requirements, provisions and specifications are given in the Information for Contractors and in the form of contract, contract drawings, bond and Contractor's Proposal, which are to be deemed a part of this invitation and copies of which may be inspected and purchased at the office of the Commission.

The receipt of bids will be subject to the requirements specified in said Information for Contractors.

New York, April 20, 1916.  
PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT, by OSCAR S. STRAUS, Chairman.  
JAMES B. WALKER, Secretary. a26,m18

#### Part of the Fourteenth Street-Eastern Rapid Transit Railroad.

SEALED BIDS OR PROPOSALS FOR THE construction of Section No. 4 of Route No. 8, a part of the Fourteenth Street-Eastern Rapid Transit Railroad, will be received by the Public Service Commission for the First District (hereinafter called the "Commission") at the office of the Commission at No. 120 Broadway, Borough of Manhattan, New York City, until the 16th day of May, 1916, at twelve fifteen (12:15) o'clock p. m., at which time and place or at a later date to be fixed by the Commission the proposals will be publicly opened.

The said Section No. 4 of Route No. 8 is to be a two-track subsurface railroad extending under N. 7th st. and Metropolitan ave., in the Borough of Brooklyn, from Bedford ave. to Manhattan ave.

The work to be done will include the care and support of surface, subsurface and overhead structures, the maintenance of traffic and the restoration of street surfaces.

The method of construction will be by trench excavation under cover, unless otherwise permitted by the Commission.

The Contractor must within 22 months from the delivery of the contract complete the Railroad and such other work covered by the contract as may be necessary to put the Railroad in condition

for operation and must complete all other work covered by the contract within 26 months from the delivery of the contract.

A fuller description of the work and other requirements, provisions and specifications are given in the Information for Contractors and in the form of contract, contract drawings, bond and Contractor's Proposal, which are to be deemed a part of this invitation and copies of which may be inspected and purchased at the office of the Commission.

The receipt of bids will be subject to the requirements specified in said Information for Contractors.

New York, April 20, 1916.  
PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT, by OSCAR S. STRAUS, Chairman.  
JAMES B. WALKER, Secretary. a26,m16

### DEPARTMENT OF EDUCATION.

#### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Supplies at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 22, 1916.**  
FOR PRINTING AND FOR FURNISHING AND DELIVERING STATIONERY AND PRINTED SUPPLIES FOR THE BOARD OF EDUCATION 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 Dec. 31, 1916.

The amount of security required for the faithful performance of the contract is thirty (30%) per cent. of the amount of the contract.

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. The Board of Education reserves the right to award the contract as a whole for the Board of Education, or schedules, or item by item, if deemed for the best interest of the City.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Bids must be submitted in duplicate, each in a separate envelope.

Blank forms and further information may be obtained at the office of the Superintendent of School Supplies, Park ave. and 59th st., Manhattan.

PATRICK JONES, Superintendent of School Supplies. m11,22

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 22, 1916.**  
Borough of Brooklyn.  
FOR ALTERATIONS, REPAIRS, ETC. AT PUBLIC SCHOOLS 5, 6, 8, 9, 15, 16, 23, 29, 33, 34, 37, 42, 78, 111, 122, 137 AND TRAINING SCHOOLS FOR TEACHERS, BOROUGH OF BROOKLYN.

The time allowed to complete the whole work on each school will be fifty-five (55) working days, as provided in the contract.

The amount of security required is as follows: P. S. 5, \$400; P. S. 6, \$300; P. S. 8, \$400; P. S. 9, \$300; P. S. 15, \$600; P. S. 16, \$300; P. S. 23, \$500; P. S. 29, \$300; P. S. 33, \$300; P. S. 34, \$500; P. S. 37, \$500; P. S. 42, \$300; P. S. 78, \$200; P. S. 111, \$300; P. S. 122, \$700; P. S. 126, \$500; P. S. 137, \$300; T. S. T., \$400.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon. Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan, and also at Branch Office, 131 Livingston st., Brooklyn.

C. B. J. SNYDER, Superintendent of School Buildings. m10,22

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 22, 1916.**  
Borough of Manhattan.  
FOR INSTALLING ELECTRIC LIGHT EQUIPMENT IN PUBLIC SCHOOLS 56, 73, 84, 122 AND 137, BOROUGH OF MANHATTAN.

The time allowed to complete the whole work on each school will be eighty (80) working days, as provided in the contract.

The amount of security required is as follows: P. S. 56, \$1,500; P. S. 73, \$1,400; P. S. 84, \$1,600; P. S. 122, \$1,500; P. S. 137, \$1,600.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon.

FOR ALTERATIONS, REPAIRS, ETC. FOR PUBLIC SCHOOLS 4, 14, 18, 53, 59, 96, 135, 147, 188, 190, STUYVESANT HIGH SCHOOL AND WASHINGTON IRVING HIGH SCHOOL, BOROUGH OF MANHATTAN.

The time allowed to complete the whole work on each school will be fifty-five (55) working days, as provided in the contract.

The amount of security required is as follows: P. S. 4, \$300; P. S. 7, \$300; P. S. 14, \$200; P. S. 18, \$300; P. S. 53, \$400; P. S. 59, \$600; P. S. 96, \$300; P. S. 135, \$300; P. S. 147, \$400; P. S. 188, \$400; P. S. 190, \$500; S. H. S., \$400; W. I. H. S., \$300.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan.

C. B. J. SNYDER, Superintendent of School Buildings. m10,22

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 22, 1916.**  
Borough of Queens.  
FOR ALTERATIONS, REPAIRS, ETC. AT PUBLIC SCHOOLS 1, 4, 6, 7, 11, 76, 80, 83, 84, 85 AND BRYANT HIGH SCHOOL, BOROUGH OF QUEENS.

The time allowed to complete the whole work on each school will be fifty-five (55) working days, as provided in the contract.

The amount of security required is as follows:

P. S. 1, \$300; P. S. 4, \$300; P. S. 6, \$200; P. S. 7, \$300; P. S. 11, \$200; P. S. 76, \$300; P. S. 80, \$200; P. S. 83, \$300; P. S. 84, \$300; P. S. 85, \$200; B. H. S., \$300.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan, and also at Branch Office, 69 Broadway, Flushing, Queens.

C. B. J. SNYDER, Superintendent of School Buildings. m10,22

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 22, 1916.**  
Borough of Brooklyn.

NO. 1.—FOR ALTERATIONS, REPAIRS, ETC. AT PUBLIC SCHOOL 19, 2ND AND KEAP STS., BOROUGH OF BROOKLYN.

The time allowed to complete the whole work will be fifty-five (55) working days, as provided in the contract.

The amount of security required is Three Hundred Dollars (\$300).

The deposit accompanying bid shall be five per cent. of the amount of security.

NO. 2.—FOR FIRE PROTECTION WORK AT PUBLIC SCHOOL 144, HOWARD AVE., PROSPECT PL. AND ST. MARK'S AVE., BOROUGH OF BROOKLYN.

The time allowed to complete the whole work will be ninety (90) working days, as provided in the contract.

The amount of security required is Twenty-four Hundred Dollars (\$2,400).

The deposit accompanying bid shall be five per cent. of the amount of security.

On Nos. 1 and 2 the bids will be compared and the contract will be awarded in a lump sum to the lowest bidder on each contract.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan, and also at Branch Office, 131 Livingston st., Brooklyn.

C. B. J. SNYDER, Superintendent of School Buildings. m10,22

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Supplies at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**THURSDAY, MAY 18, 1916.**  
FOR THE RENTAL OF NON-INFLAMMABLE OR SLOW BURNING MOTION PICTURE FILM FOR DAY AND EVENING HIGH AND ELEMENTARY SCHOOLS, DEPARTMENT OF EDUCATION 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 Dec. 31, 1916, as stated in the specifications.

The amount of the security required for the faithful performance of the contract is thirty (30%) per cent. 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 for the entire contract.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Bids must be submitted in duplicate, each in a separate envelope.

Blank forms and further information may be obtained at the office of the Superintendent of School Supplies, Board of Education, Manhattan, Park ave. and 59th st.

PATRICK JONES, Superintendent of School Supplies. m8,18

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 15, 1916.**  
Borough of Brooklyn.

FOR ALTERATIONS, REPAIRS, ETC. IN PUBLIC SCHOOLS 2, 4, 10, 27, 30, 40, 60, 94, 107, 130, 131, 136, 142, MANUAL TRAINING HIGH SCHOOL AND MANUAL TRAINING HIGH SCHOOL ANNEX, BOROUGH OF BROOKLYN.

The time allowed to complete the whole work on each school will be fifty-five (55) working days, as provided in the contract.

The amount of security required is as follows: P. S. 2, \$200; P. S. 4, \$500; P. S. 10, \$700; P. S. 27, \$500; P. S. 30, \$400; P. S. 40, \$200; P. S. 60, \$300; P. S. 94, \$300; P. S. 107, \$300; P. S. 130, \$400; P. S. 131, \$300; P. S. 136, \$500; P. S. 146, \$1,200; M. T. H. S., \$400; M. T. H. S. Annex, \$300.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan, and also at Branch Office, 131 Livingston st., Brooklyn.

C. B. J. SNYDER, Superintendent of School Buildings. m3,15

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 15, 1916.**  
Borough of Manhattan.

FOR SANITARY ALTERATIONS, ETC. AT PUBLIC SCHOOLS 13, 14, 19, 34, 40, 47, 61, 64, 71, 82, 105, 117, 135, 188 STUYVESANT HIGH SCHOOL AND WASHINGTON IRVING HIGH SCHOOL, BOROUGH OF MANHATTAN.

The time allowed to complete the whole work on each school will be forty (40) working days, as provided in the contract.

The amount of security required is as follows: P. S. 13, \$400; P. S. 14, \$200; P. S. 19, \$400; P. S. 34, \$300; P. S. 40, \$300; P. S. 47, \$400; P. S. 61, \$800; P. S. 64, \$600; P. S. 71, \$200; P. S. 82, \$400; P. S. 105, \$200; P. S. 117, \$400; P. S. 135, \$200; P. S. 188, \$500; S. H. S., \$400; W. I. H. S., \$200.

A separate proposal must be submitted for each school and award will be made thereon.

The deposit accompanying bid shall be five per cent. of the amount of security.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan.

C. B. J. SNYDER, Superintendent of School Buildings. m3,15

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 15, 1916.**  
Various Boroughs.

FOR INSTALLATIONS FOR ECONOMIZING FUEL IN PUBLIC SCHOOLS 20, 23, 31, 32, 34, 37, 42, 46 AND 47, BOROUGH OF THE BRONX; PUBLIC SCHOOLS 1, 6, 16, 56, 85 AND 86, BOROUGH OF QUEENS; AND PUBLIC SCHOOLS 1, 13, 14 AND 17, BOROUGH OF RICHMOND.

The time allowed to complete the whole work on each school will be ninety (90) working days, as provided in the contract.

The amount of security required is as follows: Bronx: P. S. 20, \$300; P. S. 23, \$300; P. S. 31, \$300; P. S. 32, \$300; P. S. 34, \$300; P. S. 37, \$300; P. S. 42, \$300; P. S. 46, \$100; P. S. 47, \$100.

Queens: P. S. 1, \$300; P. S. 6, \$300; P. S. 16, \$300; P. S. 56, \$300; P. S. 85, \$300; P. S. 86, \$300.

Richmond: P. S. 1, \$300; P. S. 13, \$400; P. S. 14, \$400; P. S. 17, \$600.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

A separate proposal must be submitted for each school and award will be made thereon.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan.

C. B. J. SNYDER, Superintendent of School Buildings. m3,15

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Superintendent of School Buildings at the office of the Department of Education, Park ave. and 59th st., Manhattan, until 11 a. m., on

**MONDAY, MAY 15, 1916.**  
Borough of Queens.

FOR ALTERATIONS, REPAIRS, ETC. AT PUBLIC SCHOOLS 42, 46, 48, 50, 54, 57, 59, 65, 66, 82, 90 AND RICHMOND HILL HIGH SCHOOL, BOROUGH OF QUEENS.

The time allowed to complete the whole work on each school will be fifty-five (55) working days, as provided in the contract.

The amount of security required is as follows:

P. S. 42, \$200; P. S. 46, \$300; P. S. 48, \$300; P. S. 50, \$200; P. S. 54, \$200; P. S. 57, \$200; P. S. 59, \$200; P. S. 65, \$100; P. S. 66, \$200; P. S. 82, \$100; P. S. 90, \$300; J. R. H. S., \$300.

A separate proposal shall be submitted for each school and award will be made thereon.

The deposit accompanying bid on each school shall be five per cent. of the amount of security.

Blank forms, plans and specifications may be obtained or seen at the office of the Superintendent, at Estimating Room, 9th floor, Hall of the Board of Education, Park ave. and 59th st., Manhattan, and also at Branch Office, 69 Broadway, Flushing, Queens.

C. B. J. SNYDER, Superintendent of School Buildings. m3,15

See General Instructions to Bidders on last page, last column, of the "City Record."

### DEPARTMENT OF PUBLIC CHARITIES.

#### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by Department of Public Charities at Room 1230, Municipal Building, Manhattan, until 12 noon, on

**THURSDAY, MAY 18, 1916.**  
FOR FURNISHING AND DELIVERING MUTTON CARCASSES.

The time for the performance of the contract is on or before June 30, 1916.

The amount of security required is thirty (30) per cent. of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per pound, or other designated unit, by which the bids will be tested. The extensions must be made and footed up, as the bids will be read



**DRAINAGE, ETC.; FOR THE ERECTION AND COMPLETION OF A NEW LAUNDRY BUILDING, KINGS COUNTY HOSPITAL, BOROUGH OF BROOKLYN, THE CITY OF NEW YORK.**

The time allowed for doing and completing the entire work and the full performance of the contract is two hundred (200) consecutive working days.

The surety required will be Twenty-Five Hundred Dollars (\$2,500).

Certified check or cash in the sum of One Hundred and Twenty-Five Dollars (\$125) must accompany bid.

The bidder will state one aggregate price for the whole work described and specified, as the contract is entire for a complete job.

Blank forms and further information may be obtained at the office of the Purchasing Agent of the Department, 10th floor, Municipal Building, Manhattan, where plans and specifications may be seen.

JOHN A. KINGSBURY, Commissioner.

Dated May 3, 1916. m3,15

See General Instructions to Bidders on last page, last column, of the "City Record."

## DEPARTMENT OF PARKS.

### Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the office of the Department of Parks, Municipal Building, Manhattan, until 3 p. m. on

**THURSDAY, MAY 18, 1916,**

**Borough of Brooklyn.**

FOR ALL LABOR AND MATERIALS REQUIRED FOR THE ERECTION AND COMPLETION OF CYPRESS ARBOR AND RAILING IN CHILDREN'S PLAYGROUND, BETSY HEAD MEMORIAL PLAYGROUND, BOROUGH OF BROOKLYN, TOGETHER WITH ALL THE WORK INCIDENTAL THERETO.

The amount of security required is One Thousand Dollars (\$1,000).

The time allowed to complete the work will be sixty (60) consecutive working days.

Certified check or cash in the sum of Fifty Dollars (\$50) must accompany bid.

Blank forms and other information may be obtained at the office of the Department of Parks, Brooklyn, Litchfield Mansion, Prospect Park West and 5th st., Prospect Park, Brooklyn.

The bids will be compared and the contract awarded at a lump or aggregate sum.

CABOT WARD, President; RAYMOND V. INGERSOLL, THOMAS W. WHITTLE, JOHN E. WEIER, Commissioners of Parks. m6,18

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Park Board at the office of the Department of Parks, Municipal Building, Manhattan, until 3 p. m. on

**THURSDAY, MAY 11, 1916,**

**Borough of Brooklyn.**

FURNISHING, DELIVERING AND SPREADING 41,550 GALLONS OF NON-ASPHALTIC ROAD OIL TO PARKWAYS IN THE BOROUGH OF BROOKLYN.

The time allowed for the completion of this contract will be until Oct. 15, 1916.

The amount of security required will be thirty (30%) per cent. of the amount for which the contract will be awarded.

A deposit of one and one-half (1½) per cent. of the total amount of bid must accompany estimate.

Bids will be compared and the contract awarded at a lump or aggregate sum.

Bids must be submitted in duplicate. Blank forms may be obtained at the office of the Department of Parks, Brooklyn, Litchfield Mansion, Prospect Park West and 5th st., Prospect Park, Brooklyn.

CABOT WARD, President; RAYMOND V. INGERSOLL, THOMAS W. WHITTLE, JOHN E. WEIER, Commissioners of Parks. a29,m11

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS OR ESTIMATES WILL BE received by the Department of Parks, Manhattan and Richmond, at Room 1230, Municipal Building, Manhattan, until 12 noon on

**THURSDAY, MAY 11, 1916,**

**FOR FURNISHING AND DELIVERING GRASS SOD AND GARDEN MOULD.**

The time allowed for the performance of the contract is on or before May 31, 1916.

The amount of security required is 30% of the amount of the bid or estimate.

No bid will be considered unless it is accompanied by a deposit. Such deposit shall be in an amount not less than one and one-half (1½) per cent. of the total amount of the bid.

The bidder will state the price per square foot, cubic yard or other designated unit, 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 on each item, as stated in the specifications.

Delivery will be required to be made at the time and in the manner and in such quantities as may be directed.

Bids must be submitted in duplicate in separate envelopes.

Blank forms and further information may be obtained at Room 1230, Municipal Building, Manhattan.

PARK BOARD, CABOT WARD, President; THOS. W. WHITTLE, RAYMOND V. INGERSOLL, JOHN E. WEIER, Commissioners of Parks. a29,m11

See General Instructions to Bidders on last page, last column, of the "City Record," except for the address of the office for receiving and opening bids.

### Sale of Privileges.

SEALED BIDS WILL BE RECEIVED BY the Park Commissioner at the office of the Department of Parks, Municipal Building, Manhattan, until 11 a. m. on

**FRIDAY, MAY 12, 1916,**

FOR THE PRIVILEGE OF SELLING LIGHT REFRESHMENTS FROM A STAND (SPIRITUOUS LIQUORS EXCEPTED) AT THE SOUTHERLY END OF CARL SCHURZ PARK.

No bids shall be considered unless accompanied by a certified check or cash to the amount of not less than One Hundred Dollars.

Should the successful bidder refuse to accept the privilege after award by the Commissioner, the deposit will be forfeited to the City of New York.

Each bidder shall make his bid for the amount of monthly rental.

The period of time, should the contract be let, will expire on Oct. 15, 1916.

The bids will be compared and the privilege will be awarded to the highest responsible bidder. The Commissioner reserves the right to reject all bids.

The form of proposal and full information as to bidding can be obtained at the office of the Department of Parks, 10th floor, Municipal Building, Manhattan.

CABOT WARD, Commissioner of Parks, Manhattan and Richmond. m1,12

See General Instructions to Bidders on last page, last column, of the "City Record."

## BOARD OF ESTIMATE AND APPORTIONMENT.

### Notices of Public Hearings.

#### FRANCHISE MATTERS.

PUBLIC NOTICE IS HEREBY GIVEN THAT the consideration of the communication from the Public Service Commission for the First District transmitting for approval forms of three certificates to the Hudson and Manhattan Railroad Company, as follows:

(a) Modifying certificate of May 4, 1909, for extension to Grand Central Station.

(b) Modifying certificate of February 2, 1905, to the New York and Jersey Railroad Company for 33d street extension.

(c) Modifying certificate of November 24, 1903, for Cortlandt and Fulton street Tunnels.

Which consideration was, by resolution adopted April 28, 1916, fixed for this day, was continued until Friday, May 19, 1916, at 10:30 o'clock in Room 16, City Hall, Borough of Manhattan, when and where all those interested will be afforded an opportunity to appear and be heard.

JAMES D. MCGANN, Assistant Secretary, Room 1307, Municipal Building, Borough of Manhattan. Telephone, 4560 Worth.

Dated, New York, May 5, 1916. m9,19

### Notices of Public Hearings.

#### PUBLIC IMPROVEMENT MATTERS.

NOTICE IS HEREBY GIVEN THAT AT THE meeting of the Board of Estimate and Apportionment held on May 5, 1916, the Board continued until May 12, 1916, the hearing in the matter of acquiring title to The Service street located on the easterly side of Riverside Drive extending from a point near West 168th street to a point near West 178th street, together with the Public Park intervening between The Service street and Riverside Drive, Borough of Manhattan.

The hearing will be held in the City Hall, Borough of Manhattan, City of New York, on Friday, May 12, 1916, at 10:30 o'clock a. m.

The map showing the proposed area of assessment and the proposed distribution of the cost in this proceeding appear in the issues of the City Record from April 1 to April 12, 1916, both dates inclusive.

JOSEPH HAAG, Secretary, Municipal Building. Telephone, 4560 Worth.

Dated May 8, 1916. m8,12

## SUPREME COURT—FIRST DEPARTMENT.

### Applications to Amend Proceedings.

In the Matter of the Application of The City of New York, relative to amending its application heretofore made 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 ADAMS STREET, from Morris Park avenue to the New York, New Haven and Hartford Railroad; MELVILLE STREET, from Morris Park avenue to the New York, New Haven and Hartford Railroad, and VAN BUREN STREET, from Morris Park avenue to the New York, New Haven and Hartford Railroad, in the Twenty-fourth Ward, Borough of The Bronx, City of New York, so as to conform to a map or plan adopted by the Board of Estimate and Apportionment November 12, 1915, and approved by the Mayor November 18, 1915, in which provision is made for modifying the alignment of Adams street in the section adjoining Morris Park avenue; the proceeding as now amended providing for the acquisition of title to Adams street, Melville street and Van Buren street, from Morris Park avenue to the northerly line of the right-of-way of the New York, New Haven and Hartford Railroad as they are now laid out upon the map or plan of The City of New York.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, First Judicial District, at a Special Term, Part III, thereof, to be held at the County Court-house, in the Borough of Manhattan, in The City of New York, on the 17th day of May, 1916, at the opening of the Court on that day or as soon thereafter as counsel can be heard thereon for an order amending the proceeding entitled "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 Adams street, from Morris Park avenue to the New York, New Haven and Hartford Railroad; Melville street, from Morris Park avenue to the New York, New Haven and Hartford Railroad, and Van Buren street, from Morris Park avenue to the New York, New Haven and Hartford Railroad, in the Twenty-fourth Ward, Borough of The Bronx, City of New York," and the petition and order appointing Commissioners of Estimate and a Commissioner of Assessment in said proceeding heretofore duly entered and filed in the office of the Clerk of the County of New York on the 21st day of November, 1913, so as to conform to a map or plan adopted by the Board of Estimate and Apportionment November 12, 1915, and approved by the Mayor November 18, 1915, in which provision is made for modifying the alignment of Adams street in the section adjoining Morris Park avenue, the proceeding as now amended providing for the acquisition of title to Adams street, Melville street and Van Buren street, from Morris Park avenue to the northerly line of the right-of-way of the New York, New Haven and Hartford Railroad as they are now laid out upon the map or plan of The City of New York.

Additional land and land not required for Adams street, from Morris Park avenue to the New York, New Haven and Hartford Railroad; Melville street, from Morris Park avenue to the New York, New Haven and Hartford Railroad, and Van Buren street, from Morris Park avenue to the New York, New Haven and Hartford Railroad, in the Borough of The Bronx, City of New York, being the following described lots, pieces or parcels of land, viz.:

ADDITIONAL LAND REQUIRED FOR ADAMS STREET.

**Parcel "A."**  
Beginning at a point in the northern line of Adams street as being acquired, distant 242.51 feet easterly from the intersection of said line and the eastern line of Morris Park avenue as legally acquired; thence easterly along said northern line of Adams street for 14.54 feet; thence northwesterly deflecting 159° 12' 30" to the left for 0.453 feet; thence westerly for 14.12 feet to the point of beginning.

**Parcel "B."**  
Beginning at a point in the southern line of Adams street as being acquired, distant 1.22 feet easterly from the intersection of said line and the eastern line of Morris Park avenue as legally acquired; thence easterly along said southern line of Adams street for 243.31 feet; thence westerly deflecting 179° 20' 50.4" to the right for 12.83 feet; thence still westerly deflecting 6° 52' 18.6" to the left for 71.396 feet; thence still westerly deflecting 12° 33' 28.6" to the right for 96.276

feet; thence still westerly for 63.74 feet to the point of beginning.

LAND NOT REQUIRED FOR ADAMS STREET.

**Parcel "X."**  
Beginning at the point of intersection of the eastern line of Morris Park avenue as legally acquired, and the northern line of Adams street as being acquired; thence easterly along last-mentioned line for 242.51 feet; thence westerly deflecting 179° 20' 50.4" to the right for 143.24 feet; thence still westerly for 99.290 feet to the point of beginning.

**Parcel "Y."**  
Beginning at the point of intersection of the eastern line of Morris Park avenue as legally acquired, and the southern line of Adams street as being acquired; thence easterly along last-mentioned line for 1.22 feet; thence westerly deflecting 179° 08' 29.6" to the left for 1.22 feet to said eastern line of Morris Park avenue; thence southerly along last-mentioned line for 0.020 feet to the point of beginning.

**Parcel "Z."**  
Beginning at a point in the southern line of Adams street as being acquired, distant 244.53 feet easterly from the intersection of said line and the eastern line of Morris Park avenue, as legally acquired; thence easterly along said southern line of Adams street for 3.14 feet; thence northwesterly deflecting 159° 12' 30" to the left for 0.098 feet; thence westerly for 3.06 feet to the point of beginning.

The additional land and land not required for Adams street is shown on the following map: "Map showing the change of lines of Adams street, between Morris Park avenue and Van Nest avenue, and the adjustment of grades necessitated thereby. Amendment to Section 37," which map was filed in the office of the President of the Borough of The Bronx on January 4, 1916, in the office of the Register of Bronx County on January 4, 1916, as Map No. 156, and in the office of the Corporation Counsel of The City of New York on January 3, 1916, in pigeonhole 103.

The additional land and land not required for Adams street is located east of Bronx River.

The Board of Estimate and Apportionment by a resolution adopted on the 21st day of January, 1916, duly determined that the area of assessment, for benefit in this amended proceeding be fixed and determined to be as follows:

Bounded on the northwest by a line always distant 100 feet northwesterly from and parallel with the northwesterly line of Morris Park avenue, the said distance being measured at right angles to Morris Park avenue; on the northeast by a line midway between Melville street and Taylor street, and by the prolongation of the said line; on the south by the southerly property line of the New York, New Haven and Hartford Railroad; and on the southwest by a line always distant 100 feet southwesterly from and parallel with the southwesterly line of Adams street and its prolongation, the said distance being measured at right angles to Adams street.

Dated, New York, May 5, 1916.

LAMAR HARDY, Corporation Counsel, Municipal Building, Borough of Manhattan, City of New York. m5,16

### Filing Preliminary Abstracts.

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 WEST 172D STREET, from Inwood avenue to Jerome avenue, as laid out on Section 15 of the final maps, in the 24th Ward, Borough of the Bronx, City of New York.

NOTICE IS HEREBY GIVEN TO ALL PERSONS interested in the above entitled 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 the undersigned, Commissioners of Estimate, have completed their supplemental and amended estimate of damage as to damage No. 1,4 and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with him at his office, Room 1537, 15th floor, Municipal Building, Chambers and Centre streets, in the Borough of Manhattan, in The City of New York, on or before the 11th day of May, 1916, and that the said Commissioners will hear parties so objecting, and for that purpose will be in attendance at their said office on the 13th day of May, 1916, at 10 o'clock a. m.

Second.—That the undersigned, Commissioner of Assessment, has completed his supplemental and amended estimate of benefit and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with him at his office, Room 1537, 15th floor, Municipal Building, Chambers and Centre streets, in the Borough of Manhattan, in The City of New York, on or before the 11th day of May, 1916, and that the said Commissioner will hear parties so objecting, and for that purpose will be in attendance at his said office on the 13th day of May, 1916, at 11 o'clock a. m.

Third.—That the Commissioner of Assessment has assessed any or all such lands, tenements and hereditaments and premises as are within the area of assessment fixed and prescribed as the area of assessment for benefit by the Board of Estimate and Apportionment on the 29th day of June, 1911, and that the said area of assessment includes all those lands, tenements and hereditaments and premises situated 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 on the northwesterly line of Jerome avenue, midway between Macombs road and West 172nd street, and running thence northwesterly at right angles to Jerome avenue to the intersection with a line distant 100 feet southerly from and parallel with the southerly line of West 172nd street, the said distance being measured at right angles to West 172nd street; thence westwardly along the said line parallel with West 172nd street and along the prolongation of the said line to the intersection with the northwesterly line of Inwood avenue; thence northwesterly at right angles to Inwood avenue, and along the prolongation of the said line to the intersection with a line bisecting the angle formed by the intersection of the prolongations of the northerly line of West 172nd street and the southerly line of Goble place, as these streets are laid out between Inwood avenue and Jerome avenue; thence eastwardly along the said bisecting line to the intersection with the northwesterly line of Jerome avenue; thence southeastwardly at right angles to Jerome avenue, a distance of 200 feet; thence southwesterly and parallel with Jerome avenue to the intersection with the line parallel with West 172nd street and passing through the point of beginning; thence westwardly along the said line parallel with West 172nd street to the point or place of beginning.

Fourth.—That the abstracts of said supplement-

tal and amended estimate of damage and of said supplemental and amended assessment for benefit, together with the damage and benefit maps, and also all the affidavits, estimates, proofs and other documents used by the Commissioner of Assessment and by the Commissioner of Estimate in making the same, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, Room 1529, 15th floor, Municipal Building, Chambers and Centre Streets, in the Borough of Manhattan, in said City, there to remain until the 12th day of May, 1916.

Fifth.—That, provided there be no objections filed to either of said abstracts, the supplemental and amended reports as to awards and as to assessments for benefit 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 8th day of June, 1916, at the opening of the Court on that day.

Sixth.—In case, however, objections are filed to the foregoing supplemental and amended abstracts of estimate and assessment, or to either of them, the motion to confirm the supplemental and amended reports as to awards and as to assessments shall stand adjourned to the date to be hereafter specified in the notice provided in such cases to be given in relation to filing the final reports, pursuant to Sections 981 and 984 of the Greater New York Charter, as amended by Chapter 658 of the Laws of 1906.

Dated, New York, March 31, 1916.

GEORGE M. S. SCHULZ, Chairman; JAMES V. GANLY, JOHN DAVIS, Commissioners of Estimate. GEORGE M. S. SCHULZ, Commissioner of Assessment.

JOEL J. SQUIER, Clerk. m1,11

## SUPREME COURT—SECOND DEPARTMENT.

### Filing of Final Report.

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 and premises required for the opening and extending of ADDISON PLACE, from Laurel Hill Boulevard to Anabel Avenue, as shown upon a map or plan adopted by the Board of Estimate and Apportionment January 11, 1912; and to GOSMAN AVENUE, from Borden avenue to Garnett avenue, and from Dreyer avenue to Jackson avenue, in the 1st and 2nd Wards, Borough of Queens, City of New York.

NOTICE IS HEREBY GIVEN THAT THE final reports of the Commissioners of Estimate and of the Commissioner of Assessment in the above-entitled matter will be presented for confirmation to the Supreme Court of the State of New York, Second Department, at a Trial Term thereof, Part I, to be held in the Queens County Court House, Long Island City, in the Borough of Queens, in The City of New York, on the 17th day of May, 1916, at 10 o'clock in the forenoon of that day; and that the said final reports have been deposited in the Office of the Clerk of the County of Queens, there to remain for and during the space of five days, as required by law.

Dated, New York, May 9, 1916.

WM. BOWNE PARSONS, J. H. QUINLAN, Commissioners of Estimate. J. H. QUINLAN, Commissioner of Assessment.

JOEL J. SQUIER, Clerk. m9,13

### Filing Bills of Costs.

In the Matter of the Application of The City of New York, relative to acquiring title in fee, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the opening and extending of ASHLAND PLACE from Fulton street to Flatbush avenue, in the 11th Ward, Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT THE 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, Second Department, at a Special Term thereof, to be held at the County Court House in the Borough of Brooklyn, in The City of New York, on the 22d day of May, 1916, at 10:00 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 Kings, there to remain for and during the space of ten days, as required by law.

Dated, New York, May 10, 1916.

M. F. MCGOLDRICK, EDWARD H. WILSON, F. A. M. BURELL, Commissioners of Estimate. M. F. MCGOLDRICK, Commissioner of Assessment.

ANDREW C. TROY, Clerk. m10,20

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 PIERCE AVENUE, from Jackson avenue to the East River, in the 1st Ward, Borough of Queens, City of New York, as amended by an order of the Supreme Court, Second Department, bearing date the 28th day of February, 1913, and entered in the office of the Clerk of the County of Queens on the 5th day of March, 1913, so as to relate to Pierce avenue from Jackson avenue to Vernon avenue at a width of 80 feet, and from Vernon avenue to the East River at a width of 65 feet, the width of 65 feet between Vernon avenue and the East River being in accordance with the Map or Plan adopted by the Board of Estimate and Apportionment on September 19, 1912, and approved by the Mayor September 30, 1912.

NOTICE IS HEREBY GIVEN THAT THE 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, Second Department, at a Trial Term thereof, Part I, to be held at the Queens County Court House, Long Island City, in the Borough of Queens, in The City of New York, on the 22nd day of May, 1916, at 10 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 Queens, there to remain for and during the space of ten days, as required by law.

Dated, New York, April 17, 1916.

EDWARD A. MAHER, JR., JAMES F. McKENNA, J. H. QUINLAN, Commissioners of Estimate. JAMES F. McKENNA, Commissioner of Assessment.

WALTER C. SHEPPARD, Clerk. m8,18

In the Matter of the Application of The City of New York, relative to acquiring title in fee, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the opening and extending of FIFTY-FIFTH STREET, from 16th Avenue to 19th Avenue, and FIFTY-FOURTH STREET, from Fort Hamilton avenue to 11th Avenue, and from New Utrecht avenue to 13th Avenue, and from 15th Avenue to 19th Avenue,



excluding in each case the right-of-way of the Long Island Railroad, in the 30th Ward, Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN THAT THE 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, Second Department, at a Special Term thereof, to be held at the County Court House in the Borough of Brooklyn, in the City of New York, on the 19th day of May, 1916, at 10:00 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 Kings, there to remain for and during the space of ten days, as required by law.

Dated New York, May 6th, 1916.  
ALMUT REED LATSON, ELMER G. SAM-  
MIS, JOHN F. CANAVAN, Commissioners of  
Estimate.  
ALMUT REED LATSON, Commis-  
sioner of Assessment.  
ANDREW C. TROY, Clerk. m6,17

#### Hearings on Qualifications.

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 SEVENTEENTH STREET, from Queens Boulevard to Jackson Avenue, in the Second Ward, Borough of Queens, City of New York.

NOTICE IS HEREBY GIVEN THAT BY AN order of the Supreme Court of the State of New York, Second Judicial District, dated April 25, 1916, and duly entered and filed in the office of the Clerk of the County of Queens on April 27, 1916, Leander B. Faber, John A. Leach and Emil A. Guenther were appointed Commissioners of Estimate in the above entitled proceeding, and that in and by the said order Leander B. Faber was appointed the Commissioner of Assessment.

NOTICE IS FURTHER GIVEN that, pursuant to the statutes in such cases made and provided, the said Leander B. Faber, John A. Leach and Emil A. Guenther will attend at a Special Term for the hearing of motions held at Trial Term, Part I, of the Supreme Court of the State of New York, Second Judicial District, held in and for the County of Queens at the County Court House in the Borough of Queens, in the City of New York, on the 16th day of May, 1916, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the purpose of being examined under oath by the Corporation Counsel of The City of New York, or by any other person having any interest in said proceeding, as to their qualifications to act as such commissioners.

Dated, New York, May 4, 1916.  
m4.15 LAMAR HARDY, Corporation Counsel.

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 VAN PELT STREET, from Borden Avenue to Skillman Avenue, in the First Ward, Borough of Queens, City of New York.

NOTICE IS HEREBY GIVEN THAT BY AN order of the Supreme Court of the State of New York, Second Judicial District, dated April 25, 1916, and duly entered and filed in the office of the Clerk of the County of Queens on April 27, 1916, Eugene N. L. Young, John H. Fox and Robert Wilson were appointed Commissioners of Estimate in the above entitled proceeding, and that in and by the said order Eugene N. L. Young was appointed the Commissioner of Assessment.

NOTICE IS FURTHER GIVEN that, pursuant to the statutes in such cases made and provided, the said Eugene N. L. Young, John H. Fox and Robert Wilson will attend at a Special Term for the hearing of motions held at Trial Term, Part I, of the Supreme Court of the State of New York, Second Judicial District, held in and for the County of Queens at the County Court House in the Borough of Queens, in the City of New York, on the 16th day of May, 1916, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the purpose of being examined under oath by the Corporation Counsel of The City of New York, or by any other person having any interest in said proceeding, as to their qualifications to act as such commissioners.

Dated, New York, May 4, 1916.  
m4.15 LAMAR HARDY, Corporation Counsel.

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 ELY AVENUE, from Jackson Avenue to Nott Avenue, in the First Ward, Borough of Queens, in the City of New York.

NOTICE IS HEREBY GIVEN THAT BY AN order of the Supreme Court of the State of New York, Second Judicial District, dated April 19, 1916, and duly entered and filed in the office of the Clerk of the County of Queens on April 20, 1916, Wilbur R. Lewis, John Kindred Gillette and Emil A. Guenther, Esqrs., were appointed Commissioners of Estimate in the above entitled proceeding, and that in and by the said order Wilbur R. Lewis, Esq., was appointed the Commissioner of Assessment.

NOTICE IS FURTHER GIVEN that, pursuant to the statutes in such cases made and provided, the said Wilbur R. Lewis, John Kindred Gillette and Emil A. Guenther, Esqrs., will attend at a Special Term for the hearing of motions, held at Trial Term, Part I, of the Supreme Court of the State of New York, Second Judicial District, held in and for the County of Queens at the County Court House, in the Borough of Queens, in the City of New York, on the 16th day of May, 1916, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the purpose of being examined under oath by the Corporation Counsel of The City of New York, or by any other person having any interest in said proceeding, as to their qualifications to act as such commissioners.

Dated, New York, May 4, 1916.  
m4.15 LAMAR HARDY, Corporation Counsel.

#### Filing Preliminary Abstracts.

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 WEST 24TH STREET, from Neptune Avenue to Surf Avenue, excluding the right-of-way of the New York and Coney Island Railroad; WEST 25TH STREET, from Neptune Avenue to the mean high-water line of the Atlantic Ocean, excluding the right-of-way of the N. Y. & Coney Island R. R.; and WEST 23RD STREET, from the southerly limit of the land heretofore acquired to the mean high-water line of the Atlantic Ocean, in the 31st Ward, Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN TO ALL PERSONS interested in the above-entitled 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 the undersigned, Commissioners of Estimate, have completed their amended and supplemental estimate of damage, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with them at their office, No. 166 Montague Street, in the Borough of Brooklyn, in the City of New York, on or before the 13th day of May, 1916, and that the said Commissioners will hear parties so objecting, and for that purpose will be in attendance at their said office on the 18th day of May, 1916, at 3:30 o'clock p. m.

Second.—That the undersigned, Commissioner of Assessment, has completed his amended and supplemental estimate of benefit and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with him at their office, No. 166 Montague Street, in the Borough of Brooklyn, in the City of New York, on or before the 13th day of May, 1916, and that the said Commissioner will hear parties so objecting, and for that purpose will be in attendance at his said office on the 19th day of May, 1916, at 3:30 o'clock p. m.

Third.—That the Commissioner of Assessments has assessed any or all of such lands, tenements and hereditaments and premises as are within the area of assessment fixed and prescribed as the area of assessment for benefit by the Board of Estimate and Apportionment on the 4th day of May, 1911, and that the said area of assessment includes all those lands, tenements and hereditaments and premises situate and being in the Borough of Brooklyn, in the City of New York, which, taken together, are bounded and described as follows:

Beginning at a point on a line midway between West 23rd Street and West 24th Street, distant 100 feet northerly from the northerly line of Neptune Avenue, and running thence southerly along the said line midway between West 23rd Street and West 24th Street, and along the prolongation of the said line to the intersection with the centre line of Surf Avenue; thence easterly along the centre line of Surf Avenue to the intersection with a line midway between West 21st Street and West 23rd Street; thence southerly along the said line midway between West 21st Street and West 23rd Street to the intersection with the mean high water line of the Atlantic Ocean; thence westerly along the said mean high water line to the intersection with a line midway between West 25th Street and West 28th Street; thence northerly along the said line midway between West 25th Street and West 28th Street to the intersection with the centre line of Surf Avenue; thence easterly along the centre line of Surf Avenue to the intersection with the prolongation of a line midway between West 25th Street and West 27th Street; thence northerly along the said line midway between West 25th Street and West 27th Street and along the prolongation of the said line to the intersection with a line parallel with Neptune Avenue and passing through the point of beginning; thence easterly along the said line parallel with Neptune Avenue to the point or place of beginning.

Fourth.—That the abstracts of said amended and supplemental estimate of damage and of said assessment for benefit, together with the affidavits, estimates, proofs and other documents used by the Commissioners of Estimate and by the Commissioner of Assessment in making the same, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, No. 166 Montague Street, in the Borough of Brooklyn, in said City, there to remain until the 22nd day of May, 1916.

Fifth.—That, provided there be no objections filed to either of said abstracts, the reports as to awards and as to assessments for benefit herein will be presented for confirmation to the Supreme Court of the State of New York, Second Department, at a Special Term thereof, to be held in the County Court House in the Borough of Brooklyn, in the City of New York, on the 21st day of June, 1916, at the opening of the Court on that day.

Sixth.—In case, however, objections are filed to the foregoing abstracts of estimate and assessment, or to either of them, the motion to confirm the reports as to awards and as to assessments shall stand adjourned to the date to be hereafter specified in the notice provided in such cases to be given in relation to filing the final reports, pursuant to Sections 981 and 984 of the Greater New York Charter, as amended by Chapter 658 of the Laws of 1906.

Dated, New York, May 2, 1916.  
WM. H. TAYLOR, FRANCIS STOCKTON  
McDIVITT, LORING M. BLACK, JR.,  
Commissioners of Estimate. LORING M. BLACK,  
JR., Commissioner of Assessment.  
ANDREW C. TROY, Clerk. m2,12

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 BROOKLYN AVENUE, from President Street to Winthrop Street, in the 24th and 29th Wards, Borough of Brooklyn, The City of New York.

NOTICE IS HEREBY GIVEN TO ALL PERSONS interested in the above-entitled 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 the undersigned, Commissioners of Estimate, have completed their estimate of damage, and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with him at their office, No. 166 Montague Street, in the Borough of Brooklyn, in the City of New York, on or before the 15th day of May, 1916, and that the said Commissioners will hear parties so objecting, and for that purpose will be in attendance at their said office on the 16th day of May, 1916, at 3:30 o'clock p. m.

Second.—That the undersigned, Commissioner of Assessment, has completed his estimate of benefit and that all persons interested in this proceeding, or in any of the lands, tenements and hereditaments and premises affected thereby, having any objection thereto, do file their said objections in writing, duly verified, with him at their office, No. 166 Montague Street, in the Borough of Brooklyn, in the City of New York, on or before the 15th day of May, 1916, and that the said Commissioner will hear parties so objecting, and for that purpose will be in attendance at his said office on the 17th day of May, 1916, at 3:30 o'clock p. m.

Third.—That the Commissioner of Assessments has assessed any or all of such lands, tenements and hereditaments and premises as are within the area of assessment fixed and prescribed as the area of assessment for benefit by the Board of Estimate and Apportionment on the 2nd day of May, 1912, and that the said area of assessment includes all those lands, tenements and hereditaments and premises situate and being in the Borough of Brooklyn, in the City of New York,

which, taken together, are bounded and described as follows, viz.:

Beginning at a point on a line midway between Brooklyn Avenue and Kingston Avenue, as these streets are laid out north of Lefferts Avenue where it is intersected by a line midway between President Street and Union Street, and running thence southwardly along a line always midway between Brooklyn Avenue and Kingston Avenue and the prolongations thereof to the intersection with a line midway between Winthrop Street and Clarkson Avenue; thence westwardly along the said line midway between Winthrop Street and Clarkson Avenue to the intersection with the prolongation of a line midway between New York Avenue and Brooklyn Avenue as these streets are laid out between Hawthorne Street and Winthrop Street; thence northwardly along the said line midway between New York Avenue and Brooklyn Avenue and along the prolongation of the said line to the intersection with the southerly line of Lefferts Avenue; thence northwardly in a straight line to a point on the northerly line of Malbone Street where it is intersected by a line midway between New York Avenue and Brooklyn Avenue as these streets are laid out at Montgomery Street; thence northwardly along the said line midway between New York Avenue and Brooklyn Avenue to the intersection with a line midway between Union Street and President Street; thence easterly along the said line midway between Union Street and President Street to the point or place of beginning.

Fourth.—That the abstracts of said estimate of damage and of said assessment for benefit, together with the affidavits, estimates, proofs and other documents used by the Commissioners of Estimate and by the Commissioner of Assessment in making the same, have been deposited in the Bureau of Street Openings in the Law Department of The City of New York, No. 166 Montague Street, in the Borough of Brooklyn, in said City, there to remain until the 26th day of May, 1916.

Fifth.—That, provided there be no objections filed to either of said abstracts, the reports as to awards and as to assessments for benefit herein will be presented for confirmation to the Supreme Court of the State of New York, Second Department, at a Special Term thereof, to be held in the County Court House in the Borough of Brooklyn, in the City of New York, on the 28th day of June, 1916, at the opening of the Court on that day.

Sixth.—In case, however, objections are filed to the foregoing abstracts of estimate and assessment, or to either of them, the motion to confirm the reports as to awards and as to assessments shall stand adjourned to the date to be hereafter specified in the notice provided in such cases to be given in relation to filing the final reports, pursuant to Sections 981 and 984 of the Greater New York Charter, as amended by Chapter 658 of the Laws of 1906.

Dated, New York, April 26, 1916.  
THOMAS D. HEWITT, JAS. H. CALLEN-  
DER, ROBT. J. KENWORTHY, Commissioners  
of Estimate. JAS. H. CALLENDER, Commis-  
sioner of Assessment.  
ANDREW C. TROY, Clerk. a26,m12

#### NOTICE TO BIDDERS AT SALES OF OLD BUILDINGS, ETC.

TERMS AND CONDITIONS UNDER WHICH BUILDINGS, ETC., WILL BE SOLD FOR REMOVAL FROM CITY PROPERTY.

THE BUILDINGS AND APPURTENANCES thereto will be sold to the highest bidder, who must pay cash or certified check, drawn to the order of the Comptroller of The City of New York, and must also 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. Where the amount of the purchase price does not equal or exceed the sum of \$50, the sum of \$50 shall be the amount of the security to be deposited. This security may at any time after the expiration of the contract period be applied by the City to the cost of completing any of the work required under the contract, but unfinished at the expiration of the contract period.

The purchaser shall not lease, occupy, cause or permit the building or buildings, etc., purchased by him to be used or occupied for any purpose other than that of their speedy removal nor shall he collect any rental or other revenue for the use of either the land or the buildings, etc., situated thereon. The breach of either or any of these conditions shall forthwith void the sale and cause immediate forfeiture of the purchase money and the security deposited for the faithful performance of the conditions of the sale. The placing therein or permitting the occupancy of any such buildings by any tenant free, for rent or otherwise, excepting the necessary watchmen or the workmen engaged in the actual demolition thereof, shall of itself be a breach of the above conditions of sale.

The sale will be as of the condition of the property on date of delivery thereof to the purchaser. The City of New York will not be responsible for any change or loss which may occur in the condition of the buildings, or their appurtenances between the time of the sale thereof and the time of delivering possession to the purchaser, after being properly vacated of all tenants. The sale and delivery to purchaser will be made as nearly together as the circumstances of vacating the structures of their tenants will permit.

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 exterior walls of the buildings and their foundations and the sidewalks and curb in front of said buildings, extending within the described area, 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 feet below the curb opposite that point. The exterior walls and their foundations shall be taken down only to a plane whose elevation shall be the level of the curb in front of the building. Where there is no curb the elevation of the surrounding ground shall be considered curb level. All wells, cesspools, sinks, etc., existing on the property must be filled to the level of the surrounding ground with clean earth.

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 openings of the main sewer in the street shall be properly closed in compliance with the directions of the Bureau of Sewers in the Borough in which the buildings are situated, and furnish the Department of Finance with a certificate from the Bureau of Sewers that the work has been properly performed.

The permit 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, appurtenances, or any part thereof, within thirty days

from the day of possession will work forfeiture of ownership of such buildings, appurtenances or portions as shall then be left standing, together with all moneys paid by said purchaser on account thereof at the time of the sale, 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 cost and expense 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 possession, 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 damage 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 said buildings.

Where party walls are found to exist between buildings purchased by different bidders, the materials of said party walls shall be understood to be equally divided between the separate purchasers.

Party walls and fences, when existing against adjacent property not sold, shall not be taken down. All furrings, plaster, chimneys, projecting bricks, 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 and adjacent buildings shall be properly flashed and painted and made watertight where they have been disturbed by the operations of the Contractor.

"No buildings, parts of buildings, fixtures or machinery sold for removal under these terms and conditions shall in any case be re-located or re-erected within the lines of any proposed street or other public improvement, and if any such buildings, parts of buildings, fixtures or machinery, etc., shall be re-located or re-erected within the lines of any proposed street or other public improvement, title thereto shall thereupon become vested in The City of New York and a resale at public or private sale may be made in the same manner as if no prior sale thereof had been made."

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; and be it further

Resolved, That while the said sale is held under the supervision of the Commissioners of the Sinking Fund, the Comptroller is authorized to cause the sale to be advertised and to direct the sale thereof as financial officer of the City.

#### 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, bureau or officers, 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 and place the estimates received will be publicly 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 thereof, 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.

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 or corporate stock or certificates of indebtedness of any nature issued by The City of New York, which the Comptroller shall approve as of equal value with the security required in the advertisement to the amount of not less than three nor more than five per centum of the amount of the bond required, as provided in section 420 of the Greater New York Charter.

The amount shall be as specified in the proposals or instructions to bidders and shall not be in excess of 5 per cent.

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 of 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.