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THE CITY RECORD.

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TABLE OF CONTENTS.

Board Meetings	3743	Municipal Civil Service Commission—
Brooklyn, Borough of—	3747	Amended Notice—Notices of Examina-
Proposals	3747	tions
Correction, Department of—	3746	Notices of Examinations
Proposals	3746	Notice to Bidders at Sales of Old Build-
Education, Department of—	3744	ings, etc.
Proposals	3744	Official Directory
Finance, Department of—	3745	Plant and Structures, Department of—
Certification of Assessments—Notice	3744	Proposals
to Property Owners	3745	Police Department—
Corporation Sale of Buildings and	3744	Owners Wanted for Unclaimed Prop-
Appurtenances Thereof on City	3745	erty
Real Estate by Sealed Bids....	3746	Public Charities, Department of—
Corporation Sale of Real Estate....	3744	Proposals
Sale of Tax Liens.....	3744	Public Service Commission—
Sureties on Contracts.....	3746	Weekly Calendar of Hearings Com-
Vouchers Received July 16, 1918....	3739	mening July 15, 1918.....
Warrants Made Ready for Payment	3739	3725
July 16, 1918	3737	Queens, Borough of—
Fire Department—	3748	Proposals
Proposals	3748	Richmond, Borough of—
Fire, Correction, Public Charities, Health,	3748	Proposals
Parks and Police, Departments	3748	Sinking Fund, Commissioners of the—
of—	3746	Notice of Public Hearing
Proposals	3746	State Industrial Commission, Department
Instructions to Bidders for Work to be	3748	of Labor—
Done or Supplies to be Furnished..	3748	Industrial Code
Law Department—	3748	Resolutions Adopted
Extract of Transactions for Week	3748	Supreme Court, First Department—
Ended June 29, 1918.....	3741	Filing Bills of Costs.....

PUBLIC SERVICE COMMISSION, FIRST DISTRICT.

49 LAFAYETTE ST., NEW YORK CITY.

Weekly Calendar of Hearings Commencing July 15, 1918.

Wednesday, July 17, 1918—2:30 p. m.—Case No. 1542—Edison Electric Illuminating Company of Brooklyn and Kings County Electric Light and Power Company—“Compliance with uniform system of accounts”—Whole Commission. 2:30 p. m.—Cases Nos. 577 and 2052—New York Edison Company et al.—“Uniform system of accounts and form of annual report for 1915”—Whole Commission.

Regular meeting of Commission held on Tuesday.

STATE INDUSTRIAL COMMISSION—DEPARTMENT OF LABOR.

INDUSTRIAL CODE.

Rules for the Guarding of Dangerous Machinery, Vats, Pans and Elevated Runways.

DEFINITIONS.

Rule 875. *Guarded*. Unless otherwise specified, the term “guarded” shall mean that the object is so covered, fenced or enclosed that accidental contact with the point of danger is reasonably remote.

(a) *Exposed to Contact*. The term “exposed to contact” shall mean that the location of an object is so accessible that a person may come into contact with it and be injured.

(b) *Approved*. The term “approved,” as used in these rules, shall mean approved by the Industrial Commission.

GENERAL.

Rule 876. *Duties of Employees*. Every employee shall be responsible for carrying out all rules which immediately concern or affect his conduct, and shall use safety devices furnished for his protection.

Rule 877. Substantial barriers or screens of suitable height and width shall be provided where necessary to protect persons from flying particles.

Rule 878. All guards shall be constructed and installed in a substantial manner.

RAILINGS AND TOEBOARDS.

Note—Metal railings are preferable.

Rule 879. *Standard Railing*. (a) A standard railing (without toeboard) shall be not less than three (3) feet six (6) inches high, with an additional rail approximately midway between the top rail and floor level.

(b) A standard railing (with toeboard) shall be not less than three (3) feet six (6) inches high, having a toeboard not less than four (4) inches high, and with an additional rail approximately midway between top rail and top of toeboard.

(c) Railings shall be constructed in a permanent and substantial manner of either pipe, metal-work or wood. One (1) or more sides may be hinged or supported in sockets.

(d) Metal railings shall be constructed of not less than one and one-quarter (1 1/4) inches standard pipe, of angle iron not less than one and one-half (1 1/2) inches by one and one-half (1 1/2) inches by three-sixteenths (3-16) inch supported on uprights of at least equal dimensions, spaced not more than eight (8) feet centre to centre.

(e) Wooden railings shall be of sound lumber, dressed on four (4) sides, and constructed as follows:

Top railing shall be not less than two (2) inches by four (4) inches, or one (1) inch by four (4) inches, provided another board of not less than one (1) inch by four (4) inches is securely nailed to sides of posts and to top rail. Centre railing shall be not less than one (1) inch by four (4) inches, supported on not less than two (2) inch by four (4) inch posts, spaced not less than eight (8) feet centre to centre.

Note—It is recommended that four (4) inch by four (4) inch posts be used.

Dimensions given above are rough lumber sizes; dressed lumber will be from one-eighth (1/8) inch to three-eighths (3/8) inch smaller, and will be accepted.

(f) Centre rail may be omitted when space between top rail and floor, or top

of toeboard, is paneled or filled with substantial material properly constructed and fastened.

(g) Existing railings not less than three (3) feet high, with an additional rail approximately midway between the top rail and floor or top of toeboard, if of substantial construction and affording proper protection, may be accepted.

Rule 880. *Standard Toeboards*. Standard toeboards shall be not less than four (4) inches high, constructed in a substantial manner, either of metal or wood, installed along the edge of any floor opening, platform or runway. Existing toeboards, substantially installed, not less than two (2) inches in height, may be accepted.

ELEVATED RUNWAYS.

Rule 881. *Elevated Runways*. The term “elevated runway” shall mean any permanent runway or platform suspended from above or supported from underneath.

(a) If six (6) feet or more above floor level, it shall be provided with standard railing and standard toeboard. Substantial chains or ropes may be used in place of the standard railing at points on platforms where materials are usually raised or lowered over the edge of the platform in the regular course of the business. Where chains or ropes are used they shall be taut when in place.

(b) Safe means shall be provided for reaching all elevated runways. Whenever permanent elevated platforms are in general use they must be equipped with a permanent stairway or stationary ladder.

Exceptions: These rules for elevated runways shall not apply:

First: To small platforms for motors or other similar equipment, unless there is standing room of at least eighteen (18) inches in width on the platform beside the equipment;

Second: To shelves used for the storage of material, on which persons have no occasion to stand;

Third: To oiling runways constructed for the sole purpose of oiling or repairing transmission equipment, provided the platform is at least eighteen (18) inches in width and is equipped with a standard railing on one side;

Fourth: To platform used for loading and unloading freight.

Fifth: To runways used in filling tank cars when equipped with standard railing on one side;

Sixth: To platforms used for pouring molten metal;

Seventh: Toeboards and intermediate rails are not required on platforms used only for storing lumber.

TRANSMISSION APPARATUS AND GENERAL MACHINERY.

Rule 882. *Horizontal Shafting*. All revolving main line, counter or jack shafts within seven (7) feet of the floor or other working level, if exposed to contact, shall be substantially encased or shall be guarded by standard railings not less than twelve (12) inches nor more than twenty (20) inches away from any moving part. Shafting under bench machines shall be substantially encased.

A shaft end exposed two (2) inches or more shall be cut off or protected by a safety sleeve.

Rule 883. *Vertical or Inclined Shafting*. All revolving vertical or inclined shafting, if exposed to contact, shall be substantially encased to a height of six (6) feet above the floor or other working level, or shall be guarded by standard railings placed not less than twelve (12) inches nor more than twenty (20) inches away from any moving part.

Existing guards for shafting (horizontal, vertical or inclined), if of substantial construction and affording proper protection, may be accepted.

Rule 884. *Clutches and Couplings*. All shaft couplings hereafter installed shall be of the safety type, with bolts and nuts countersunk or protected by a flange.

Couplings not of the safety type, and all clutches, if exposed to contact, shall be substantially encased unless mounted on shafting which is guarded by standard railings placed not less than twelve (12) inches nor more than twenty (20) inches from any moving part.

Rule 885. *Set Screws and Projecting Parts*. (a) All projecting keys in revolving shafts shall be made flush or protected with cylindrical safety sleeves, or by a stationary enclosure.

(b) All projections in revolving objects which extend beyond the plane of the rim of a pulley, gear or wheel, shall be guarded by cylindrical safety sleeves, or by a stationary enclosure.

(c) All set screws in collars on shafting shall not project beyond the surface (or flanges) of the collar.

(The covering of set screws with leather bands or wooden blocks shall not be permitted.)

Note—A standard railing shall not be considered an approved guard for set screws or projecting parts.

Note—Keys, set screws or set bolts in the hubs of pulleys outside of plane of rim shall be guarded as required above. They shall also be guarded if located on the hubs of pulleys twenty-four (24) inches or more in diameter, when such hubs are within six (6) feet of floor, or within eighteen (18) inches of a shafting bearing.

Rule 886. *Gears, Sprockets and Chains*. Gears, friction drives and sprockets, except where guarded by their location on a machine, shall be guarded as follows:

(a) They shall be completely enclosed or fitted with a band guard covering face and having side flanges extending inward beyond the root of the teeth. In the case of arm or spoke gears or sprockets over twelve (12) inches in diameter, having a spoke hazard, provision must be made to guard the opening between arms or spokes.

(b) By a substantial solid casing or screen guard covered on the top, unless the sides of the guard are at least three (3) feet high and extend at least two (2) feet above the top of the gear. The maximum required height for such guards shall be six (6) feet.

(c) The chains of chain drives, located within seven (7) feet of the floor or other working level, and traveling at a speed of forty (40) feet or more per minute, shall be enclosed on all exposed sides or guarded by a standard railing.

Note—This rule shall not apply to hoisting chains on cranes or to chain conveyors.

Rule 887. *Belts and Pulleys*. Belts more than three (3) inches wide or with a speed of more than one thousand (1,000) feet per minute, and all rope drives, shall be guarded as follows:

Guards shall not be required for belts or pulleys that are effectively guarded by location on a machine, or so located otherwise that they are not exposed to contact. Where space between machines, or between machines and walls or adjacent objects, is so limited as to prevent the use of such space as passageway or aisle, the guarding of all belts or pulleys located in such space shall not be required if such space is effectively barred against use.

1. Vertical and Inclined Belts:

(a) No guard hereafter installed shall be more than twenty (20) inches from any belt.

(b) If guard is placed four (4) inches or less from belt, with an enclosure on all exposed sides to a height of not less than six (6) feet above floor or other working level. The maximum size of openings shall not exceed one (1) inch in at least one direction.

(c) If guard is placed not less than four (4) inches and not more than fifteen (15) inches from belt, with an enclosure on all exposed sides to a height of not less than five (5) feet above floor or other working level. If guard is constructed of wire mesh, it shall not have openings greater than two (2) inches in size. Slatted guards shall not have openings greater than one (1) inch in width.

(d) If guard is placed not less than fifteen (15) inches and not more than twenty (20) inches from the belt, with an enclosure on all exposed sides to a height of not less than three (3) feet six (6) inches above floor or other working level, or by a standard railing.

(e) Guards for inclined belts shall be so installed that the vertical distance between the lower run of belt and the floor shall be not less than six (6) feet at any point outside of guard.

2. Horizontal Belts:

(a) No guard hereafter installed shall be placed more than twenty (20) inches from any belt.

(b) If upper part of belt is less than six (6) feet from floor or other working level, the guard shall extend at least fifteen (15) inches above the belt or to a height of six (6) feet, but in no case shall it be less than forty-two (42) inches high, unless the belt is completely enclosed or guarded by a standard railing not less than fifteen (15) nor more than twenty (20) inches from belt. If guard is placed four (4) inches or less from belt, the maximum size of openings shall not exceed one (1) inch in at least one direction. If guard is constructed of wire mesh, it shall not have openings greater than two (2) inches in size; slatted guards shall not have openings greater than one (1) inch in width.

(c) If lower part of belt is less than seven (7) feet from floor or other working level, to be guarded on sides and bottom, unless the space under the belt is barred against passage.

(d) Horizontal belts ten (10) inches or more in width, used for transmitting power from a prime mover (including motors) to a line shaft or between two (2) line shafts, shall be guarded whenever running over a passageway, or where employees are regularly working underneath.

(e) Every spoke pulley revolving at a speed of more than fifty (50) revolutions per minute, the bottom of which is six (6) feet or less above the floor, or other working level, shall be protected by fitting in the spokes or by guarding as required for belts.

3. *Exceptions: Vertical, Inclined and Horizontal Belts.*

(a) Flat belts two (2) inches or less in width, and round belts three-quarters (3/4) of an inch or less in diameter, need not be guarded unless they run at a speed in excess of seventeen hundred (1,700) feet per minute.

(b) Belts over two (2) inches wide and not over three (3) inches wide, running at a speed of not over one thousand (1,000) feet per minute, shall be guarded to a point six (6) inches above the top of the pulley, if the bottom of the pulley is within twelve (12) inches or less from the floor or other working level. If a standard railing is used, it shall be not less than fifteen (15) inches nor more than twenty (20) inches from belt.

(c) Inside cone pulley belts requiring frequent manipulation by hand need not be guarded. Overhung cone belts shall have a fence or standard railing to guard the back and end of the cone, or an enclosure extending the height of the cone, when the latter is less than three (3) feet six (6) inches high.

(d) Where it is necessary to have access to parts enclosed by guard, suitable doors or gates may be provided in guard.

(e) Existing belt and pulley guards, if of substantial construction and affording proper protection, may be accepted.

(f) Notwithstanding the foregoing provisions of Rule 887, the Industrial Commission may require guards for belts and pulleys in any case where a special hazard exists.

Rule 888. *Passage between Belts.* Where passageway between upper and lower part of the belt is necessary, the sides of belt up to the point of passageway shall be guarded, and a substantial passageway completely enclosed on sides and top shall be provided, or space traversed by belt barred against passage.

In rooms or parts of rooms used exclusively for transmission machinery, the Industrial Commission may define certain passageways for the use of oilers and millwrights and require the guarding of pulleys, belts and shafts along these passageways only.

Rule 889. *Fly Wheel Guards.* All fly wheels on prime movers shall be guarded in the following manner:

(a) If a standard railing is used, it must be placed not less than six (6) inches nor more than twenty (20) inches from the wheel, provided that such railing shall be not less than fifteen (15) inches from spokes of wheel or projections. If wheel runs in a pit or within two (2) inches of the floor, a standard toeboard shall also be installed. If passage over journal is necessary, the railing and toeboard shall be carried over journal at standard height.

(b) If guard is placed less than six (6) inches from wheel, it shall be not less than five (5) feet high and constructed of either solid material or wire mesh of not more than two (2) inches between members, except that when fly wheel is less than five (5) feet in height, the guard shall be not less than the height of the wheel from the floor. In no case, however, shall guard be less than three (3) feet six (6) inches high, unless wheel is completely enclosed, including the top.

(c) Fly wheels other than those on prime movers shall be guarded as set forth in this rule, or in accordance with the provisions of Rule 887, subdivision 2-e.

(d) Existing fly wheel guards, if of substantial construction and affording proper protection, may be accepted.

Rule 890. *Crank and Connecting Rods.* Cranks and connecting rods, unless guarded by location, shall be enclosed in such a way as to prevent accidental contact with them, or shall be guarded by a standard railing placed not less than fifteen (15) inches nor more than twenty (20) inches from the moving parts.

Rule 891. *Tail Rods or Extension Piston Rods.* Tail rods shall be enclosed in such a way as to prevent accidental contact with them, or shall be guarded by a standard railing on sides and end, with a clearance at end of not less than fifteen (15) inches when rod is fully extended.

Rule 892. *Governors.* Every engine shall be equipped with an effective governor to automatically control the speed of the engine under varied loads; except in case of reversing engines without fly wheels, or an engine connected by shaft, coupling or gears to a constant load, such as a blower, centrifugal machine, or hydro-extractor.

(a) Revolving governor balls six (6) feet or less from the floor, or other working level, shall be guarded by a substantial wire screen of not less than No. 20 U. S. standard gauge, or solid enclosure extending to the top of the governor balls when at their highest position.

Rule 893. *Engine Stops.* Any engine of five hundred (500) or more horsepower, where a regular operator is not constantly in attendance, shall be equipped with an automatic stopping device independent of the regulating governor.

Note:—It is recommended that an automatic stopping device be installed on all engines less than five hundred (500) horsepower, where a regular operator is not constantly in attendance.

Rule 894. *Valves.* When valves in daily use are so located that they cannot be reached from the floor, a permanent platform, runway or other safe means shall be provided for their manipulation or operation.

Rule 895. *Clutch or Loose Pulley on Machines.* Every machine not operated by individual motor shall be equipped with a clutch, loose pulley or other device for disengaging power. Where a loose pulley is used, a belt shifter shall be provided. The mechanism for stopping machines shall be convenient to the operator. The provisions of this rule shall not apply to (a) group-driven machines where the shutoff device is within a reasonable distance of each operator; (b) grinding, buffing or polishing wheels operated in groups of ten (10) frames or less; (c) grindstones; (d) blowers; (e) centrifugal pumps.

Rule 896. *Counterweights.* All counterweights exposed to contact shall be guarded the entire distance from the floor or bottom support. Such guard shall be constructed of wood or metal, and shall extend to at least one-half (1/2) the height of the counterweight, when it is at its highest position; other equally effective devices may be used. This rule shall not apply to elevator counterweights, governor counterweights, and all other kinds of counterweights of less than ten (10) pounds weight, when the bottom of the weight at the highest point of its travel is eight (8) feet or less from the floor.

Rule 897. *Grinding and Polishing Machinery.* Grinding wheels six (6) inches or more in diameter, constructed of emery or other abrasive material liable to fracture, shall be guarded by either protection hoods, protection flanges, or protection chucks, as follows:—

Hoods:—

(a) Protection hoods must be securely fastened in place.

(b) Hoods shall be designed and constructed so that the peripheral protecting member can be adjusted to the constantly decreasing diameter of the wheel by means of an adjustable tongue, or its equivalent, so that maximum protection is afforded the operator at all times.

(c) Hoods shall be either cast or fabricated.

(d) Cast hoods shall be defined as hoods which have the peripheral protecting member cast integral with at least one side member.

(e) Fabricated hoods shall be defined as hoods which are built up or constructed by either bolting, pinning, riveting or welding the peripheral protecting member to the side members.

(f) Cast hoods may be made either of gray iron castings, malleable iron castings or steel castings.

(g) Fabricated hoods may be made either of structural steel plate, wrought iron plate or a material possessing an equivalent tensile strength.

(h) Cups, cylinders and sectional ring wheels shall be either protected with hoods, enclosed in protection chucks, or surrounded with protection bands. Not more than one-quarter (1/4) of the height of such grinding wheels shall protrude beyond the provided protection.

FLANGES.

General.

(a) Wheels shall never be run without flanges on each side.

(b) All straight flanges and tapered flanges ten (10) inches and smaller in diameter may be made of cast iron. All tapered flanges over ten (10) inches in diameter shall be of steel, or other material of equal strength.

(c) Both flanges, whether straight or tapered, in contact with the wheels shall be of the same diameter.

(d) Each flange, whether straight or tapered, shall be relieved or recessed at the center at least one-sixteenth (1/16) of an inch on the side next to the wheel for a distance as specified in the respective tables of dimensions for straight and tapered flanges.

Straight Flanges.

Size of straight flanges for straight wheels shall not be less than shown in column B of Table (A).

TABLE (A).

Dimensions for Straight Flanges Used with Straight Wheels Which Are Protected with Hoods.

A	B	C	D
Diameter of Wheel in Inches.	Minimum Outside Diameter of Flange.	Minimum Diameter of Recess.	Minimum Thickness of Flange at Bore.
6	2	1	3/8
8	3	2	3/8
10	3 1/2	2 1/4	3/8
12	4	2 3/4	1/2
14	4 1/2	3	1/2
16	5 1/2	3 1/2	5/8
18	6	4	5/8
20	7	4 1/2	5/8
22	7 1/2	5	5/8
24	8	5 1/2	5/8
26	8 1/2	6	5/8
28	10	7	3/4
30	10	7	3/4
36	12	8	7/8
48	16	12	1 1/4

TABLE (B).

Dimensions for Tapered Flanges Used with Tapered Wheels Which Are Not Protected with Hoods.

A—Maximum flat spot at center of flange.
B—Flat spot at center of wheel.
C—Minimum diameter of flange.
D—Minimum thickness of flange at bore.
E—Minimum diameter of recess in taper flanges.
F—Minimum thickness of each flange for single taper at bore.

Diameter of Wheel in Inches.	A	B	C	D	E	F
6	0	1	3	3/8	2	3/8
8	0	1	5	3/8	3 1/2	3/8
10	0	2	6	1/2	4	1/2
12	4	4 1/2	6	5/8	4	5/8
14	4	4 1/2	8	5/8	5 1/2	9/16
16	4	6	10	5/8	7	7/8
18	4	6	12	3/4	8	1
20	4	6	14	3/4	9	1
22	4	6	16	3/4	10 1/2	1 1/8
24	4	6	18	3/4	12	1 1/8
26	4	6	20	3/4	13 1/2	1 1/8
28	4	6	22	7/8	14 1/2	1 1/4
30	4	6	24	7/8	16	1 1/4
36	4	6	28	1	20	1 3/8

FOR FUTURE INSTALLATIONS.

Minimum Sizes of Machine Spindles in Inches for Various Diameters and Thicknesses of Grinding Wheels.

Diameter in Inches.	Thickness of Wheel in Inches.
6	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
7	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
8	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
9	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
10	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
12	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
14	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
16	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
18	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
20	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
24	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
26	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
30	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4
36	1/4 3/8 1/2 5/8 3/4 7/8 1 1/8 1 1/4

Ends of spindles shall be so threaded that the nuts on both ends will tend to tighten as the spindles revolve.

Suitable eye protection shall be provided for operators on grinding wheels.

Rule 898. *Metal Planers.* The openings in the bed of all metal planers shall be covered with substantial metal or other suitable covering. Where the table or work thereon travels to within eighteen (18) inches of a wall or other object, the clearance space between the end of a table or work thereon and such wall or object, shall be protected by a standard railing on each side of such clearance space.

Rule 899. *Machines Where Bar Stock Is Used.* Bar stock projecting beyond the headstock of machine and revolved by power shall have a substantial guard extending the entire length of such stock.

Rule 905. *Circular Rip Saws.* Circular rip saws shall be equipped with a stationary or adjustable hood or guard, and in addition thereto, where the nature of the work will permit, by a spreader.

Circular saws that are exposed to contact beneath the table shall be completely enclosed on the underside. Where metal guard is used, it shall be not less than No. 20 U. S. standard gauge.

Rule 906. *Self-Feed Circular Rip Saws.* Tooth sprockets or feed rolls shall be guarded on the front to within three-eights (3-8) inch of the work. Where metal guard is used, it shall be not less than No. 20 U. S. standard gauge.

Rule 907. *Circular Cross Cut Saws.* Circular cross cut saws having fixed bearings shall be equipped with stationary or adjustable guards.

Circular saws that are exposed to contact beneath the table shall be completely enclosed on the underside. Where metal guard is used it shall be not less than No. 20 U. S. standard gauge.

Where special operations require the removal of saw guards, when it is impossible to perform the work with the guard in place, such guard shall be replaced upon completion of such special work.

Rule 908. *Swinging Cross Cut Saws.* Swinging cross cut saws shall have the saw enclosed to prevent accidental contact, a stop to prevent the saw swinging beyond the front edge of table, and belt protected by a shield or knuckle guard. An effective stop shall be placed at the end of the counterweight level, so that weight cannot accidentally slip off the lever.

Rule 909. *Moulding and Sticking Machines.* The cutting heads of moulding and sticking machines when exposed to contact shall be guarded.

Rule 910. *Tenoning Machines.* Knife heads, sows and all other exposed moving parts shall be guarded.

Rule 911. *Wood Shapers.* The cutting heads of wood shapers shall be provided with a guard that will prevent the hands of the operator from coming in contact with the knives.

Where special operations require the removal of shaper guards, when it is impossible to perform the work with the guard in place, such guard shall be replaced upon completion of such special work.

Rule 912. *Jointers.* Hand jointers shall be equipped with cylindrical cutter head and a guard which adjusts automatically over the knives.

Where special operations require the removal of jointer guards, when it is impossible to perform the work with the guard in place, such guard shall be replaced upon completion of such special work.

A safety pusher shall be provided where short pieces are jointed.

Rule 913. *Sanding Machines.* Disc sanders shall have the periphery and back of revolving head guarded, and the space between revolving disc and edge of table shall not be greater than one-quarter (1/4) inch.

Rule 914. *Post or Column Sander.* Post or column sanders shall have the belt from swivel to head guarded.

Rule 915. *Mortising Machines.* Mortising machines shall be provided with thumb stops on each side of chisel.

Rule 916. *Floor Space around Wood-working Machinery.* The floor where operator stands in operating machines such as wood shapers, jointers and circular saws, must be provided with approved means of preventing slipping.

Note: Wood Milling Machines. It is recommended that an air blast be directed against the work and away from the operator while machine is in operation.

VATS AND PANS.

Rule 917. (a) *Vats and Pans.* All vats, pans and tanks containing hot liquids, acids or other injurious chemicals, when so set that the opening or top thereof is less than thirty (30) inches from the floor or other working level, shall be guarded on all sides by a standard railing or by a substantial railing of such height that the distance from floor or other working level to the top of such railing, shall be not less than three (3) feet, or the top shall be entirely covered except when loading or unloading.

In the case of such open vats, pans, and tanks, where the top is less than three (3) inches from the floor or other working level, a standard toeboard shall be installed in addition to the railing.

(b) The sides of tanks used in connection with paper mill beater engines shall, in existing installations, be not less than thirty-six (36) inches above the floor or other working level; and, in future installations, not less than forty-two (42) inches above the floor or other working level. If less than thirty-six (36) inches in existing installations and forty-two (42) inches in future installations, such tanks shall be guarded by a substantial rail not less than forty-two (42) inches nor more than fifty-four (54) inches from the floor, extending to a point not less than seven (7) feet from cover of beater cylinder.

This rule shall not apply to grainers in salt works, or soaking vats in tanneries.

CRANES.

The following rules apply only to traveling cranes and are in addition to rules specified elsewhere for general machinery, but do not apply to traveling cranes operated by hand.

Rule 918. *Traveling Cage Cranes.* It is recommended that no person shall operate any traveling cage crane except the regular crane operator, authorized substitute, crane repair man, or an inspector.

Foot brakes, or other approved means, shall be provided to control the bridge travel of all traveling cranes operated from cages.

All cranes of five (5) or more tons' capacity shall be provided with two (2) brakes for each hoist, either an electrical and mechanical or two (2) electrical.

The tracks on which all overhead traveling cranes run shall have at each end thereof and attached thereto bumpers. The height of bumper above rail shall be equal to at least one-third (1/3) of the truck wheel diameter. Bumpers shall be built up of plates and angles or made of steel casting. This rule shall also apply to trolley as well as bridge tracks.

It is recommended that both truck wheel bumpers and trolley bumpers be fastened to the girder and not to the rails.

On all traveling cage cranes, except monorail cranes, there shall be provided a footwalk along the entire length of the bridge, preferably on the motor side. Such walk shall be at least five (5) feet, preferably six (6) feet six (6) inches, below the bottom of the overhead trusses, and shall not be less than eighteen (18) inches in width, except where it passes the bridge motor, where it may be reduced to fifteen (15) inches. A standard railing shall also be provided on the outer side of footwalk. Standard toeboard shall be installed on all open sides or the opening between footwalk and bridge girder may be closed.

Safe means shall be provided for passing from crane cab to bridge footwalks and shall consist of fixed ladders or stairs with hand rails.

Each crane shall be provided with a stairway with hand rails or permanent ladder giving access to the crane cab. If ladder is used, it shall extend not less than four (4) feet above the floor of the crane cab. The opening between the crane cab and ladder or stairway shall not exceed eighteen (18) inches.

All bridge truck wheels shall be equipped with fenders, which shall project in front of wheels and extend slightly below top of rail on each side.

It is recommended that all cranes shall be equipped with a hand or foot-operated signal gong. If such signaling device is provided, a tray or other suitable device shall be placed under it in such manner as to prevent gong or parts falling.

Tool box or other receptacle shall be placed in the cage or on the runway in which shall be kept oil cans, tools, etc.

The rated capacity of each crane in tons shall be marked on the bridge girder in such manner as to be clearly legible from the floor.

Rule 919. *Gantry Cranes.* All bridge truck wheels shall be equipped with fenders, which shall project in front of wheels and extend slightly below top of rail on each side.

An unobstructed passageway, not less than thirty (30) inches wide, shall be maintained parallel to and extending the entire length of the tracks upon which any gantry crane is operated.

It is recommended that an automatically operated bell or other effective warning device, which shall operate at all times while crane is traveling, shall be provided on all gantry cranes.

Rule 920. *Monorail Cranes.* All monorail crane systems operating on various tracks or spurs shall be so arranged or constructed that it will be impossible to run the crane into an open switch.

Where traveling bridge or transfer serves several spur tracks, a lock shall be provided that will assure positive alignment for traveling hoist.

It is recommended in relation to female operatives: That where their hair is in

danger of being caught in moving machinery, they shall wear caps or hair-nets. That where their clothing is in danger of being caught in moving machinery, they shall wear overalls. That they wear shoes with low heels.

Note: The rules for guarding dangerous machinery will be supplemented from time to time by rules for guarding machines other than those specifically referred to therein, and in the absence of such additional rules, the Industrial Commission may require guards in any case where a special hazard exists.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules for Dangerous Machinery with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said Rules for Dangerous Machinery and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL] WILLIAM S. COFFEY, Secretary.

Rule Relating to Smoking in Protected Portions of Factories or in Special Classes of Occupancies.

RULE 15.

Meaning of Terms.

"Contents" means articles, goods, wares and merchandise packed, stored, manufactured or in process of manufacture.

"Incombustible" means contents which will not support combustion.

"Non-inflammable" means contents which will support combustion but will not readily burn.

"Explosives" means and includes any chemical compound or any mechanical mixture that contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities or packing that an ignition by fire, by friction, by concussion, by percussion or by detonator of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant gaseous pressures are capable of producing destructive effects to contiguous objects or of destroying life or limb.

"Fireproof construction" means a building constructed as specified in section 79-f of the Labor Law.

"Mill construction" means a building not more than five (5) stories high, constructed of slow burning materials, and in which the exterior, division and party walls, skylights and roof covering are of fireproof material; stairway and hoistway enclosures of fireproof material and openings in such enclosures protected by fire doors, and with floors and roofs of heavy plank and timber construction.

"Approved" means approved by the Industrial Commission.

"Tenant Factory" building, for the purposes of this Rule, means a building, separate parts of which are occupied and used by two or more persons, companies or corporations engaged at manufacturing, and where the elevator, hallways or exist stairs are used in common by more than one such person, company or corporation.

(a) Smoking may be permitted in a factory upon written application by an employer, and after the issuance of a permit by the Fire Commissioner of the City of New York in such City, and elsewhere the Industrial Commission. The permit shall state the conditions under which, the hours between which, and the place or places in such factory where smoking may be permitted, and shall be framed and posted in a conspicuous place in the factory.

(b) Smoking may be permitted, as prescribed in this rule, on compliance with requirements in subdivision (a), when conditions are substantially as follows:

In a factory building used by one person, company or corporation for Factory purposes:

(1) If of fireproof construction where the contents are either non-inflammable or incombustible.

(2) If of mill construction where the contents are incombustible.

(3) If of other than fireproof or mill construction where contents are non-inflammable and no manufacturing or other work in connection therewith is carried on above the second floor, provided there are at least two (2) approved exits remote from each other on the second floor, if such floor is used for factory purposes.

(4) If of other than fireproof or mill construction where contents are non-inflammable and manufacturing or work in connection therewith is carried on above the second floor, in offices, sample rooms and separate rooms that are enclosed by partitions of fireproof or fire-resisting materials, or in which an automatic sprinkler system, approved for the purposes, is installed. Manufacturing shall not be carried on in any such room.

In a tenant factory building:

(5) If of fireproof construction and equipped with an approved automatic sprinkler system, except that smoking may be further restricted to a separated room or rooms set apart for the purpose and in which no inflammable material is manufactured, used or stored.

(6) If of fireproof construction, or equipped with an approved automatic sprinkler system, in factories where cigars or cigarettes are manufactured and smoking therein is permitted only for sampling, testing and experimental purposes.

(7) If of other than fireproof construction, in offices, sample rooms and separate rooms, for sampling, testing and experimental purposes in connection with the manufacture of cigars or cigarettes, provided such room or rooms are enclosed by partitions of fireproof or fire-resisting material, or in lieu thereof there is installed therein an automatic sprinkler system approved for the purpose.

(8) If of other than fireproof or mill construction where contents are non-inflammable and no manufacturing or other work in connection therewith is carried on above the second floor, provided there are at least two approved means of exit remote from each other on the second floor and an automatic sprinkler approved for the purpose installed on the first and second floors of such building.

In any factory building (except as otherwise provided):

(9) In foundries, forge shops, boiler and engine rooms.

(10) In cigar or cigarette factories, for sampling, testing and experimental purposes, where less than six (6) persons are employed at manufacturing.

(3) SMOKING SHALL NOT BE PERMITTED:

(1) In any building or on the premises connected therewith where explosives are manufactured, used or stored.

(2) In buildings commonly known as flour, feed and cereal mills and malt house elevators.

(3) In offices, sample rooms or separate rooms set aside for the purpose, through which it is necessary to pass to reach a required means of exit.

(d) GENERAL REQUIREMENTS:

(1) Fireproof receptacles shall be provided for all waste paper and other inflammable waste materials in factory buildings or protected portions thereof in which smoking is permitted.

(2) Celluloid eye shades or cuff protectors, or any devices of similar nature, shall not be used where smoking is permitted.

(3) In portions of a factory where smoking is prohibited, notices of such prohibition shall be posted.

VIOLATIONS.

It is in violation of the provisions of the Labor Law and the Industrial Code:

(1) For any person to smoke in a factory or any portion thereof, unless a permit to smoke is posted in a conspicuous place in the factory.

(2) For any person to smoke in any portion of a factory building to which a permit does not relate.

(3) For any persons to smoke in any factory or portion thereof if the conditions upon which a permit was issued are not maintained.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules-Smoking with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said Rules-Smoking and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL] WILLIAM S. COFFEY, Secretary.

Rule Relating to Lighting of Factories and Mercantile Establishments.

RULE 50.

General Requirements.

(a) Working or traversed spaces in buildings or grounds shall be supplied during the time of use with artificial light, in accordance with the following rules, when natural light is less than the intensity specified in Subdivision (c).

Measurements.

(b) For the purposes of light measurements a standardized photometer shall be used and such measurements shall be made at locations specified in the table.

Intensity.

(c) The minimum intensity shall not fall below the figures given in the following table:

	Foot-candles at Floor Level— Minimum Required.
1. Roadways and yard thoroughfares.....	0.02
2. Storage spaces, stairs, stairways, halls, hallways, passageways, aisles, exits and elevator entrances.....	0.25
3. Water closet compartments, toilet rooms, washrooms, dressing rooms and elevator cars	0.50
4. Work not requiring discrimination of detail such as handling material of a coarse nature and performing operations not requiring close visual application	0.50
5. Rough manufacturing requiring discrimination of detail, such as rough machining, rough assembling, rough bench work, also work in basements of Mercantile Establishments requiring discrimination of detail	1.00
6. Rough manufacturing requiring closer discrimination of detail, such as machining, assembly and bench work, also work in basements of Mercantile Establishments requiring closer discrimination of detail, intermediate between 5 and 7.....	2.00
7. Fine manufacturing, such as fine lathe work, pattern and tool making, also office work, such as accounting and typewriting.....	3.00
8. Special cases of fine work such as watch making, engraving and drafting	5.00

Shading of Lamps.

(d) Exposed bare lamps located less than 20 feet above the floor level shall be provided with shades, reflectors, diffusing glassware or other accessories to eliminate or minimize glare.

This rule shall not apply to lamps used for a temporary decorative purpose where an unusual or harmful glare is not created.

Distribution of Light.

(e) Lamps shall be so installed in regard to height, spacing reflectors or other accessories, as to secure a good distribution of light on the work, avoiding objectionable shadows and excessively sharp contrasts.

Emergency Lighting.

(f) Where required, shall have a minimum intensity of 0.25 foot-candle.

APPENDIX.

Notes and Recommendations.

Daylight—Special attention should be given to daylighting facilities in order that the darkest part of any working space should, under normal daylight conditions, be illuminated by natural light, to not less than the intensities specified in subdivision (c). It is recommended that the minimum intensities of natural light should considerably exceed those specified for artificial light in subdivision (c).

The intensity requirements for adequate daylighting are much higher than those for adequate night lighting, because under daylight conditions the brightness of objects in the field of vision is generally much greater than at night, and hence for good visibility a correspondingly more intense light must fall on the object viewed.

When part daylight and part artificial light are used a higher intensity is usually required than for artificial light alone.

Glare, whether from direct sunlight or skylight, should be avoided. This usually requires the provision of window shades, awnings, diffusive or refractive window glass, especially where the location of the work is such that the worker must face the windows.

Measurements of Illumination.

The expression "at the work" means the location at which the principal illumination is required. Measurement of the illumination is to be made at this location in the usual plane in which the work is done; that is, on the horizontal, vertical or an intermediate plane, as the case may be.

Intensity.

Explanation of foot-candle. The foot-candle, the common unit of illumination, is the lighting effect produced upon an object by a standard candle at a distance of one foot; at two feet the effect would be not one-half, but one-quarter foot-candle, at three feet, one-ninth foot-candle, etc.

Minimum and desirable illumination. The minimum foot-candles in subdivision (c) specify the lowest illumination with which the employee can be properly safeguarded against both accident and eye strain. It is to the advantage of the employer to provide the corresponding intensities of modern practice listed in the following table of desirable illumination, as such provision results in reduced eye-strain, greater accuracy of workmanship, increased production and less spoilage.

Desirable Illumination.

	Foot-candles at Floor Level, Modern Practice.
1. Roadways and yard thoroughfares	0.05 to 0.25
2. Storage spaces	0.50 to 1.00
3. Stairs, stairways, halls, hallways, passageways, aisles, exits, elevator entrances and elevator cars	1.00 to 2.00
4. Work not requiring discrimination of detail	1.00 to 2.00
5. Rough manufacturing requiring discrimination of detail	2.00 to 4.00
6. Rough manufacturing requiring closer discrimination of detail	3.00 to 6.00
7. Fine manufacturing	4.00 to 8.00
8. Special cases of fine work	7.00 to 15.00

In the above table, the upper portion of the range of modern practice intensities is preferable to the lower in most cases. Sometimes even higher intensities than those cited are desirable; for example, in very fine manufacturing operations, such as special engraving and dark colored lace work, an intensity exceeding 20 foot-candles is not uncommon in modern practice.

Interpretation of the Intensity Classification in Subdivision (c).

There is no sharp line of demarcation between the intensity requirements set forth in adjoining subdivisions of subdivision (c) for different classes of work.

The intensity of light required for an industrial operation or process depends upon the visual discrimination required in the performance of the work, the continuity of the visual application and many other factors, some of which may be briefly stated as follows: (1) Glare from (a) a large quantity of light in the field of view, (b) a high brightness of light in the field of view, (c) specular reflection from shiny surfaces, or a combination of (a), (b) and (c); (2) color of light, color of surroundings, color of goods or work; (3) direction of light; (4) diffusion

of light. All of these involve the factor brightness contrast. The system of lighting, direct, indirect or semi-direct, must be taken into consideration.

Table of Minimum Intensities for Detailed Industrial Operation and Processes.

The following classification of minimum illumination intensities at location of work is tentative and is submitted for the guidance of factory owners and managers. The data in this table are based upon tests in modern lighting installations.

It is the intention of the Industrial Commission to make the intensity requirements of this table mandatory on July 1, 1919, if, after public hearings and a year's experience, the same are found to be adequate and just.

It is suggested that shop managers have tests made of present illumination and advise the Bureau of Industrial Code (230 5th ave., New York) the results of such tests, together with their recommendations:

	Minimum Foot-candles at the Work.
Bakeries— Mixing and baking operations	1.00
Boiler Rooms— Boiler rooms (general)	0.25
Pumps, condensers and apparatus	1.00
Brewing— Brew-house (general), cleaning, malt mills, beer kettles, mash tubs, rice cookers, beer cooling coils, ferment room, stock room, filter room	0.50
Beer keg washing, cooperage, racking or keg filling, automatic bottle filling machine	1.00
Candy Manufacturing— Mixing, cooking, hand-dipping, machine-dipping, cutting, cream-beating, cooling, wrapping, packing, weighing	1.00
Machine operations	2.00
Chemical Manufacturing— Furnaces, roasters, stills, precipitation, crushing, grinding, crystallizing, mixing tanks, evaporating, filtering	0.50
Extractors, compounding	1.00
Cigars and Cigarettes— Stripping, cigarette packing (hand and machine)	1.00
Hand rolling, banders (hand), banding machines (cigarettes)	2.00
Automatic cigarette machines, paper punch machines, cork-tipping machines, cylinder dressing machines (for tobacco)	1.00
Dairy Products— Cooler rooms, washing machines, pasteurizing apparatus, cream separators, ice cream freezers, churns, clarifiers	0.50
Bottle-filling, bottle-cappers, butter-worker, butter-printing, ice crushers	1.00
Packing and shipping	1.00
Electric Cable Manufacturing— Flexible conduit and armor cable machines	1.00
Engine Rooms— At machines and engines	1.00
Switchboards and transformers	2.00
Fertilizer Manufacturing— Cookers, pressers, fertilizer dryers, fertilizer mills	0.50
Foundries— Rough molding, tumbling barrels, charging floors, cleaning at cupola	0.50
Fine molding, grinding, machine molding	1.00
Coremaking	2.00
Glass Industries— Furnaces, annealing ovens, glass blowing	0.50
Mixing room	0.50
Grinding	1.00
Polishing	2.00
Etching	3.00
Cutting	5.00
Grinding, Buffing and Polishing— Rough work	1.00
Medium work	2.00
Fine work	3.00
Ice-making— Ammonia valves, tank floor, compressed air hoist, compressors, dipping tanks, at run to storage, ammonia pump	0.50
Jewelry— Gold and silver polishing, buffing, burnishing, punch-presses, clock assembling and repairing	5.00
Engraving, stone setting, modeling, saw piercing, jewelery, designing	5.00
Laundries— Washing machines, hydro-extractors, starching	0.50
Sorting, marking and folding	1.00
Hand ironing	1.00
Leather Gloves— Cutting	3.00
Sewing and stitching (machine or hand), examining, finishing	5.00
Machine Shops— Rough bench work, machine work, assembling	1.00
Medium bench work, machine work, assembling	2.00
Fine bench work, machine work, assembling	3.00
Meat Packing— Slaughtering, casing machine, casing department, beef coolers, packing, extractors, sausage casing machines, dressing, post mortem inspection, offal work, scalding vats, automatic dehairing machine, cleaning and cutting, grinding, casing, cooking	2.00
Milling and Grain Products— Dust collecting apparatus, grain elevators, general operations in work-rooms	0.50
Separator, scouring, grinding, bolting, bagging, packing, all automatic machines	1.00
Paint Manufacturing— Color drying rooms	0.50
Compounding room, mixers (pony, liquid, cyclone), grinding mills, striking vats, boiling tubs, drying pans, putty chaser, can filling, can labeling, can soldering	1.00
Paper Box Manufacturing— Power paper cutting machines, slitting machines, scoring machines, automatic machines, stripping, top labeling machines, bench work (hand)	1.00
Corner staying machines, corner cutters	2.00
Paper and Pulp Mills— Wood grinders, acid plant, barkers, digesters	0.50
Paper machines, calendar rolls, winders, beaters, wet press, screening	1.00
Pearl Button Manufacturing— Grading machines, wet and dry polishing	0.50
Grinding machines, cutting blanks and shells, carding buttons, hand turning, automatic machines	1.00
Sorting of waste, sorting for thickness	2.00
Grading for color and defects	2.00
Printing Industry— Metal pots	0.50
Stereotype casting	0.50
Job printing presses, cylinder presses, paper ruling machines	1.00
Lithographing, electrotyping, trimming saws	2.00
Linotype and monotype machines, hand typesetting, proofreading	3.00
Engraving	5.00
Rubber Manufacturing— Vulcanizing	0.50

	Minimum Foot- candles at the Work	Light.	Dark.
Compounding scales, tubing machines, rubber spreading machines, starching machines, cloth printing machines, acid-curing room, churn room ..	1.00		
Grinding mills, calenders, washing machines ..	1.00		
Pressing forms ..	2.00		
Shoe Manufacturing—			
Buffing, cutting, channeling soles, lasting, weltng, trimming uppers, miscellaneous bench and machine work, stitching (hand and machine), turning ..	2.00		
Inspection, treeing, cleaning, finishing ..	5.00		
Soap Manufacturing—			
Kettle-house, dryer, mixers, soft soap vats, blotter, framing ..	0.50		
Soap press, soap mills ..	1.00		
Steel Mills—			
Charging floors, loading yards ..	0.25		
Rolling mills, sheet and bar mills, reheating furnaces ..	0.50		
Wire drawing and straightening mills ..	1.00		
Tanneries—			
Dehairing, dehairing forms, pressing, tacking boards ..	0.50		
Tanning paddle vats, putting-on machines, team dryers, coloring and dyeing, measuring machines, blooding ..	0.50		
Glazing machines, ironing machines, staking (knee, arm, machine), finishing tables, abrasive wheels, shaving machines, buffing, sorting of raw hides (for color after shaving), beamsters (or fine dehairing) ..	1.00		
Woodworking—			
Carriage saws in long mills, mortiser machines, wood boring and bench ..	1.00		
Circular saw, band saw, swing saw, jointer, wood shaper, tenoning machine, planer, veneer cutter, resaws, woodturning machines, sandpaper machines ..	3.00		
Textiles (Cotton)—			
Receiving and opening bales, openers, pickers, lappers, cards, slashers ..	0.25	0.50	
Drawing frames, fly frames (slubbers and speeders), spinning frames (ring), twisters, spoolers, warping, doublers, nappers ..	0.50	1.00	
Weaving, knitting, inspecting ..	1.00	2.00	
Textiles (Wool)—			
Receiving and opening bales, pickers (burr, mixing and rag), cards (breaker) ..	0.25	0.50	
Garnetting machines, spoolers, cards (finishing), spinning (mule or jack), winders, washing extractors, boarding ..	0.50	1.00	
Knitting frames, cutting, sewing machines (ribbing, finishing, seaming), examining ..	1.00	2.00	
Clothing—			
Clothing, finishing and inspecting ..	3.00	5.00	
Pressing and sponging ..	1.00	1.00	
Cutting ..	2.00	2.00	
Shrinking ..	0.50	0.50	

Some Exceptions to the Intensity Rule.

(a) There are some operations that are performed in comparative darkness, as, for example, photographic processes in the dark room.

(b) There are some operations that are best observed by their own light, as in parts of the process of working glass.

(c) Some operations are best observed by the "silhouette" method of lighting, in which the work is seen against a lighted background in a comparatively dark room, as in some processes of working with dark threads and lamp filaments.

In all such cases in which work is of necessity carried on in comparative darkness, special precautions should be taken to properly safeguard the workmen.

Allowance for Depreciation.

In order that the illumination should not fall below the specified minimum during the interval between inspections or cleanings, installations should be so designed as to produce initial illumination values at least 25% higher. Lamp and accessories should be kept clean.

Shading of Lamps.

This rule is intended to eliminate the use of exposed bare lamps in the ordinary field of view. Intense sources of light in the field produce eye strain, interfere with good vision and increase liability to accident.

Distribution of Light—Overhead Lighting Desirable.

General illumination by properly arranged overhead lighting is the best method of securing a good distribution of light on the work. Where a very high intensity of light is required, it is sometimes desirable to supplement the general illumination by local lighting produced by shaded lamps mounted close to the work. When this method is used the field of illumination from each item is apt to be in strong contrast to the darker surroundings, thereby causing eye-strain and increasing accident hazard; hence such local lighting should not be used as the sole source of illumination. Where the light from the local lamps falls principally on surfaces which are light in color and the ceiling and walls also are light in color, there may be sufficient general illumination received indirectly by reflection to obviate the necessity of additional overhead lighting.

In general, light sources should not approach a point in dimension but should be reasonably large, and considerable light should be diffused about the room.

Diffused Light vs. Directed Light.

For most kinds of work a diffused light is desirable, for example, in such work as drafting; for others, a highly diffused light makes seeing difficult; for example, in sewing on dark goods and typesetting, where a directed light producing sharp contrast of light and shade is desirable.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:
I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules—Lighting, with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said Rules—Lighting, and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL.] WILLIAM S. COFFEY, Secretary.

*Rule Relating to Window Cleaning.**RULE 5.*

The term "outside" shall mean wholly without the building.

The term "approved" shall mean approved by the Industrial Commission.

In factory buildings and mercantile establishments more than one (1) story high or in which the sills of windows are located more than ten (10) feet above grade or adjoining flat roof, safety devices for the protection of window cleaners shall be provided, when windows are cleaned from the outside.

(a) When windows are cleaned from the sill a safety belt of heavy leather, canvas, rope or other equally strong material shall be provided.

Bolts, rings or other fittings for holding the belt shall be of bronze, brass or other approved durable metal, and shall be firmly fastened to sides of window or building at a point not less than fifty-one (51) inches above the sill.

The ends of the belt shall be fitted with heavy metal safety terminals.

(b) When windows are cleaned from a scaffold, it shall be of substantial construction and fitted at exposed side and ends with guard rail not less than thirty-six inches high, and toe boards not less than six (6) inches high.

The proper tackle and other necessary fittings shall be provided when swinging scaffold is used.

(c) Portable ladders when used shall be fitted with safety feet or other suitable means to prevent slipping.

(d) Window cleaners shall use safety devices provided for their protection.

(e) Window cleaners shall not pass from window to window on the outside, except where a railing is installed.

(f) The provisions of this rule shall not apply to windows leading to a fire escape.

(g) Existing safety devices and methods of cleaning windows other than those specified above may be approved on application to the Industrial Commission.

(h) Both the owner and tenant shall be responsible for the observance of this rule.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules, Window Cleaning, with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said Rules, Window Cleaning, and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL.] WILLIAM S. COFFEY, Secretary.

*Rule Relating to Automatic Sprinkler Systems (Not Applicable to the City of New York).**RULE 75.*

1. Definition of Automatic Sprinkler Systems. Automatic sprinkler systems shall consist of a system of piping connected to one or more acceptable sources of water supply, provided with distributing devices so arranged and located as to discharge and diffuse automatically under the action of heat an effective stream or spray over every part of the interior of the building area in which a fire may start or to which it may be communicated.

2. Classification of Automatic Sprinkler Systems. For the purpose of these rules, sprinkler systems shall be classified as:

(a) Automatic Wet Pipe Systems in which all pipes and sprinkler heads are at all times filled with water.

(b) Automatic Dry Pipe Systems, in which the pipes and sprinkler heads are filled with compressed air and the water supply is controlled by a Dry Pipe Valve;

(c) Non Automatic Systems, in which all pipes and sprinkler heads are maintained dry with a fire department connection for water supply.

3. Approved Devices. Automatic sprinklers and accessory appliances, shall include all devices approved as such by the Bureau of Standards, Washington, D. C.; by the Underwriters' Laboratories, Inc., of Chicago; by the Associated Factory Mutual Laboratories of Boston; and by the State Industrial Commission.

4. Water Supply. Approved sources of water supply shall be classified as Automatic and Auxiliary.

(a) Automatic Sources shall include the Gravity Tank, the Pressure Tank and the Public Water System.

(b) Auxiliary Sources shall include the Fire Pump and the Fire Department Connection.

5. Gravity Tank. Gravity tanks shall contain an available quantity of water sufficient to supply twenty-five per cent (25%) of the number of sprinkler heads in the average protected fire area for twenty (20) minutes, but not less than 15,000 gallons; and the bottom of the tank shall have an elevation of not less than twenty (20) feet above the highest line of sprinklers below the main roof.

Where a tank capacity in excess of 25,000 gallons is required by this rule, the amount of water to be provided in excess of 25,000 gallons shall be specified by the State Industrial Commission.

The tank shall be filled through a fixed pipe, independent of the sprinkler piping, not less than two (2) inches in size discharging into the top of the tank, or through a by-pass not less than two (2) inches in size around the check valve in the discharge pipe, provided the supply is of sufficient pressure to fill the tank. The water supply and connections shall be capable of supplying the tank at a rate of not less than sixty-five (65) gallons per minute.

6. Pressure Tank. Pressure tanks shall contain sufficient water to supply twelve and one-half per cent (12 1/2%) of the number of sprinklers in the average protected fire area for twenty (20) minutes, but not less than 4,500 gallons. No single tank shall have a capacity greater than 9,000 gallons. The tank shall be kept two-thirds (2/3) full of water under air pressure of seventy-five (75) pounds per square inch, and shall be so proportioned and located that a pressure of not less than fifteen (15) pounds per square inch will be available on the highest line of sprinklers below the main roof when all the water has been discharged from the tank.

The tank shall be placed either on the roof or in the highest sprinklered story.

Where a tank capacity in excess of 25,000 gallons is required by this rule, the amount of water to be provided in excess of 25,000 gallons shall be specified by the State Industrial Commission.

The water shall be supplied through a fixed pipe, independent of the sprinkler piping, not less than 1 1/2 inches in size. The water supply and connections shall be capable of supplying the tank at a rate of not less than sixty-five (65) gallons per minute without reducing the pressure in the tank. The tank shall have a fixed metallic horizontal line on the end opposite the glass gauge, to indicate the level of the water when the tank is two-thirds full.

The air compressor shall be of sufficient capacity to increase the air pressure at the average rate of one (1) pound in two minutes in each pressure tank.

Note:—It is recommended that pressure and gravity tanks be constructed and erected in accordance with the regulations of the National Board of Fire Underwriters. All piping and connections to be made in accordance with the National Board of Fire Underwriters' requirements.

7. Public Water Systems. Direct connection to the public water supply shall be capable of furnishing water at not less than 25 lbs. static pressure at all hours of the day and night on the highest line of sprinklers under the main roof, and also be satisfactory to the State Industrial Commission as to its ability to maintain 10 lbs. pressure at highest sprinklers with the water flowing through a number of sprinklers judged liable to be opened by a fire at any one time. Dead end mains should be avoided, if possible, by arranging mains to be fed both ways. No pressure regulating valve should be used in water supply for sprinklers. Meters should not be installed in connections unless required by Municipal Authorities, and then only meters of a type acceptable to the State Industrial Commission. Connections to the Public Water Works System should, where feasible, be controlled by post indicator valves of a standard type. Where it is not feasible to install post indicator valve, an O. S. & Y. valve may be installed inside of building at point where service enters building. The locations of gates in the public mains and the direction in which they open should be plainly marked on buildings.

8. Fire Pump. Steam or electric standard fire pumps shall receive water supply from a suction tank, a direct connection to the public water main, or other approved source capable of supplying the pump at its rated capacity for ninety (90) minutes. The rated capacity of the pump shall be not less than five hundred (500) gallons per minute, and shall be sufficient to supply twenty-five per cent (25%) of the number of sprinklers in the average protected fire area.

The pump shall be located in a room of fireproof construction, properly ventilated, lighted and drained, enclosed in eight (8) inch brick or concrete walls, with approved fire doors at openings, and with fireproof floor and ceiling construction. If located in the lowest story of the building, the pump shall be placed on a foundation not less than one (1) foot in height. The pump room shall be readily accessible, with safe egress for the attendant.

The steam supply for the fire pump should invariably be an independent line from the boilers and to be so run as not to be liable to injury at time of fire in any part of the property. The other steam lines from the boilers should be controlled by valves located in the boiler room, so that in an emergency, steam can be properly shut off from these lines, leaving the steam supply still available for the fire pump. Where there is more than one boiler, the pipes and valves shall be so arranged to permit the cut out of any one boiler, without interrupting steam supply to the pump from the other boilers.

In order to insure the boiler feed supply so long as the fire pump can be operated, in case the usual feed apparatus is out of commission, it is recommended that an emergency boiler feed shall be provided by connecting the discharge of the pump with the boiler feed pipe having a control valve at the fire pump, and also, if desired, an additional valve in the boiler room. A check valve should also be located in this pipe, preferably in the boiler room. This emergency connection should be about 2 inches in size.

Before installing an electrically driven pump, the matter should be taken up

with the State Industrial Commission and Underwriters having jurisdiction, in order that an investigation may be made to determine whether the liability of the current supply is such as to make electric service dependable. The question of the liability of the service depends on so many factors, that in many cases it can only be settled on the ground.

All details of construction, materials and apparatus pertaining to the electrical equipment shall comply with the requirements of the National Electric Code.

Note—It is recommended that both steam and electric fire pump be built and connected in accordance with the requirements of the National Board of Fire Underwriters.

9. *Sprinkler Discharge.* For the purpose of computing the capacity of water supplies, standard one-half ($\frac{1}{2}$) inch sprinkler heads shall be assumed to have an average discharge of twenty (20) gallons per minute.

10. *Fire Area.* A fire area is any floor space enclosed on all sides by exterior walls or fire walls, or a combination of both. The number of sprinklers in the average protected fire area shall be determined by dividing the total number of sprinklers on a system in one fire section by the number of sprinklered stories in such section. In determining the required capacity of water supplies, the number of sprinklers in the average protected fire area need not include those located in low positions, such as under benches, low shelves, closets and platforms.

11. *Fire Department Connections.* Note—Fire Department connections to be required only in cities and towns having pumping engines.

All automatic sprinkler systems shall be provided with a hose inlet pipe, properly connected to system and arranged so system may be fed from hose or pumping engine of public fire department.

Pipe sizing shall not be less than 4 inches in size and shall be fitted with a straightway check valve, but not with a gate valve. Siamese connection shall be provided with connection with check valves in the "Y." Connection shall be located so as to provide for prompt and easy attachment of hose.

Each hose connection shall be made of good bronze or other suitable metal having threads to fit coupling of public fire department. Standard cast iron, malleable iron or brass caps properly secured and arranged for easy removal of public fire department provided in each connection.

Each hose connection shall be designated by raised letters at least 1 inch in size, cast in the fitting in a clear and prominent manner and reading for the service designated, viz., automatic sprinklers or basement sprinklers.

12. *Automatic Sprinkler Systems.* Automatic sprinkler systems shall be classified as:

(a) One Source Systems, supplied with water from any one of the automatic sources; and

(b) Two Source Systems, supplied with water from a combination of any two of the automatic sources; two pressure tanks with a total water capacity twice that required for a one source supply; direct connection to the public water supply on two different streets, so located that the closing of the controlling valve on one main will not eliminate the main on the other street; or a direct connection to the public water supply and one of the auxiliary sources, provided the water supply main is at least six (6) inches in size, the main is fed both ways and a two (2) inch test pipe at the top of the sprinkler riser shows a flowing pressure of fifteen (15) pounds per square inch between the hours of six a. m. to six p. m.

13. *Sprinkler Spacing.* One-half ($\frac{1}{2}$) inch sprinkler heads shall be spaced as herein provided.

Mill Construction. Under mill ceiling (smooth solid plank and timber construction, 5 to 12 foot bays) one line of sprinklers shall be placed in center of each bay, and distance between the sprinklers on each line shall not exceed the following: 8 feet in 12-foot bays; 9 feet in 11-foot bays; 10 feet in 10-foot bays; 11 feet in 9-foot bays; 12 feet in 5- to 8-foot bays. Measurements shall be taken from center to center of timbers.

Ceilings of modified mill construction having bays less than three feet, shall be treated as open joist construction, and sprinkler heads spaced accordingly.

Bay timbers spaced three feet or more on centers, but less than five feet on centers, will require special ruling.

Joisted Construction. Under open finish joisted construction, ceilings, floors, decks and roofs, the lines shall be run at right angles to the joists and the sprinklers "staggered," so that heads will be opposite a point half-way between sprinklers on adjacent lines, and the distance between sprinklers shall not exceed 8 feet at right angles, to the joists or 10 feet parallel with joists, the end heads on alternate lines being not more than 2 feet from wall or partition; except that permission may be given to install but one line of sprinklers in bays 10 to 11½ feet wide from center to center of the timbers which support the joists. In all cases where such bays are over 11½ feet wide, two or more lines of sprinklers shall be installed in each bay as required by the rules for spacing. Where beams are flush with the joists, sprinklers shall be spaced according to the general rule. Permission may be given to space the sprinklers closer together on a line, but in no case shall the area covered by a single sprinkler exceed 80 square feet.

Smooth Finish, Sheathed or Plastered Ceilings. Under smooth finish, sheathed or plastered ceilings, in bays 6 to 12 feet wide (measurement to be taken from center to center of timber, girder or other projection or support forming the bay), one line of sprinklers shall be placed in center of each bay, and distance between the sprinklers on each line shall not exceed the following: 8 feet in 12-foot bays; 9 feet in 11-foot bays; 10 feet in 6 to 10-foot bays. Bays in excess of 12 feet in width and less than 23 feet in width, shall contain at least two lines of sprinklers; bays 23 feet in width or over, shall have the lines therein not over 10 feet apart. In bays in excess of 12 feet in width, not more than 100 square feet of ceiling area shall be allotted any one sprinkler.

Note—Ceiling of wood lath and plaster to be treated same as open joisted ceilings.

Fireproof Construction. The rules of slow-burning construction shall apply as far as practicable. The rule may be modified, however, the intent being to arrange the spacing of sprinklers to protect the contents rather than the ceilings; but in no case shall the distance of a sprinkler on a line exceed 12 feet to a sprinkler on an adjoining line.

Distance from Walls. The distance from wall or partition to first sprinkler shall not exceed one-half the allowable distance between sprinklers in the same direction. Additional sprinklers may also be required in the narrow pockets formed by bay timbers or beams and wall. Where beams, girders, columns, walls, partitions or other obstructions prevent the effective discharge of water, additional heads shall be installed to effectively sprinkle the area.

Vertical Shafts. In vertical shafts having inflammable sides, a sprinkler shall be provided within the shaft for each two hundred (200) square feet of the inflammable surface, in addition to sprinklers at the tops of shafts. Such sprinklers shall be installed at each floor when practicable, and always when shaft is trapped. Where practicable, sprinklers shall be "staggered" at the alternate floor levels, particularly when only one sprinkler is installed at each floor level.

Pitched Roofs. Under a pitched roof sloping more steeply than 1 foot in 3 feet, sprinklers shall be located in peak of roof, and those on either side of the peak shall be spaced according to above requirements. Distance between sprinklers shall be measured on a line parallel with roof. Where the roof meets the floor line, sprinklers shall be placed not over 3 1-2 feet from where the roof timbers meet floor.

Sprinklers not more than 21-2 feet distant each way from the peak of roof, measured on a line with the roof, may be used in lieu of sprinklers located in peak of roof as above.

In sawtooth roof construction, the end sprinklers on the branch line shall be not over 21-2 feet from the peak of the sawtooth.

Special Locations. In special locations, such as over electrical generating and transforming apparatus and switchboards, where water extinguishing equipment would be detrimental, the sprinkler heads may be omitted at the discretion of the State Industrial Commission.

14. *Sprinkler Position.* All sprinklers shall be located, wherever possible, in an upright position on top of the pipes, except that sprinkler heads on automatic wet pipe systems may be pendant on concealed piping, and when construction or occupancy of a room or enclosure makes it preferable.

Sprinkler deflectors shall be parallel to ceilings, roofs, or the incline of stairs, but when installed in the peak of a pitched roof they shall be horizontal. Distance of deflectors from ceilings of mill or other smooth construction, or bottom of joists of open joist construction, shall be not less than three (3) inches nor more than ten (10) inches.

In fireproof buildings the distance between deflectors and panel ceilings shall not exceed fifteen (15) inches.

Not less than eighteen (18) inches effective clear space shall be left below the sprinklers, so that they may form an unbroken spray blanket from sprinkler to sprinkler and sides of room. Any stock piles, racks or other obstructions interfering with such action shall not be permitted.

15. *Pipe Sizes.* The number of one-half ($\frac{1}{2}$) inch sprinklers on a given size pipe in one fire area in any one story shall not exceed the following:

Size of Pipe.	Maximum Number of Sprinklers Allowed.
$\frac{3}{4}$ inch	1 sprinkler
1 inch	2 sprinklers
$1\frac{1}{4}$ inch	3 sprinklers
$1\frac{1}{2}$ inch	5 sprinklers
2 inch	10 sprinklers
$2\frac{1}{2}$ inch	20 sprinklers
3 inch	36 sprinklers
$3\frac{1}{2}$ inch	55 sprinklers
4 inch	80 sprinklers
5 inch	140 sprinklers
6 inch	200 sprinklers

Where practicable it is desirable to arrange the piping so that the number of sprinklers on a branch line will not exceed eight.

When the piping is arranged on the "gridiron" plan the permissible number of sprinklers may be doubled, provided the supply main is of the size indicated in the schedule for the total number of sprinklers.

Where feed mains supply branch lines of only two sprinklers each the conditions approach those of long single lines. Such feeds shall usually be centrally supplied where there are over eight (8) or ten (10) branch lines. Lines up to fourteen in number may be fed from end, provided 2½-inch pipe supplies not more than sixteen sprinklers.

Buildings having slatted floors, or large unprotected floor openings without approved stops, shall be treated as one room with reference to the pipe sizes, and the feed main shall be of sufficient size to accommodate the number of sprinklers called for. Larger pipe sizes than called for in the schedule may be required wherever the construction or conditions introduce unusually long runs of pipe or many angles. Buildings with blind attics with small unprotected openings to floor below may be piped from the system on the ceiling of floor below, provided pipe size schedule is not overloaded on sizes 3 inches or under.

16. *Feed Mains.* The size of feed mains shall not be less than the size of riser and shall be arranged to run as direct as possible from source of water supply to riser.

Feed mains for stair or other towers without approved stops between floors, when piped on independent riser, shall be of sufficient size to accommodate the total number of sprinklers in such tower.

17. *Risers.* There shall be one or more separate risers in each building and in each section of the building divided by fire walls. Risers shall be arranged to provide "Centre Central" or "Side Central" supply to sprinkler main. Each riser shall be of sufficient size to supply all the sprinklers on said riser in one story according to the schedule of pipe sizes in Rule 15. If the conditions warrant, special permission will be granted allowing the sprinklers in a fire section of small area (total number of sprinklers not to exceed 48 per floor) to be fed from the riser in another section.

Risers shall not be located close to windows, shall be properly protected from mechanical injury and freezing and shall be properly supported on foundations and by floor plates, clamps, couplings or hangers.

18. *Pipes and Fittings.* All pipe shall be full weight standard wrought iron or steel threaded pipe, well reamed and screwed up tight into fittings without reducing the waterway. Fittings shall be standard cast iron fittings and shall be long turn pattern on feed mains and risers.

Such fittings shall be designed and guaranteed for a working pressure of 150 pounds per square inch and must be capable of withstanding a hydrostatic test pressure of 750 pounds per square inch without failure.

All pipe shall be secured to the ceiling, walls and other parts of the building with standard steel, wrought or malleable iron hangers.

Extra heavy fittings shall be employed where the normal pressure in the pipe system exceeds one hundred and fifty (150) pounds per square inch, and shall be designed for a working pressure of 250 pounds per square inch and be capable of withstanding a hydrostatic test pressure of 1,250 pounds per square inch without failure.

All underground pipe shall comply with the specifications for cast iron pipe of the American Water Works Association.

19. *Protection of Pipes and Sprinklers.* When exposed to moisture, sprinkler pipes and hangers shall be protected against corrosion whenever found necessary by thoroughly cleaning the pipe of all scale and grease, and painting with a coat of red lead and linseed oil paint, or other acceptable moisture resisting paint. When exposed to chemical fumes, the pipe and fittings shall be coated with graphite or other acceptable chemical resisting paint. Care shall be taken not to paint the sprinkler heads.

Supply pipes of risers in low basements or low spaces under ground floors exposed to frost shall be properly protected by a masonry or wood enclosure, properly heated, or filled with mineral wool, sawdust, or tar mixed with granulated cork, extending below bottom of pipe and through the top flooring of ground floor, or the pipe shall be protected with three alternate layers of one-inch hair felt and building paper or by other approved method. When of wood, such enclosure shall be constructed double with a layer of tar paper between the two thicknesses of wood.

Where risers, drains, heating pipes, etc., pass through cinder concrete floors or partitions they shall be protected with a metal sleeve or be grouted with cement mortar.

Wherever sprinklers are exposed to corrosion the heads shall be protected with an acceptable hermetically sealed cover, or with an acceptable wax coating.

20. *Drainage.* All sprinkler pipe and fittings shall be so installed that they can be thoroughly drained, and where practicable, all piping shall be arranged to drain at the main drips.

Drains or drip pipes shall be so arranged as not to expose any part of the sprinkler system to frost, and shall be so connected, either by check valves or other means, that they will not overflow domestic service or other connections to the same sewer or house drain.

Drains, pitched not less than one-quarter ($\frac{1}{4}$) inch in ten (10) feet shall be installed: At the base of the main riser, at each alarm valve, at each dry pipe valve, at each gravity tank, at each pressure tank, at each fire department connection, on each floor, if independent floor control valves are used, and at each supply main when the water in the same cannot be removed through any of the above drains.

Such drains shall be installed with controlling valves so that flowing tests may be made to determine if the water supplies or connections from yard mains to the inside of the building are in order without causing water damage or overflowing service connections to the same house drain. Any such drain shall not be less than two (2) inches in size except that drains at independent floor valves may be one and one-quarter ($1\frac{1}{4}$) inches in size. The drain at the main riser shall discharge into a cone or sight drain, or if carried through the wall and exposed to the weather, it shall be fitted with a hood or down-turned elbow.

On automatic wet pipe systems, the horizontal branch pipes shall be pitched not less than one-quarter ($\frac{1}{4}$) inch in ten (10) feet to drain toward the sources of supply with drip valves at the low points.

On automatic dry pipe systems, branch pipes shall be pitched at least one-half ($\frac{1}{2}$) inch in ten (10) feet.

21. *Test Pipe.* On all wet pipe automatic systems a test pipe of not less than $\frac{3}{4}$ inch in diameter shall be connected directly with each riser in upper story and arranged to discharge, through a $\frac{1}{2}$ inch brass outlet, preferably to a point where it can readily be seen. With long runs or many angles, size of test pipe shall be increased to one (1) inch or larger.

22. *Pressure Gauges.* A four and one-half ($4\frac{1}{2}$) inch double-spring Bourdon pressure gauge shall be provided in all automatic sprinkler systems as follows: above dry-pipe valves, below dry-pipe valves, at the pressure tank, at the air compressor, above the alarm valve, below the alarm valve.

Gauge connections shall be taken from the supply main or riser and not from the two-inch drain or test pipe.

Gauges shall be installed in a suitable place, protected from freezing and be controlled by a valve with arrangements for draining. A plugged outlet, not less than one-quarter (1/4) inch in size, shall be located between each valve and gauge for purpose of installing the inspector's gauge.

23. *Valves.* All valves two (2) inches in diameter and under shall be of brass or bronze, or other approved non-corrodible material. Valves over two (2) inches in diameter shall be of brass, or bronze or iron body, brass mounted, or of other approved non-corrodible material.

All sidewalk Siamese inlet valves, caps and chains shall be of galvanized cast-iron or other acceptable non-corrodible material.

All gate valves shall be solid or double wedge disc, stuffing box pattern with hand wheel, and outside screw and yoke pattern.

All check valves shall be approved, straight way swinging patterns so built that the clappers may be readily removed for repairs.

24. *Water Supply Gate Valves.* The piping connecting each source of water supply with the sprinkler system shall be provided with a gate valve of the outside screw and yoke type, sealed open and tagged to designate its purpose, so located as to control each source of water supply, except that from fire department hose connections. All such gate valves shall be located within the building where easily visible and readily accessible, and as close as possible to the supply inlet.

25. *Water Supply Check Valves.* The piping connecting each source of water supply with the sprinkler system, including fire department connections, shall be provided with a check valve.

On two-source systems, check valves shall have a gate valve on each side, to permit repair of check without shutting off both supplies.

26. *Control Valves.* All automatic sprinkler systems shall be provided with a main control or shut-off valve, arranged to be readily accessible and sealed in the open position; except that when the sprinkler system is fed from water supplies on the roof of the building, independent and readily accessible floor control valves, sealed in the open position, may be installed.

When not more than ten (10) sprinkler heads in any system are exposed to cold and subject to freezing, shut-off valves may be provided to discontinue the water supply to such sprinklers between November 1 and April 1. A greater number of sprinklers than ten (10) located in places which cannot be properly heated shall be installed on an approved automatic dry pipe system.

27. *Dry Pipe Valves.* Dry pipe valves shall be located as near as practicable to the sprinkler system in an accessible place, protected from mechanical injury and freezing.

The air pressure in sprinkler system under dry pipe valve control shall not exceed forty (40) pounds per square inch, nor be permitted to fall below twenty-five (25) pounds per square inch, nor shall it be less than one-sixth of the water pressure in any case.

Wet pipe sprinkler systems in which only twenty-five (25) per cent. of the sprinklers are required to be maintained dry for protection from freezing shall have only such sprinklers under air valve control.

Preferably not more than three hundred (300) sprinklers to be controlled by one dry pipe valve. Four hundred (400) heads is the maximum number allowed on one valve.

The air compressor shall be of sufficient capacity to increase air pressure at an average rate of not less than 1 lb. per two minutes' pumping (or preferably faster).

A relief valve should be provided on air compressor.

The air pressure on dry pipe systems shall be maintained throughout the year.

28. *Alarm Valve.* All automatic wet pipe sprinkler systems shall be equipped with an alarm valve, so constructed that a flow of water through a one-half (1/2) inch orifice will operate an electric and mechanical gong.

Dry pipe valves shall be equipped with a reliable device to give both an electrical and mechanical alarm. Both wet and dry pipe systems to be equipped with testing by-passes.

29. *Heating of Tanks.* The water in all sprinkler supply tanks subject to freezing shall be protected by internally heating the water, or enclosing the tank in a frost-proof house, properly heated and lighted.

Note—It is recommended that the method of heating be in accordance with regulations of the National Board of Fire Underwriters.

30. *Concealed Pipe Systems.* All pipe in concealed pipe systems shall be of standard full weight wrought iron or steel, painted with two coats of protective paint, one before and one after installation. Such pipe shall be installed in ducts or be encased in cement mortar, and shall be inspected prior to concealment. When installed in the concealed space between floor arches and ceiling, such pipe shall be supported by hangers, and all pipe, fittings and hangers be protected with two coats of paint.

Note—The above applies only to buildings of fire resistive construction.

31. *Preparation of Buildings.* Floor or wall openings, and other structural defects which prevent the banking up of heated air and retard the automatic action of sprinkler heads, shall be provided with the necessary curtain boards and draft stops to permit specific control of the fire by the local sprinklers.

Curtain board shall project at least twelve (12) inches below the lowest sprinkler.

32. *Sprinkler System Tests.* All automatic sprinkler systems, excluding the water supply tanks, shall be tested after installation at not less than 150 pounds pressure for two hours, and at 50 pounds in excess of the normal pressure when the normal pressure is in excess of 100 pounds. All pressure tanks shall be tested after erection to a test pressure of one and one-half times the working pressure. To prevent the possibility of serious water damage in case of a break, the pressure shall be maintained by a small pump, the main controlling gate being meanwhile kept shut. In the case of dry systems with differential type of dry pipe valve, the valve shall be held off its seat during the test, to prevent injuring the valve. Brine or other corrosive chemicals shall not be used for testing systems.

In dry systems an air pressure of 40 pounds shall be pumped up, be held for 24 hours, and all leaks stopped which allow a loss of pressure of over 2 pounds for the 24 hours.

Non-automatic systems shall be tested after installation at not less than fifty (50) pounds in excess of the pressure necessary to reach the highest line of sprinkler.

33. *Existing Installations and Approvals.* Automatic sprinkler systems and devices heretofore approved and accepted by the authorities having jurisdiction may be accepted by the Industrial Commission if, after inspection, they are found to be in good working order and affording adequate protection.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules, Automatic Sprinkler Systems, with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said Rules, Automatic Sprinkler Systems, and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL] WILLIAM S. COFFEY, Secretary.

Rules Relating to Mines and Quarries.

RULE 1000. DEFINITION OF TERMS.

(a) *Application.*—These rules shall apply to all mines in the State of New York producing minerals within the meaning of that term, as hereinafter defined.

(b) *Singular and Plural Numbers.*—For the purpose of these rules, the singular number when used in reference to persons, acts, objects, and things of whatsoever kind and description, shall, whenever the context will permit, be taken and held to import and include the plural number, and the plural number shall similarly be taken and held to import and include the singular.

(c) *Mine.*—The term "mine" shall include prospect openings, pits, banks and open cut workings employing an average of five (5) or more men, and shall embrace any and all parts of the property of such "mine" and mining plant, on the surface or underground, that contribute directly or indirectly to the mining or handling of minerals. Provided, that when a group of workings in proximity to one another and under one management are administered as distinct units, each working shall be considered a separate mine.

(d) *Mineral.*—The term "mineral" shall mean whatever is recognized by the standard authorities as mineral, whether metalliferous or non-metalliferous, but shall

not be held to embrace or include coal, lignite, gas, oil, or any substances when extracted in solution or in the molten state through bore holes.

(e) *Operator.*—The term "operator" shall mean the person, firm, or body corporate in immediate possession of any mine and its accessories as owner or lessee thereof, and as such responsible for the condition and management thereof.

(f) *Superintendent.*—The term "superintendent" shall mean the person having immediate supervision of the operation.

(g) *Mine Foreman.*—The term "mine foreman" shall mean a person who at any one time is charged with the general direction of the underground work.

(h) *Excavations or Workings.*—The terms "excavations" and "workings" shall signify any or all parts of a mine excavated or being excavated, including shafts, raises, tunnels, entries, galleries, open cuts, and all working places, whether abandoned or in use.

(i) *Number of Men.*—Whenever the expression "number of men" or "average number of men" employed in a mine is used in these rules, as defining or constituting classes of mines to which these rules do or do not apply, such expressions shall be construed to mean the average number of men employed during the previous year, as shown by the returns to the mine inspector or by the books or pay roll of the mine, or by all of such means, and such average number shall be determined by dividing the total number of man shifts by the number of days the mine was worked during such period.

(j) *Magazine.*—The term "magazine" as used in these rules shall be held to mean and include any building or other structure or place in which explosives are stored or kept, whether above or below ground.

(k) *Explosive.*—The term "explosive" or "explosives" shall be held to mean and to include any chemical compound or any mixture that contains any oxidizing and combustible units or other ingredients in such proportions, quantities or packing, that an ignition by fire, by friction, by concussion, by percussion, or by detonation of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant pressures are capable of producing destructive effects on contiguous objects or of destroying life and limb.

(l) *Person.*—The term "person" shall be held to mean and include a firm or body corporate as well as natural persons.

(m) *Underground.*—The term "underground" shall be held to mean within the limits of any mine working or excavation.

(n) *Employees.*—The terms "employees" and "men employed" shall be held to mean all men receiving compensation from the operator, directly or indirectly, for labor or services performed in connection with the mine, and shall include contractors, lessors, lessees, tributaries, or anyone else similarly employed.

(o) *Approved.*—The term "approved" shall be held to mean approved by the Industrial Commission.

RULE 1001. GENERAL.

(a) The operator and superintendent of every mine shall use every reasonable precaution to insure the safety of the workmen in the mine in all cases, whether provided for in these rules or not.

(b) All defects in or damage or injury to machinery or timbering, or to apparatus and equipment generally in and about a mine, all unsafe or dangerous conditions in any part of the mine, and all accidents occurring in the course of mining operations, other than those of a purely minor character, even though not resulting in personal injury, shall be promptly reported to the mine foreman or superintendent by the person observing the same.

(c) Wages shall not be paid on any premises used for the sale of intoxicating liquors.

(d) Each workman employed in the mine, when first engaged, shall have his attention directed to the general and special rules provided for in these rules.

RULE 1002. SUPERINTENDENT.

The operator of every mine shall appoint a man who shall be personally in charge of the mine and the performance of the work done therein, who shall be designated as the "superintendent"; provided, however, that nothing herein contained shall prevent the owner or operator of any mine from personally filling the office of superintendent.

The superintendent of every mine shall inspect or cause some competent person or persons appointed by him to inspect all mining appliances, boilers, engines, magazines, shafts, shaft houses, underground workings, roof, pillars, timbers, explosives, bell ropes, speaking tubes, telephone, tracks, ladders, dry closets, and all parts and appliances of said mine in actual use, and any such person or persons appointed by the said superintendent shall at once report any defects therein to the superintendent. It shall be the duty of the superintendent upon ascertaining such defects to take immediate steps to remedy the same so as to make the same comply with the provisions of these rules, and he shall forthwith notify the operator of said mine or quarry of the existence of such defects. It shall be the duty of the superintendent to appoint a competent man to have full charge, under the direction of said superintendent, of every magazine containing explosives situated on such mining property, and to make such other appointments and perform such other duties as are provided by these rules to be performed by such superintendent.

RULE 1003. CARE OF INJURED.

It shall be the duty of operators, superintendents, or anyone in charge of any mine, to keep at such place about the mine as may be designated by the industrial commission, a stretcher, a woolen blanket, and a waterproof blanket in good condition for use in carrying any person who may be injured at the mine. Where more than one hundred (100) persons are employed, two (2) stretchers, two (2) woolen blankets and two (2) waterproof blankets shall be kept. At all mines an adequate supply of materials shall be kept readily accessible for the treatment of anyone injured and shall include the following in suitable quantity: First-aid outfits consisting of one extra-long gauze bandage with compress sewed in its center, one triangular bandage with methods of application printed thereon, two safety pins, and one card of instructions; large first-aid dressings for wounds; packages of sterilized gauze; assorted bandages; United States Army tourniquet; carbolicated vaseline or boric acid ointment; packages of picric acid gauze; wooden or wire-gauze splints; packages of absorbent cotton; safety pins; shears; tweezers; aromatic spirits of ammonia; paper cups; first-aid book of instructions; soap; basins; towels. Furthermore, in all mines where one hundred (100) or more men are employed, a first-aid corps shall be organized, consisting of the foreman or foremen, shift bosses, timekeepers, or other employees designated by the superintendent; and it shall be the duty of the operator or superintendent of the mine to cause the organization of such employees and to procure the services of a competent person to instruct the members of such first-aid corps from time to time, not less than once in every three months, in the proper handling and treatment of injured persons before the arrival of a physician; except that where a hospital is maintained in connection with a mine, there shall be provided only such first-aid equipment as may be reasonably necessary to prepare the injured employee for removal to the hospital.

RULE 1004. MINE MAPS.

The operator of every mine shall make and maintain, or cause to be made and maintained by a competent engineer or surveyor a clear and accurate map, or maps, of uniform scale not less than one hundred (100) feet to the inch, with sections, showing clearly all the workings of such mine. At least once in every six (6) months, or oftener, if necessary, the operator or superintendent of each mine shall cause to be shown clearly and accurately on the map or maps of such mine all the excavations made therein during the time elapsed since such excavations were last shown on such map or maps, and all parts of such mine that shall have been worked out or abandoned during said elapsed period of time shall be clearly indicated on said map or maps, and all underground workings shall be surveyed and mapped before they are allowed to become inaccessible. Such maps shall at all times be open to the examination of the Industrial Commission. In the event of the closing of a mine under conditions that will result in its workings becoming inaccessible, the maps herein specified, or certified copies of them, shall be filed with the Industrial Commission.

RULE 1005. INFLAMMABLE MATERIAL.

(a) It shall be the duty of the operator of every mine in which oils and other dangerous inflammable materials are used, to store such materials, or cause them to be stored, in a covered building kept solely for such storage, which building shall be at least one hundred (100) feet from any shaft, tunnel, or other mine opening, or any building directly connected with a mine opening, and at least three hundred (300) feet from any powder magazine; provided, that gasoline, naphtha, distillate, and fuel oils may be stored in a tank or tanks buried in the ground, which tank or tanks shall be provided with proper vents, and shall be placed at least fifty (50) feet from any shaft, tunnel, or other mine opening, or any building directly

connected with a mine opening, and at least three hundred (300) feet from any powder magazine; and provided further, that lubricating oils may be stored in a well-constructed covered building, which shall be at least fifty (50) feet from any shaft, tunnel, or other mine opening, or any building directly connected with a mine opening, and at least three hundred (300) feet from any powder magazine. No tank shall be installed from which oil is to be conducted by gravity to the point of combustion, unless such tank shall be so located that escaping oil cannot run over the surface from such tank to any building, within one hundred (100) feet of any mine opening.

(b) The man in charge of such building or tank or tanks, who shall be the superintendent or a person expressly designated by him, shall permit only sufficient oil or other inflammable material to be taken from such building or tank or tanks to meet the requirements of paragraph (c). If any oil or gasoline storage be so situated that leakage would permit the oil or gasoline to flow within the above specified distances, means to prevent such flow must be provided.

(c) Oil, either lubricating or illuminating, shall not be taken into the underground workings of any mine, or kept therein in quantities greater than necessary to afford three days' supply, except when the transportation and storage are arranged for in a manner satisfactory to the Industrial Commission.

(d) The storage of gasoline, naphtha and other distillates underground is prohibited; provided, however, that a supply sufficient for one day's operation of blow torches, fuel burning engines or locomotives may be kept in the tank or tanks attached to such equipment.

(e) Waste timber or old timber shall not be stored and permitted to decay in the mine but shall be removed from the mine promptly. Empty boxes, wooden chips, paper and combustible rubbish of all kinds shall not be allowed to accumulate underground.

EXPLOSIVES.

RULE 1006. STORAGE OF EXPLOSIVES.

(a) Sufficient explosives may be stored within a mine to meet the estimated requirements of such mine during the succeeding twenty-four hours, and an additional twenty-four hours' supply of explosives may be taken within the mine for the purpose of thawing the same, in accordance with the provisions of Rule 1008, but in no event shall any greater supply of explosives be taken into or stored in the mine than is required to meet the estimated requirements of the mine during the succeeding forty-eight hours.

(b) No explosive shall be kept at any place within a mine where its accidental discharge would cut off the escape of miners working therein.

(c) All daily supplies of explosives within the mine shall be kept in stout, tight boxes with hinged lids, which shall be kept securely locked except at such times as explosives are being placed therein or removed therefrom, from which the explosives shall be removed only as required for immediate use. It shall be unlawful to keep such boxes containing explosives near electric conductors other than lighting circuits, or in any required manways or adjacent to shaft landings, or to permit any grains or particles of such explosives to be or remain on the outside or about the containers in which such explosives are held. Black blasting powder and high explosives shall not be kept in the same box and not more than seventy-five (75) pounds of explosives shall be kept in such box.

(d) When more than seventy-five (75) pounds of explosives are kept in an underground magazine they shall be distributed by an authorized and competent person or persons. Such underground magazine may consist of a separate drift or chamber, the walls of which shall be of fireproof material or of wood covered with sheet iron. The entrance to such underground magazine shall be kept securely locked, except when it has to be entered by the person or persons in charge thereof.

(e) Keys and access to daily supply chests shall not be allowed to any person other than a blaster, or duly authorized person.

(f) All explosives in excess of the temporary supply authorized to be taken into or stored in the mine shall be stored in a magazine above ground.

(g) All detonators shall be stored above ground in a suitable magazine or magazines, properly protected against molestation; provided, that a sufficient supply for the needs of the mine forty-eight (48) hours may be stored underground, as hereinbefore stated. No detonators shall be stored within twenty (20) feet of other explosives underground. No detonator shall be taken into any magazine containing other explosives. No fuses shall be capped with detonators in any magazine or in any other place where detonators or other explosives are stored, but special benches shall be provided at least twenty (20) feet from such storage places, where all fuses shall be capped. Cap crimpers shall be furnished in sufficient quantity to avoid the necessity of crimping in any other way. No detonator shall be transported with other explosives except when made into a primer with such other explosive.

(h) All magazines located above ground shall be bullet-proof.

(i) Fuse shall not be stored underground for a longer period than forty-eight hours.

(j) When supplies of explosives or fuse are removed from a magazine those that have been longest in the magazine shall be taken first. Packages of explosives shall be removed to a safe distance from the magazine before being opened, and no such packages shall be opened with any metallic instrument.

RULE 1007. MARKING OF EXPLOSIVES, DETONATORS, ETC.

It shall be unlawful for the operator or superintendent of any mine to permit the use within such mine of any explosive or any blasting caps or detonators, or fuse, unless there shall be printed or marked on every original package containing explosives the name and place of business of the manufacturer of such explosive, the date of its manufacture (if the date of manufacture is in code the key to such code shall be furnished on application), and its character and grade; and on every original package containing such fuse the name and place of business of the manufacturer such fuse, and the date of its manufacture (if the date of manufacture is in code the key to such code shall be furnished on application); and on every original package containing blasting caps or detonators the name and place of business of the manufacturer of such blasting caps or detonators, the date of their manufacture (if the date of manufacture is in code the key to such code shall be furnished on application), and their grade.

In emergencies, or when approved by the Commission, one manufacturer may supply explosives for another manufacturer, under the latter's brand.

It is recommended that employers provide common or safety fuse of uniform speed, preferably ninety (90) seconds per yard.

RULE 1007. CONVEYING, THAWING, BLASTING, MISFIRES, ETC.

(a) The superintendent shall appoint a sufficient number of experienced blasters to handle explosives and to do blasting.

(b) All foremen and gang bosses shall be experienced blasters and shall supervise the handling of explosives and see that blasting operations are carried on in accordance with the rules and regulations herein prescribed.

(c) The daily quantity of explosives shall be brought at regular time daily to mine entrance and taken directly to suitable receptacles, as herein prescribed.

(d) Detonators shall not be carried into the mine with other explosives, nor shall any person ride in the same cage, skip or car with explosives.

(e) No blaster shall attempt to use any dynamite that is frozen, nor detonators of less than No. 6 strength.

(f) No quantity greater than is sufficient for daily use shall be artificially thawed at one time.

(g) Only approved methods of thawing shall be permitted.

(h) No person shall approach or open chests or magazines containing explosives, nor prime while using naked light.

(i) Fuse may be kept with detonators and all crimping of caps on fuse shall be done with proper crimpers and at least twenty (20) feet away from explosives.

(j) Chests containing daily supply of explosives shall be protected from derailed cars and from blasts and falls.

(k) No tools or other articles shall be kept with the explosives or with the detonators, except that the detonator chest may contain one or more crimpers, and the explosive chest may contain a hard wood wedge and mallet.

(l) All drill holes shall be of sufficient bore to admit of the free insertion to the bottom of the hole of a cartridge of explosive without ramming or removing the dynamite from its original wrapper, except for block holes.

(m) Fuse shall not be laced through cartridges for forming a primer.

(n) Foreman or shift boss shall before drilling be commenced on any shift, ascertain whether all holes fired on the previous shift have been exploded, and shall cause all remaining holes to be examined with a wooden stick for unexploded charges or cartridges, and if any are found, same shall be refired or a new hole drilled and fired before regular drilling is commenced.

(o) Explosives shall not be extracted from a hole which has once been charged; the tampering only may be withdrawn sufficiently to allow a missed shot being fired by insertion of fresh additional charge of primer.

(p) Blaster shall be furnished with hard wood rods for tampering and he shall not tamper or load any hole with a metal bar, nor shall the wooden rod have any metal parts; except that where black powder with no detonator is used, tampering will be permitted with a copper-tipped tampering rod.

(q) Firing shall be done by safety fuse or approved battery or from an electric current of not over two hundred and fifty (250) volts, provided a suitable switch is used, as hereinbefore described. Other methods of firing may be permitted upon application and approval by the Industrial Commission.

(r) When firing by electricity from power or lighting wires in any mine, a proper switch shall be furnished with lever down when "off". The switch shall be fixed in a locked box, to which no person shall have access except the blaster. The lead wires shall be furnished with plugs and shall not be connected with the switch till ready to fire. After blasting the switch lever shall be pulled out, the wires disconnected, and the box locked before any person shall be allowed to return, and shall remain so locked until again ready to blast.

(s) All power lines and electric light wires shall be disconnected at a point outside the blasting switch before explosives are taken in and loading of holes is proceeded with. No current by grounding of power or lighting wires or banded rails shall be allowed beyond blasting switch after explosives are taken in preparatory to blasting, and under no circumstances shall grounded current be used for exploding blasts.

(t) The blaster shall cause a sufficient warning to be sounded and shall be responsible that all persons retreat to a safe shelter before he sets off blast, and shall also see that none return until he reports it safe for them. He shall report to the mine foreman and furnish names of all persons refusing to obey his caution. Suitable and convenient shelters shall be provided.

(u) When a blaster fires a round of holes, he shall count the number of shots exploding, except in case of instantaneous blasting by electricity. If there are any misfires, he shall report the same to the gang boss or foreman. The blaster shall not leave until he has placed a wooden plug painted red, or other proper danger signal, in the mouth of the missed hole. If a missed hole has not been fired at the end of a shift, that fact together with the position of the hole shall be reported by the mine foreman or shift boss to the mine foreman or shift boss in charge of the next relay of miners, before work is commenced by them.

(v) No person shall be allowed to deepen holes that have previously contained explosives.

(w) All wires in broken ore or rock shall be carefully traced and search made for unexploded cartridges.

(x) Whenever blasting is being done in a mine at points liable to break through to where other men are at work, the foreman or person in charge shall, before any holes are loaded, give warning of danger to all persons that may be working where the blasts may break through, and he shall not allow any holes to be charged until warning is acknowledged and men are removed.

(y) Blasters, when testing circuit through charged holes, shall use sufficient leading wires to be at a safe distance, and shall use only approved types of galvanometers. No tests of circuits in charged holes shall be made until men are removed to safe distance.

(z) No blasts shall be fired with fuse in vertical or steep shafts from which men have to be hoisted to safety.

(aa) A daily record of all misfires shall be kept at the mine office, giving name of loading blaster and name of blaster that refired it.

RULE 1009. HOISTING ENGINEER.

(a) It shall be the duty of every superintendent of every mine having a hoisting engine to appoint and designate one or more men, who shall be able to speak and read the English language readily, to be known as hoisting engineers. At all shafts where men are hoisted or lowered, such hoisting engineers shall be not less than twenty-one (21) years of age, and at shafts where men are not so hoisted or lowered, they shall be not less than eighteen (18) years of age. It shall be the duty of every superintendent to appoint as hoisting engineers men who are familiar with the details and working of a hoisting engine, and, except in case of emergency, to permit no one other than such duly appointed hoisting engineers to run such engine or hoisting machinery; except that, by and with the consent of the superintendent, specified apprentices may be taught the operation of the hoisting engine at such times and under such restrictions as the superintendent may determine to be free of risk to life and limb.

(b) At every mine in which fifty (50) or more men per shift are to be hoisted or lowered at the beginning or ending of shift, there shall be with the hoisting engineer an extra man competent to operate the engine.

RULE 1010. HOISTING.

(a) The superintendent of the mine shall establish for each shaft rates of speed for the cages, skips, buckets or other conveyances that shall not be exceeded in the hoisting or lowering of men, and shall post notice of such limitation in a conspicuous place near each hoisting engine; such rates of speed shall not exceed the maximum approved by the Industrial Commission.

(b) The superintendent of the mine shall determine the maximum number of men that in his judgment may safely ride on each cage, skip, bucket or other conveyance used in the mine under his supervision, and shall post in a conspicuous place near each shaft a notice stating that maximum number of persons so permitted to ride and forbidding the carrying of any greater number. At the beginning and ending of each shift the mine foreman or shift boss, or some other responsible person appointed by the superintendent, shall be stationed on the loading platforms or landing places of each shaft where men are to be hoisted and lowered, and shall prevent any greater number of men than that permitted by order of the superintendent to enter upon or into any cage, skip, bucket, or other conveyance, and shall remain at such stations until the last man about to ascend or descend the shaft shall have entered the cage, skip, bucket or other conveyance. And at the end of the shift, the man in charge of work on each level of the mine from which men are to be hoisted shall post himself in the station of the shaft at that level, and shall prevent any greater number of men than the maximum permitted by the superintendent of the mine to enter upon or into any cage, skip, bucket or other conveyance, and shall remain in this station until the last man to ascend shall have entered upon or into the cage, skip, bucket or other conveyance. The number of persons permitted to ride, as determined by the superintendent, shall not exceed the maximum approved by the Industrial Commission.

(c) During such other times when men are hoisted or lowered by cage or other conveyance, except a bucket, such cage or other conveyance shall be operated under the charge of a person or persons appointed as conductors or starters, and no person other than those conductors or starters shall give any signal for the movement of the cage or other conveyance.

(d) In hoisting or lowering men with a bucket, the speed, except in the case of apprehended danger, shall not exceed two hundred (200) feet per minute when the bucket is within one hundred (100) feet of the surface or five hundred (500) feet per minute in any other part of the shaft.

RULE 1011. SAFEGUARDS AGAINST OVERWINDING.

(a) For the purpose of safeguarding life, provision against overwinding, approved by the Industrial Commission, shall be installed.

(b) The operator of a mine shall install in every shaft through which more than fifty (50) men are hoisted per shift, by cage, skip or man car, a device which shall give a warning signal in the engine room whenever the cage or skip in ascending reaches a point not less than sixty (60) feet below the limit of travel of the cage or skip.

RULE 1012. DUTIES OF HOISTING ENGINEER.

(a) It shall be the duty of every hoisting engineer to keep a careful watch over his engine and over all machinery under his charge.

(b) He shall, while on duty, be in immediate charge of his engine and shall not at any time delegate any of his duties to any other person, except to apprentices, duly designated, as provided in these rules.

(c) He shall familiarize himself with and use the signal code posted in the engine room, as hereinbefore provided.

(d) He shall not run his engine unless the same is properly provided with brakes, indicators and distance marks on hoisting ropes or cables, as provided in these rules.

(e) It shall be the duty of the hoisting engineer to exclude every person from his engine-room, excepting any person or persons whose duties require their presence therein, and visitors authorized by the superintendent of the mine.

(f) He shall hold no conversation with anyone while his engine is in motion, or while attending to signals.

(g) He shall not hoist men out of, or lower men into, any mine or shaft at a speed greater than the rate posted in the engine-room.

(h) He shall inspect all hoisting machinery and safety appliances connected therewith and shall report any defects found therein.

(i) After any stoppage of hoisting for repairs or for any other purpose exceeding in duration one hour, he shall run a bucket, skip, cage or other conveyance, on which no men shall ride, up and down the working part of the shaft at least once, and shall not permit the bucket, skip, cage or other conveyance to be used for hoisting or lowering men until the hoisting machinery and shaft shall have been found to be in safe condition.

(j) He shall do no hoisting in any compartment of a shaft while repairs are being made in the said hoisting compartment, except such hoisting as may be necessary to make such repairs.

(k) He shall not turn over the charge of the engine to his relief at change of shift, or at any other time, while the bucket, skip, cage or other conveyance is in motion.

RULE 1013. HOISTING ROPES.

(a) No operator of any mine shall use any rope or cable for hoisting or lowering men when such hoisting or lowering is done by any means other than human or animal power, unless such rope or cable shall be composed of metal wires, with a factor of safety determined as hereinafter set forth; provided, however, that such metal wires may be laid around a hemp center.

(b) The factor of safety of all such ropes or cables shall in no case be less than five (5).

(c) No head or angle sheave of a diameter less than sixty (60) times the diameter of the rope shall be used for hoisting or lowering men.

(d) There shall not be used any rope or cable for the raising or lowering of men, either when the number of breaks in any consecutive ten (10) feet of said rope exceeds ten (10) per cent of the total number of wires composing the rope, or when the wires on the crown of the strands are worn down to less than sixty (60) per cent of their original area, or when the superficial inspection provided for in these rules shows marked signs of corrosion.

(e) All ropes used for hoisting or lowering men shall be thoroughly inspected once in every week by some competent person designated for that purpose by the superintendent. If upon any inspection, such hoisting rope or cable shall be found to be below the requirements set forth in these rules, it shall be discontinued for such purpose forthwith.

(f) Every rope used for hoisting or lowering men shall be securely fastened at both ends, and when in use shall never be fully unwound; at least two (2) full turns shall remain always on the drum or reel. The end of the rope attached to the conveyance in the shaft shall either be securely fastened within a tapered socket or else it shall be bound around an oval thimble and then fastened to itself by splicing or by the use of three or more clamps.

RULE 1014. CAGES FOR HOISTING MEN.

In all shafts an iron bonneted safety cage shall be used for hoisting and lowering men; but this provision shall not apply to shafts in the process of sinking.

It shall be the duty of the operator to have all cages in which men are hoisted and lowered, used in such shafts, constructed as follows, or in a manner equally safe: The bonnet shall be of two (2) steel plates not less than three-sixteenths (3/16) of an inch in thickness, sloping toward each side, and so arranged that they may be readily pushed upward to afford egress to persons therein, and such bonnet shall cover the top of the cage in such manner as to protect persons on the cage from objects falling in the shaft. The cage shall be provided with metal plate or wire mesh siding, not greater than two (2) inch mesh, the wires of which shall be not less than No. 8 U. S. standard gauge, and with gates either hung on hinges opening inwardly or working in slides; when men are being hoisted or lowered such gates shall be closed before the car is put in motion. Every cage shall be provided with an approved safety catch of sufficient strength to hold the cage or skip with its maximum load at any point in the shaft, in the event that the hoisting cable should break.

RULE 1015. TWO (2) OPENINGS TO SURFACE.

It shall be the duty of every operator of every mine, except as hereinafter provided, to maintain at least two (2) outlets to the surface from such mine, or an underground communicating passageway between such mine and some other mine, so that there shall be at all times at least two (2) distinct and available means of access to the surface to all persons employed in such mine. Such outlets shall not be less than two hundred (200) feet apart, and there shall be between them a space not less than one hundred (100) feet in width free of buildings or inflammable material.

Provided, however, that the above requirements shall not apply in the case of: (a) shafts or mines in process of being connected, to comply with the terms of this rule; (b) shafts, winzes, adit levels, tunnels and drifts to prospect for and develop mineral substances, but not for the extraction of mineral substances, except such as may be extracted in the course of such prospecting and developing work; (c) any mine in which one of the shafts or outlets shall have temporarily become unavailable for the persons employed in the mine, and in which every effort is being made by the operator of the mine to open such temporarily unavailable outlet, and provided the same is not, in the opinion of the Industrial Commission, dangerous to the life and health of those employed therein; (d) mines having workings less than one hundred (100) feet deep and extending less than three hundred (300) feet from the shaft in any direction, but not mines opened primarily by an adit level or tunnel; and (e) mines opened by an adit level, tunnel or drift less than one thousand (1,000) feet in length; and provided, further, that mines opened by an inclined shaft of less than twenty (20) degrees angle from the horizontal shall be considered for the purpose of these rules as equivalent to a mine opened by an adit level, tunnel or drift.

Provided, further, that any prospecting or development, exempt under exception (b) from providing two (2) outlets to the surface, shall not permit more than twenty-five (25) men to work underground at any one time. The exemption granted under the provisions of subdivision (b) may be withdrawn by the Industrial Commission, when after investigation, it appears that the operation has extended beyond the prospecting or developing stage.

Provided, however, that in mines opened by adit levels, slopes, or both, the Industrial Commission may waive the requirements of this rule, when, after investigation by the Industrial Commission, existing conditions are, in its opinion, found to be such that the safety of the occupants would not be endangered thereby.

RULE 1016. OPENINGS THROUGH OTHER MINES.

When a common communicating escapement outlet is established between mines, such outlet shall be maintained clear of obstruction to travel, and intervening doors, if any, shall be kept unlocked and ready at all times for immediate use.

In the event that escape by such communicating outlet be cut off, the owner or operator, upon whose property the secondary outlet is rendered unavailable, shall immediately notify the owner or operator of the adjoining mine and the Industrial Commission.

RULE 1017. MINES HAVING ONLY ONE OUTLET.

In every mine where, under the provisions of Rule 1015 of these rules, only one outlet is required, and where a single shaft affords the only means of ingress or egress to persons employed underground, such shaft shall be divided into at least two (2) compartments by solid partitions. One of said compartments shall be set aside for use as a ladderway and no hoisting conveyance shall be allowed therein. Whenever such shaft shall be covered by a non-fireproof building, it shall be the duty of the operator of said mine to cause said ladderway to be securely bulkheaded at a point at least twenty-five (25) feet below the collar of the shaft, and below this bulkhead a passageway shall be driven to the surface so as to have its outlet in no case less than thirty (30) feet beyond the walls of the building covering the main shaft. The said passageway shall be equipped with a ladderway when necessary, as provided in Rule 1019 of these rules, and shall be kept in good repair and shall afford an easy exit in the event of fire. Every mine opened by adit level or tunnel or by an inclined shaft or slope of less than twenty (20) degrees angle from the horizontal, which is less than one thousand (1,000) feet in length, shall have a similar side outlet, if covered by a non-fireproof building.

RULE 1018. PROTECTION OF OUTLETS AGAINST FIRE.

It shall be unlawful for the operator of any mine after the passage of these rules to erect any combustible structure over the shaft, tunnel or other mine opening, except open headframe necessary for hoisting from such shaft or other mine opening and the hatch or door necessary for closing such shaft or other mine opening. Provided, however, that a housing of non-inflammable and fireproof material may be erected

over any shaft, tunnel or other mine opening to protect the men working at such point.

It shall be the duty of every operator to provide every adit, tunnel, inclined shaft, or slope of less than twenty (20) degrees angle from the horizontal, the mouth of which is covered by a building or house of any kind, with a tightly fitting door near the mouth of such adit, tunnel, inclined shaft or slope of less than twenty (20) degrees angle from the horizontal that can be closed from outside of the building by a pull wire or cable.

RULE 1019. LADDERS AND LADDERWAYS.

It shall be the duty of the operator of every mine to provide, in addition to any mechanical means of ingress and egress, at least one means of outlet for the miners by means of ladders from the lowest workings of the mine to the surface. Except in the case of swinging or extension ladders used for shaft sinking, all ladders and ladderways hereafter constructed shall be built as prescribed in the following rules:

(a) The distance between the centres of the rungs of a ladder shall not exceed (14) inches and shall not vary more than one (1) inch in any one ladderway. The length of the ladder rungs (width of ladder) shall not be less than twelve (12) inches.

(b) The rungs of a ladder shall in no case be less than three (3) inches from the wall or other obstruction in the shaft or opening in which the ladder shall be used.

(c) Every main ladderway with an inclination of more than seventy (70) degrees from the horizontal, the distance between the top and bottom of which is more than fifty (50) feet, shall have substantial platforms at intervals of not more than thirty (30) feet, measured vertically. Where the inclination of any ladder or section of a ladder, in main ladderways, exceeds eighty (80) degrees from the horizontal, all ladder sections shall be placed at one and the same side of the main shaft, and shall be inclined in the same direction.

(d) All such platforms, except for an opening large enough to permit the passage of a man, shall be closely covered, or protected by railings.

(e) Ladders shall project at least three (3) feet above every platform in the ladderway and at least three (3) feet above the collar of the shaft, unless secure hand holds are fixed at such places.

(f) In ladderways, other than main ladderways, not exceeding fifty (50) feet in depth or height, ladders may be fixed vertically.

(g) Under no circumstances shall any ladder inclining backward from the vertical be installed.

(h) Ladderways shall be provided in all shafts steeper than thirty (30) degrees from the horizontal in the course of sinking to within such a distance from the bottom thereof as will secure them from damage by blasting. From the end of such ladderways, chain, wire rope or wooden extension ladders, or chains to reach to the bottom of the shaft shall be provided.

RULE 1020. VENTILATION.

The operator of every mine, whether operated by shaft, slope, tunnel, adit level, or drift, shall provide and maintain for every such mine a good and sufficient amount of ventilation for such men and animals as may be employed therein, and shall cause an adequate quantity of pure air to circulate through and into all the shafts, winzes, levels, and all the working places of such mine.

Note—It is strongly recommended that the recommendations as prepared by the Bureau of Mines from time to time be followed.

RULE 1021. SANITATION—DRY CLOSETS, DRINKING WATER, CHANGE HOUSES, ETC.

It shall be the duty of the operator of every mine, for the purpose of improving the sanitation thereof and preserving the health of those employed therein, to provide dry closets, water closets, chemical closets, or closet care upon all main working levels, for the use of all men employed in the mine. At least one (1) such closets shall be provided for every twenty-five (25) men employed within the mine. Ready means of access to each such closet shall be provided by the operator. No closet shall be constructed without adequate provision for the effectual cleansing and removing of the contents thereof, which shall be removed and disposed of at least twice a week. It shall be the duty of the mine foreman to cause each dry closet to be supplied with some disinfectant or deodorizer to be sprinkled upon the contents thereof. It shall be the duty of all men employed within any mine where such closets are provided to use such closets exclusively when in the mine. Provided, however, that this rule shall not apply to any mine where the operator or superintendent prefers to permit the men to go to the surface, and requires the men so to do.

Every stable or other place underground used for the housing of mules, horses or other animals, shall be kept thoroughly cleaned and the waste contents thereof removed to the surface.

It shall also be the duty of the operator of every mine to provide a good quantity of drinking water for the use of all men employed in the mine, a supply of which shall be provided on each main working level, and it shall be the further duty of the superintendent to cause such supply of drinking water to be adequately protected from contamination.

The operator of every mine employing more than twenty-five (25) men underground shall provide a wash and change house and such wash and change house shall be adequately heated, lighted and with sufficient water supply of warm water available to the men, open at all reasonable hours, free of cost.

RULE 1022. ROOF INSPECTION.

In all mines where stopeing is done by the opening of chambers, the roof thereof being supported only by the walls of the chambers, or by pillars, it shall be the duty of the superintendent of the mine to detail a competent man to make a frequent inspection of the roof of those parts of the mine where men are employed, and said man so detailed shall be charged with the duty of dislodging any slabs of rocks or ore in said roof that have become loose. Until such dislodgement is effected, the floor of the stope immediately beneath such loose rock shall be fenced off or otherwise adequately guarded; provided, however, that it shall be the duty of every miner to care for the roof at his working place.

It shall also be the duty of the superintendent of the mine to cause frequent inspection to be made by a competent person, detailed for such purpose, of the roofs of stopes, inclined shafts, inclined winzes, and other workings, and of the sides of shafts and winzes when any of these are used as traveling ways, and of the roofs of all drifts, adit levels, tunnels and gangways. The roof of the working places and the passages traversed by the employees going to and from same shall be inspected daily and dangerous conditions shall be remedied.

RULE 1024. INTOXICATING LIQUOR PROHIBITED IN MINES.

No stopeing shall be done within twenty (20) feet of a shaft that is used for hoisting men or material. The Industrial Commission may waive the requirements of this rule, when after investigation by the Industrial Commission, existing conditions are, in its opinion, found to be such that the safety of the occupants would not be endangered thereby.

No stopeing shall be done within ten (10) feet of the boundary line of a mining property, except on application to and permission by the Industrial Commission.

RULE 1024. INTOXICATING LIQUOR PROHIBITED IN MINES.

No person shall, while under the influence of intoxicating liquor, enter any mine, or any of the buildings connected with the operation of the same, where miners or other workmen are employed, nor shall intoxicating liquors be brought into any such places.

Provided, however, that nothing herein contained shall prevent the carrying of any alcoholic spirits or other stimulants into such mine or buildings for the purpose of administering to any one injured therein.

RULE 1025. CANDLES.

(a) At all timbered stations where candles are kept burning, there shall be provided metal sconces of sufficient size to catch and hold drippings and dropping wicks.

(b) It shall be the duty of any person using a candle or other portable light in a mine or any part of a mine, to extinguish it before departing from the mine, unless the candle or other portable light is taken to the outer air.

RULE 1026. CAGES.

(a) No person shall ride upon any cage, skip or bucket that is loaded with tools, timber, powder, or other material, except for the purpose of assisting in passing such material through a shaft or incline, and then only after a special signal has been given.

(b) When tools, timber, or other materials are to be lowered or hoisted in a shaft, their ends, if projecting above the top of the bucket, skip or other vehicle, shall be securely fastened to the hoisting rope or to the upper part of the vehicle, and all tools, timbers, or other materials loaded upon a cage, shall be securely lashed before being lowered or hoisted; provided, however, that such tools or other materials may

be placed without lashing in a closed box or in a mine car when lowered in a cage, or in a skip, or in a special tool bucket, when no tool projects above the edge thereof.

RULE 1027. HOISTING WHILE SINKING SHAFT.

In no case shall a cage, skip or bucket or other vehicle be lowered directly to the bottom of the shaft, when men are working there, but such cage, skip or bucket or other vehicle shall be stopped at least fifteen (15) feet above the bottom of such shaft until the signal to lower farther shall have been given to the hoisting engineer by one of the men at the bottom of the shaft.

RULE 1028. DEEPENING SHAFT—PROTECTION.

During shaft-sinking operations, no other work in any other place in the shaft shall be executed, nor shall any material or tools be hoisted or lowered from or to any other place in the shaft while men are at work in the bottom of the shaft, unless the men so at work be protected from the danger of falling material by a securely constructed covering extending over the whole area of the shaft, sufficient closable openings being left in the covering for the passage of men and the bucket or other conveyance used in the sinking operations, or by a substantial rock pentice.

RULE 1029. WHIMS.

Whims in use at or in mines shall be provided with a suitable latch or locking device which shall prevent running back of the bucket or other conveyance.

RULE 1030. CROSSHEADS.

All vertical shafts more than one hundred (100) feet deep from which hoisting is done by means of a bucket, shall be provided with suitable guides, and in connection with the bucket, there shall be a crosshead traveling upon these guides. The height of the crosshead shall be equal to that of its width.

RULE 1031. TELEPHONE SYSTEM.

In all mines in active operation, a telephone system must be established, equipped and maintained with stations readily and quickly accessible to the men on each working level, communicating with a station thereof on the surface of any such mine.

RULE 1032. SIGNALS.

(a) Every mine shall be provided with an efficient means of interchanging distinct and definite signals between the top of the shaft and the lowest level and the various intermediate levels from which hoisting is being done. There shall be provided and maintained two (2) separate systems of signaling, which shall be either electrical, pneumatic, or mechanical, or one such system supplemented by speaking tube or telephone.

(b) No person shall ride upon any bucket, cage, skip or other conveyance, unless proper signals have been given as prescribed in Rule 1033. No person shall knowingly interfere with or impede a signal, or damage a signal system, or give or cause to be given a wrong signal.

(c) The signal to move the cage, skip or bucket shall be given only when the same is at the level from which the signal is to be given.

RULE 1033. SIGNAL CODES.

(a) Three (3) months after the adoption of these rules, the following system or code of mine signals shall be used:

- 1 bell—Stop if in motion; or hoist if not in motion.
- 2 bells—Lower.
- 3 bells—Men on, run very carefully.

(b) Additional signals to meet local conditions may be used, provided they are easily distinguishable and do not conflict with the above code.

(c) Flashlight signals, consisting of nine (9) flashes on the mine lighting circuit, indicating fire or flood or other danger, shall be established in all mines equipped with an electric lighting system.

(d) An easily legible copy of the above code, and of any special code adopted in any mine, shall be printed in letters at least one-half (1/2) inch high on a board or metal plate not less than eighteen by eighteen (18 x 18) inches, and shall be securely posted in the engine room, at the collar of the shaft and at each level or station. The superintendent of the mine shall be responsible for the carrying out of this rule.

RULE 1034. CLEANING OF MANWAYS.

The timbers in all vertical and inclined ladders and manways in daily use shall be cleaned of all loose rock lodged upon them at least once in every twenty-four (24) hours. Manways in daily use shall be kept clear of obstructions.

RULE 1035. FIRE PROTECTION.

In all heavily timbered stopes, it shall be the duty of the mine foreman to cause fire inspection to be made after each shift shall have left such stope. A fire map shall be maintained at the mine office, showing all air and water lines in the mine, and their dimensions, with the positions of all sumps, valves, hydrants and pumps, and such map shall be brought up to date at least every six (6) months.

RULE 1036. TIMBERING.

For the purposes of this and the succeeding rules, the term "timbers" shall be held to include and mean all wood to be used by the miner, or all steel or concrete material used in lieu of timber.

(a) Every shaft, incline, slope, adit, tunnel, level or drift and any working place in the mine shall be, when necessary, kept securely timbered or protected to prevent injury to any person from falling material. It shall be the duty of the operator to carry out and enforce the provisions of this rule, but nothing contained herein shall be construed to relieve the miner from the duty of caring for his own working place save as hereinafter provided.

(b) It shall be the duty of the operator to see that all miners in the mine are supplied at all times with such timbers as are necessary to keep their working places in a safe condition, such timbers to be supplied at a point readily accessible and convenient to the working place.

(c) If for any cause necessary timbers cannot be supplied to any miner when required, it shall be the duty of the mine foreman to instruct the miner or miners to vacate all such working places until supplied with the timbers needed, but nothing contained herein shall be construed to relieve the operator of the duty of supplying such timbers.

RULE 1037. FENCING DISUSED WORKINGS.

All abandoned shafts, shafts temporarily out of use, or shafts used only as airways shall be securely covered or fenced, and shall be so maintained. All mill holes, glory holes and cavernous stopes opening to the surface shall be securely fenced and shall be so maintained. All other abandoned excavations whereof the sides slope more than thirty (30) degrees from the horizontal, and whereof the depth is more than ten (10) feet, shall be securely fenced, but such fencing need be erected only at those places where such slope is in excess of thirty (30) degrees, and all such fencing shall be maintained in good condition.

RULE 1038. LIGHTING.

(a) Stationary lights shall be provided during the working hours at all shaft stations during the time the same are in actual use, and also at all stations on the levels where hoisting or hauling is effected by means of machinery, and also at night at all places on the surface where work is being conducted.

(b) All places where hoisting, pumping or other machinery is erected and in the proximity of which persons are working or moving about shall be so lighted when the machine is in operation that the moving parts of such machine can be clearly distinguished.

RULE 1039. PLACES OF REFUGE.

(a) Where mechanical haulage is employed there shall be maintained at all times a clearance space of not less than two and one-half (2 1/2) feet on one side of tramway. Where such space cannot be maintained, refuge places shall be provided at not more than sixty (60) foot intervals, which shall afford a clearance space not less than four (4) feet wide, five (5) feet high, and eight (8) feet long.

(b) Every such place of refuge shall be conspicuously marked and kept clear and no refuse shall be placed thereon, and no person shall in any way prevent access thereto.

RULE 1040. PROTECTION AGAINST WATER.

(a) When advancing toward a mine excavation that is suspected to be filled with water, the working place shall not exceed six (6) feet by eight (8) feet in cross section, and the bore holes shall be kept at least fifteen (15) feet in advance of the breast, and also, if necessary, in direction laterally from the course of the drive.

(b) In every mine where there is danger from a sudden inburst of water such additional raises, drifts or other workings shall be constructed as are necessary to insure the escape of workmen from the lower workings.

RULE 1041. SUMPS.

All sumps shall be securely covered or fenced, except when being cleaned or repaired.

RULE 1042. STOLES.

In stopes timbered with square sets the working floors shall be closely and securely lagged over. Openings in the floors shall be protected by railings.

RULE 1043. WINZES OR RAISES.

Winzes opening directly from the floor of a drift or stope shall be kept covered by a substantial hatch, or shall be planked over, except when in use, or shall be barred off by a substantial railing not less than three and one-half (3 1/2) feet nor more than four (4) feet above the level of the floor, or shall be provided with a gangway not less than ten (10) inches wide, which gangway shall have a substantial hand-railing not less than three and one-half (3 1/2) feet nor more than four (4) feet above the gangway, and the approaches to such gangway at each end shall be protected by a substantial railing not less than three and one-half (3 1/2) feet nor more than four (4) feet above the floor.

Raises for shaft extensions and for stopes steeper than fifty (50) degrees shall be done by two (2) compartments, in one of which there shall be a protected ladder-way.

RULE 1044. PROTECTION TO DRAFFTS.

Drifts used as manways intersecting overhead workings through which material is dropped shall be closed to the passage of persons by a substantial rail not less than three and one-half (3 1/2) feet nor more than four (4) feet in height above the level of the drift, on each side of the working, whenever material is to be dropped through such working, and the drift shall be kept so closed during periods when the working is so in use.

RULE 1045. SHAFT PROTECTION.

(a) At all shaft stations a gate or a guard rail not less than three and one-half (3 1/2) feet nor more than four (4) feet above the floor shall be provided and kept in place across the shaft, except when the cage, skip, bucket, or other conveyance is being loaded or unloaded thereat, but this prohibition shall not forbid the temporary removal of the gate or rail for the purpose of repairs or other operations, if proper precaution to prevent danger to persons be taken.

(b) The top of all shafts shall be protected by a tight fence, which may be provided with the necessary gates to give access to the shaft, but such gates shall be kept closed when access to the shaft is not necessary.

(c) If hoisting be done from greater depth than twenty-five (25) feet by means of a bucket, shaft doors shall be installed that will prevent any material from falling into the shaft while the bucket is being dumped, and such doors shall be closed while the bucket is being dumped.

(d) All stations or levels shall have such a passageway through or around the working shaft that crossing through the hoisting compartment may be avoided; entering or crossing the hoisting compartment of a shaft, except to ascend or descend, or for the purpose of effecting repairs is prohibited; before repairs are commenced the person in charge of or directing the repairs shall inform the hoisting engineer of the nature thereof.

RULE 1046. SAFETY CATCHES.

The safety catches or cages shall be kept well oiled and in good working order, and shall be tested at least once a month. Such test shall consist of releasing the cage suddenly in some suitable manner so that the safety catches shall have opportunity to grip the guides.

RULE 1047. MECHANICAL HAULAGE.

When mechanical haulage is used and through passageways and approaches to working places, no greater speed shall be made than the Industrial Commission will permit. No cars shall be pushed ahead of the locomotive underground where it is practicable to draw. Headlights shall be placed on the front of first car or locomotive of a moving train. All trolleys shall be trailed. No locomotive shall be driven by a person under twenty-one (21) years of age. No gas locomotive shall be used in any mine without the written consent of the Industrial Commission.

ELECTRICAL EQUIPMENT.

RULE 1048. DEFINITIONS.

(a) Potential and Voltage—The terms "potential" and "voltage" are synonymous and mean electrical pressure.

(b) Difference of Potential—The expression "difference of potential" means the difference of electrical pressure existing between any two points of an electrical system or between any point of such a system and the earth, as determined by a voltmeter.

(c) Potential of a Circuit—The potential or voltage of a circuit, machine or any piece of electrical apparatus is the potential normally existing between the conductors of such circuit or the terminals of such machine or apparatus.

(d) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit cannot exceed three hundred (300) volts the supply shall be deemed a low-voltage supply.

(e) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit may at any time exceed three hundred (300) volts, but cannot exceed six hundred fifty (650) volts, the supply shall be deemed a medium-voltage supply.

(f) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit may at any time exceed six hundred fifty (650) volts, the supply shall be deemed a high-voltage supply.

(g) Grounding—Grounding any part of an electrical system shall consist in so connecting such part to the earth that there shall be no material difference of potential between such part and the earth.

(h) Underground Station—The term "underground station," as used herein, shall mean any place where electrical machinery is permanently installed in the mine.

(i) The term "carrying capacity" shall be taken to mean carrying capacity of a given wire as prescribed for various insulated wires in the National Electrical Code, published by the National Board of Fire Underwriters, and the United States Bureau of Mines' standard for bare wires.

RULE 1049. CARE OF EQUIPMENT AND PRACTICES.

(a) No person shall, without authority, install or handle electric wires, lights, conductors or electrical apparatus of any kind, or enter an electrical machine room or underground station.

(b) No person shall be allowed to work on or with electrically driven apparatus unless he shall have been previously instructed in the performance of his duties by a competent person, and shall have been duly authorized by the mine superintendent or mine foreman.

(c) Instruction for the disengaging of persons from contact with live wires and the resuscitation of persons suffering from electric shock shall be posted at the entrance to the mine, in every generating station and substation and in all underground electric stations. All employees working with electrical apparatus shall be required by the mine superintendent to familiarize themselves with these instructions and shall be capable of applying them before entering upon such work.

RULE 1050. GROUNDING.

The frames and bed plates of generators, transformers, compensators, rheostats and motors installed underground shall be effectively grounded. All metallic coverings, armoring of cables, other than trailing cables, and the neutral wire of three-wire systems shall also be so grounded.

RULE 1051. VOLTAGE.

In electrical systems hereafter installed, no higher voltage than low voltage shall be used underground, except for transmission or for application to transformers, motors, generators, or other apparatus in which the whole of the medium or high voltage apparatus is stationary.

RULE 1052. SWITCHBOARDS.

Switchboards shall consist of substantial framework of iron pipes, angle irons or bar iron, on which shall be mounted a panel or panels of incombustible, non-absorbent insulating material that is mechanically strong and has insulating qualities suitable for the voltage at which it is used.

The panels of insulating material may be omitted if each piece of equipment carried on the switchboard is provided with an individual base of insulating material of the character specified for the panels and of adequate dimensions, or has its current-carrying parts mounted on similar insulation self-contained in the equipment, which shall be especially designed for mounting on iron pipe, angle-iron or bar-iron framework.

RULE 1053. DANGER SIGNALS.

All medium and high-voltage machines and apparatus shall be conspicuously marked by the use of the word "danger," and shall be properly illuminated when in circuit.

RULE 1054. FIRE BUCKETS.

Buckets filled with clean, dry sand shall be kept in all underground electrical stations ready for immediate use in extinguishing fires. The minimum quantity of sand thus stored in any one station shall be two (2) cubic feet; provided that a fire extinguisher of character approved for the purpose may be kept instead of the sand.

RULE 1055. EMERGENCY LIGHTS.

Lamps or other proper lights shall be kept ready for use in all underground stations where a failure of electric light is likely to cause danger.

RULE 1056. PLAN OF ELECTRIC SYSTEMS.

The operator of every mine where electrical equipment is installed underground shall make or cause to be made by a competent person a clear and accurate plan or sketch with distances marked, showing the position of all stationary electrical apparatus in connection with the mine, in excess of twenty-five (25) kilowatts' capacity, including fixed cables, conductors, lights, switches and trolley lines. The capacity in horsepower of each motor and in kilowatts of each generator or transformer, and the nature of its use, shall be shown on such plan or sketch. This plan or sketch shall be kept at the mine and shall be corrected and be brought up to date at intervals not exceeding six (6) months, and shall at all times be subject to examination by the Industrial Commission.

RULE 1057. UNDERGROUND STATIONS AND TRANSFORMER ROOMS.

(a) Switchboards. All switches, circuit breakers, rheostats, fuses and measuring instruments used in connection with underground motor generators, rotary converters, transformers and motors shall be mounted on standard bases of noncombustible and insulating material, but in no case shall primary instruments be used on circuits of more than three hundred (300) volts. This provision shall not apply to compensators for induction motors. The above mentioned switches, circuit breakers, rheostats, fuses and instruments may be mounted on a common base, provided such base is of noncombustible, insulating material.

(b) Passageways. A passageway not less than three (3) feet in width shall be maintained in front of all switchboards. No one shall be permitted back of the switchboards while the current is on.

(c) Space Back of Switchboards. Any space over thirty (30) inches wide at the back of switchboards shall be accessible from each end and shall be kept locked up in case of medium and high-voltage boards, but no lock shall be used that will not permit the door being opened from the inside without the use of a key. In no case shall this space be used as a change room, wardrobe or for the storage of material. Noncombustible flooring only shall be used at the front and back of high-voltage boards, and insulating mats or their equivalent shall be provided in front and back of all boards, whatever the voltage.

(d) Conductors Crossing Passageway. No electric conductor shall cross a passageway at the back of a switchboard except below the floor or at a height of not less than seven (7) feet above the level of the floor.

(e) Live Metal Work on Switchboards. No live metal work shall be placed on the front of high-voltage switchboard within seven (7) feet of the floor.

(f) Protection of Terminals. All exposed terminals on underground machines shall be protected with properly designed insulating covers of suitable material or with metal covers connected to earth.

(g) Transformer Rooms. Transformer rooms shall be properly lighted, shall be of fireproof construction, and if of conductive material shall be effectively grounded.

(h) Circuits Entering or Leaving All Transformers. Circuits leaving the transformer shall be protected by a switch and an automatic circuit breaker to interrupt current, but fuses may be substituted for the circuit breakers in the case of lighting circuits, and in the case of power circuits transmitting twenty-five (25) kilowatts or less. Primary fuses and disconnecting switches shall be placed in the primary circuit ahead of the transformers, but in no case shall these disconnecting switches be opened or closed under load.

RULE 1058. HIGH-VOLTAGE WIRES.

All high-voltage wire installed underground after these rules are adopted shall be in the form of insulated lead-covered cables, which shall be armored or effectively protected against abrasion, but the armor shall be electrically continuous throughout and shall be effectively grounded. The installation of efficiently insulated wires in metal conduit to transmit power underground shall be considered to meet this requirement.

RULE 1059. SUPPORT OF CABLES AND WIRES.

(a) All underground cables and wires, unless provided with grounded metallic covering, shall be supported by efficient insulators. The conductors connecting lamps to the power supply shall in all cases be insulated.

(b) Cables and wires unprovided with metallic coverings shall not be fixed to walls or timbers by means of uninsulated fastenings.

RULE 1060. OVERHEAD LINES ABOVE GROUND.

Overhead transmission lines between the generating station or substation and the mine entrance, shall be supported upon insulators, which shall be adequate in quality, size and design for the voltage transmitted. Where such line is more than five hundred (500) feet in length, lightning arresters shall be installed in connection therewith at the entrance to the mine. Such line, except in the case of trolley wires, shall be maintained not less than ten (10) feet above the ground at the lowest point, except at the point of entrance to the mine.

RULE 1061. BURIED CABLES.

Buried cables shall be continuously insulated and protected by a metallic sheath, preferably lead, and, where they are so located that there is a possibility of danger to the sheath by puncturing, such cables shall be further protected by armor.

RULE 1062. PROTECTION OF CIRCUITS LEADING UNDER GROUND.

(a) Every completely insulated feeder circuit in excess of twenty-four (24) kilowatt capacity, leading under ground, where the potential does not exceed the limits of a medium-voltage potential, shall be provided above ground with a switch and an automatic overload circuit breaker. In the case of ground-return direct-current circuits, a switch and current breaker shall be installed in the ungrounded side of the circuit, but may be omitted from the return side. Fuses may be substituted for circuit breakers in circuits transmitting twenty-five (25) kilowatts or less.

(b) Every high voltage alternating current feeder circuit leading under ground shall be provided above ground with an oil break switch on each phase, and every such switch shall be equipped with an automatic overload trip.

RULE 1063. BRANCH CIRCUITS.

Every branch circuit shall be provided with a switch of ample carrying capacity on each phase, within fifty (50) feet of the point where it leaves the main circuit.

RULE 1064. LIGHTING CIRCUITS.

Wires for all lighting circuits shall be covered with an insulation adequate for the voltage of the circuit, and, unless encased in pipes or other metallic covering, shall be strung on porcelain or glass insulators. Separate uncased wires shall be kept at least three (3) inches apart, except where they enter the fittings. Metallic casings, if used, shall be efficiently grounded.

RULE 1065. UNDERGROUND TROLLEY.

Trolley wires shall be securely supported upon hangers efficiently insulated and placed at such intervals that the sag between points of support shall not exceed three (3) inches.

RULE 1066. PROTECTION OF TROLLEY WIRES.

(a) At all places where men are required to work or pass regularly under trolley or other bare power wires, which are placed less than six and one-half (6 1/2) feet above top of rail, a suitable protection shall be provided, which may consist of channeling the roof or of placing boards along the wire, which shall extend three (3) inches below it, or in the use of any other device that will afford ample protection. In new installations the trolley wires shall be protected as provided for above, unless the wire is at least seven (7) feet above top of rail. At all points where timbers or tools have to be unloaded or transferred up a raise, the trolley wires shall be boxed or otherwise protected as provided for in this paragraph. All places where it is required that the trolley wires shall be boxed shall be well lighted with electric lamps.

(b) All wires, except telephone, shot-firing and signal wires, shall be boxed or otherwise guarded, where timbers or tools have to be transported.

RULE 1067. POWER WIRES AND CABLES IN SHAFTS.

In all shafts, the angle of inclination of which is above forty-five (45) degrees from the horizontal, and in all hoisting shafts or manway compartments, all power wires and cables shall be amply protected by insulation and substantially fixed in position. All shaft cables shall be supported on insulators that cannot cause abrasion

of the covering or insulation, so spaced that no part of the cable shall be under a tension greater than one-fourth (1/4) of its ultimate strength. The cable shall be held in position at points between the insulators by grips or cleats that cannot cause abrasion of the covering or insulation. Where the cables are not completely boxed in and protected from falling material, space shall be left between them and the side of the shaft so that they may yield and lessen a blow from falling material. This rule shall not be construed to prevent the installation of efficiently insulated wires in metal conduit, to transmit power underground.

RULE 1068. CABLES IN MAIN ROADS.

Where the cables or feed wires in main roads cannot be kept at least twelve (12) inches from any part of the mine car or locomotive, they shall be especially protected by proper guards.

RULE 1069. PROTECTION OF CABLES DURING BLASTING.

Cables shall be temporarily protected against damage at any point where workings are being repaired or where blasting is being carried on.

RULE 1070. CABLES ENTERING FITTINGS.

(a) The exposed ends of cables where they enter fittings of any description shall be so protected and finished off, that moisture cannot enter the cable, or the insulating material leak out, if of an oily or viscous nature.

(b) Where unarmored cables or wires pass through metal frames or into boxes or motor casings, the holes shall be substantially lined with insulated bushings.

RULE 1071. JOINTS IN CONDUCTORS.

All joints in conductors shall be mechanically and electrically efficient, and shall be soldered wherever necessary. All joints in insulated wire shall, after the joint is complete, be reinsulated to the same extent as the remainder of the wire.

RULE 1072. JOINTS IN CABLES.

Where cables are joined, suitable junction boxes shall be used, or the joints shall be soldered, and the insulation, armoring, or lead covering, replaced in as good condition as it was originally.

RULE 1073. FUSES, CIRCUIT BREAKERS AND SWITCHES.

(a) Fuses and automatic circuit breakers shall be constructed so as effectually to interrupt the current when a short circuit occurs or when the current through them exceeds a pre-determined value. No open type or link fuses shall be used.

(b) All points at which a circuit has to be made or broken shall be provided with proper switches, which shall be so installed that they cannot be closed by gravity.

(c) Fuses shall be stamped or marked, or shall have a label attached, indicating the maximum current that they are intended to carry. Fuses shall be adjusted or replaced only by an authorized and competent person.

(d) The capacity of fuses used to protect feeders shall not exceed the current capacity of the feeder by more than twenty-five (25) per cent.

(e) All switches, circuit breakers, and fuses shall have non-combustible bases.

RULE 1074. STATIONARY MOTORS.

Every stationary motor and every portable motor underground, together with its starting device, shall be protected by a fuse on each phase, or (in the case of motors of more than forty (40) horsepower) by a circuit breaking device on at least one phase of direct current motors and on each phase of alternating current motors, and by switches arranged to cut off entirely the power from the motor. The above devices shall be installed in a convenient position near the motor and in sight of it.

RULE 1075. ELECTRIC LIGHTING.

(a) *Lamp Sockets*.—The exterior of the sockets of all fixed incandescent lamps, installed after these rules go into effect, shall be entirely non-metallic.

(b) *Flexible Lamp Cord*.—The use of flexible lamp cord for lighting connections is prohibited, except for portable incandescent lights to be used in connection with the inspection and repair of machinery and equipment, and in that case the cord shall have extra heavy insulation. Such portable lights shall be protected by a wire cage large enough to inclose both lamp and socket, and shall be provided with a handle to which the light and socket shall be firmly attached and through which the leading-in wires shall be carried.

(c) *Incandescent Lamps*.—Incandescent lamps shall be so placed that they cannot come into contact with combustible material; and shall be so placed that an adequate circulation of air may take place on all sides of them.

RULE 1076. DUTIES OF EMPLOYERS.

Every employee shall be responsible for carrying out all rules which immediately concern or affect his conduct.

QUARRIES.

RULE 1100. DEFINITIONS OF TERMS.

(a) *Application*.—These rules shall apply to all quarries in the State of New York producing minerals within the meaning of that term as hereinafter defined.

(b) *Singular and plural numbers*.—For the purpose of these rules the singular number when used in reference to persons, acts, objects and things of whatsoever kind and description shall, whenever the context will permit, be taken and held to import and include the plural number, and the plural number shall similarly be taken and held to import and include the singular.

(c) The term "quarry" shall include excavations, prospect openings, pits, banks and open cut workings employing an average of five (5) or more men, and shall embrace any and all parts of the property of such quarry and quarrying plant that contribute directly or indirectly to the quarrying of minerals. Provided, that when a group of workings in proximity to one another and under one management are administered as distinct units each working shall be considered a separate quarry.

(d) *Mineral*.—The term "mineral" shall mean whatever is recognized by the standard authorities as mineral whether metalliferous or non-metalliferous, but shall not be held to embrace or include coal, lignite, gas, oil, or any substances when extracted in solution or in the molten state through bore holes.

(e) *Operator*.—The term "operator" shall mean the person, firm or body corporate in immediate possession of any quarry and its accessories as owner or lessee thereof, and as such responsible for the condition and management thereof.

(f) *Superintendent*.—The term "superintendent" shall mean the person having immediate supervision of the quarry.

(g) *Quarry Foreman*.—The term "quarry foreman" shall mean a person who at any time is charged with the general direction of the quarry work.

(h) *Explosive*.—The term "explosive" or "explosives" shall be held to mean and to include any chemical compound or any mixture that contains any oxidizing and combustible units or other ingredients in such proportions, quantities or packing that an ignition by fire, by friction, by concussion, by percussion or by detonation or any part of the compounds or mixture may cause such a sudden generation of highly-heated gases that the resultant gaseous pressures are capable of producing destructive effects on contiguous objects or of destroying life and limb.

(i) *Magazine*.—The term "magazine," as used in these rules, shall be held to mean and include any building or other structure or place in which explosives are stored or kept, whether above or below ground.

(j) *Person*.—The term "person" shall be held to mean and include a firm or body corporate as well as natural persons.

(k) *Employees*.—The terms "employees" and "men employed" shall be held to mean all men receiving compensation from the operator, directly or indirectly, for labor or services performed in connection with the quarries.

(l) *Approved*.—The term "approved" shall be held to mean approved by the Industrial Commission.

RULE 1101. GENERAL.

(a) The operator and superintendent of every quarry shall use every reasonable precaution to insure the safety of the workmen in the quarry in all cases, whether provided for in these rules or not.

(b) All defects in or damage or injury to machinery or timbering or to apparatus and equipment generally in and about a quarry, all unsafe or dangerous conditions in any part of the quarry, and all accidents occurring in the course of quarrying operations, other than those of a purely minor character, even though not resulting in personal injury, shall be promptly reported to the quarry foreman or superintendent by the person observing the same.

(c) Wages shall not be paid on any premises used for the sale of intoxicating liquors.

(d) Each workman employed in the quarry, when first engaged, shall have his attention directed to the general and special rules provided for in these rules.

RULE 1102. SUPERINTENDENT.

The operator of every quarry shall appoint a man who shall be personally in charge of the quarry and the performance of the work done therein, who shall be designated as the "superintendent"; provided, however, that nothing herein contained shall prevent the owner or operator of any quarry from personally filling the office of superintendent.

The superintendent of every quarry shall inspect or cause some competent person or persons appointed by him to inspect all quarrying appliances, boilers, engines, magazines, explosives, bell ropes, speaking tubes, telephones, tracks, adders, dry closets and all parts and appliances of said quarry in actual use and any such person or persons appointed by said superintendent shall at once report any defects therein to the superintendent. It shall be the duty of the superintendent, upon ascertaining such defects, to take immediate steps to remedy the same so as to make the same comply with the provisions of these rules, and he shall forthwith notify the operator of said quarry of the existence of such defects. It shall be the duty of the superintendent to appoint a competent man to have full charge, under the direction of said superintendent, of every magazine containing explosives situated on said quarrying property, and to make such other appointments and perform such other duties as are provided by these rules to be performed by such superintendent.

RULE 1103. CARE OF INJURED.

It shall be the duty of operators, superintendent or anyone in charge of any quarry to keep at such place about the quarry as may be designated by the industrial commission, a stretcher, a woolen blanket and a waterproof blanket, in good condition, for use in carrying any person who may be injured at the quarry. Where more than one hundred (100) persons are employed, two (2) stretchers, two (2) woolen blankets and two (2) waterproof blankets shall be kept. At all quarries an adequate supply of materials shall be kept readily accessible for the treatment of anyone injured and shall include the following in suitable quantity: First-aid outfits, consisting of one extra long gauze bandage with compress sewed in its center; one triangular bandage with methods of application printed thereon, two (2) safety pins and one card of instructions, large first-aid dressings for wounds, packages of sterilized gauze, assorted bandages, United States army tourniquet, carbolated vaseline or boric acid ointment, packages of picric acid gauze, wooden or wire-gauze splints, packages of absorbent cotton, safety pins, shears, tweezers, aromatic spirits of ammonia, paper cups, first-aid book of instructions, soap, basins, towels. Furthermore, in all quarries where one hundred (100) or more men are employed, a first-aid corps shall be organized, consisting of the foreman or foremen, shift bosses, timekeepers or other employees designated by the superintendent, and it shall be the duty of the operator or superintendent to cause the organization of such employees and to procure the services of a competent person to instruct the members of such first-aid corps from time to time, not less than once in every three (3) months, in the proper handling and treatment of injured persons before the arrival of a physician, except that where a hospital is maintained in connection with a quarry, there shall be provided only such first-aid equipment as may be reasonably necessary to prepare the injured employee for removal to the hospital.

EXPLOSIVES.

Rule 1104. Storage of Explosives.

(a) The daily supply of explosives in a quarry shall be kept in a stout, tight box with hinged lids, which shall be kept securely locked, except at such times as explosives are being placed therein or removed therefrom, from which explosives shall be removed only as required for immediate use by the authorized blaster.

(b) No detonators shall be taken into any magazine containing other explosives. No fuses shall be capped with detonators in any magazine or in any other place where detonators or other explosives are stored, but special benches shall be provided at least twenty (20) feet from such storage places, where all fuses shall be capped. Cap crimpers shall be furnished in sufficient quantity to avoid the necessity of crimping in any other way. No detonator shall be transported with other explosives, except when made into a primer with such other explosive.

(c) All magazines shall be bullet-proof.

(d) When supplies of explosives or fuse are removed from a magazine, those that have been longest in the magazine shall be taken first. Packages of explosives shall be removed to a safe distance from the magazine before being opened and no such packages shall be opened with any metallic instrument.

RULE 1105. MARKING OF EXPLOSIVES, DETONATORS AND FUSES.

It shall be unlawful for the operator or superintendent of any quarry to permit the use within such quarry of any explosive, or any blasting caps or detonators, or fuse, unless there shall be printed or marked on every original package containing explosives, the name and place of business of the manufacturer of such explosive, the date of its manufacture (if the date of manufacture is in code, the key to such code shall be furnished on application) and its character and grade, and on every original package containing such fuse, the name and place of business of the manufacturer of such fuse, and the date of its manufacture (if the date of manufacture is in code, the key to such code shall be furnished on application), and on every original package containing blasting caps or detonators, the name and place of business of the manufacturer of such blasting caps or detonators, the date of their manufacture (if the date of manufacture is in code, the key to such code shall be furnished on application), and their grade.

In emergencies, or when approved by the Commission, one manufacturer may supply explosives for another manufacturer under the latter's brand.

It is recommended that employers provide common or safety fuse of uniform speed, preferably ninety (90) seconds per yard.

RULE 1106. CONVEYING, THAWING, BLASTING, MISFIRES, ETC.

(a) The superintendent in all quarries shall appoint a sufficient number of experienced blasters to handle explosives and to do blasting.

(b) All foremen and gang bosses shall be experienced blasters and shall supervise the handling of explosives and see that blasting operations are carried on in accordance with the rules and regulations herein prescribed.

(c) Detonators shall not be carried with other explosives, nor shall any person ride in the same cage, skip or car with explosives.

(d) No blaster shall attempt to use any dynamite that is frozen nor detonators of less than No. 6 strength.

(e) No quantity greater than is sufficient for daily use shall be artificially thawed at one time.

(f) Only approved methods of thawing shall be permitted.

(g) Fuse may be kept with detonators and all crimping of caps on fuse shall be done with proper crimper and at least twenty (20) feet away from explosives.

(h) No tools or other articles shall be kept with the explosives or with the detonators, except that the detonator chest may contain one or more crimpers and the explosive chest may contain a hard wood wedge and mallet.

(i) All drill holes shall be of sufficient bore to admit of the free insertion to the bottom of the hole of a cartridge of explosive without ramming or removing the dynamite from its original wrapper, except for block holes.

(j) Fuse shall not be laced through cartridges for forming a primer.

(k) Foreman or shift boss shall before drilling is commenced on any shift, ascertain whether all holes fired on the previous shift have been exploded, and shall cause all remaining holes to be examined with a wooden stick for unexploded charges or cartridges, and if any are found, same shall be refired or a new hole drilled and fired before regular drilling is commenced.

(l) Explosives shall not be extracted from a hole which has once been charged; the tamping only may be withdrawn sufficiently to allow a missed shot being fired by insertion of fresh additional charge of primer.

(m) Blaster shall be furnished with hard wood rods for tamping and he shall not tamp or load any hole with a metal bar, nor shall the wooden rod have any metal parts; except that where black powder with no detonator is used, tamping will be permitted with a copper-tipped tamping rod.

(n) Firing shall be done by safety fuse or approved battery or from an electric current of not over two hundred and fifty (250) volts, provided a suitable switch is used, as hereinafter described. Other methods of firing may be permitted upon application and approval by the Industrial Commission.

(o) When firing by electricity from power or lighting wires in any quarry, a proper switch shall be furnished with lever down when "off." The switch shall be fixed in a locked box to which no person shall have access except the blaster. The lead wires shall be furnished with plugs and shall not be connected with the switch till ready to fire. After blasting, the switch lever shall be pulled out, the wires dis-

connected, and the box locked before any person shall be allowed to return, and shall remain so locked until again ready to blast.

(p) All power lines and electric light wires shall be disconnected at a point outside the blasting switch before explosives are taken in and loading of holes is proceeded with. No current by grounding of power or lighting wires or banded rails shall be allowed beyond blasting switch after explosives are taken in preparatory to blasting, and under no circumstances shall grounded current be used for exploding blasts.

(q) The blaster shall cause a sufficient warning to be sounded and shall be responsible that all persons retreat to safe shelter before he sets off blast, and shall also see that none return until he reports it safe for them. He shall report to the quarry foreman and furnish names of all persons refusing to obey his caution. Suitable and convenient shelters shall be provided.

(r) When a blaster fires a round of holes, he shall count the number of shots exploding, except in case of instantaneous blasting by electricity. If there are any misfires, he shall report the same to the gang boss or foreman. The blaster shall not leave until he has placed a wooden plug painted red, or other proper danger signal, in the mouth of the missed hole. If a missed hole has not been fired at the end of a shift, that fact, together with the position of the hole, shall be reported by the quarry foreman or shift boss to the quarry foreman or shift boss in charge of the next relay of quarrymen, before work is commenced by them.

(s) No person shall be allowed to deepen holes that have previously contained explosives.

(t) All wires in broken ore or rock shall be carefully traced and search made for unexploded cartridges.

(u) Whenever blasting is being done at points liable to break through to where other men are at work, the foreman or person in charge shall, before any holes are loaded, give warning of danger to all persons that may be working where the blasts may break through, and he shall not allow any holes to be charged until warning is acknowledged and men are removed.

(v) Blasters, when testing circuit through charged holes, shall use sufficient leading wires to be at a safe distance, and shall use only approved types of galvanometers. No tests of circuits in charged holes shall be made until men are removed to safe distance.

(w) A daily record of all misfires shall be kept at the quarry office, giving name of loading blaster and name of blaster that fired it.

RULE 1107. INTOXICATING LIQUORS PROHIBITED IN QUARRIES.

No person shall, while under the influence of intoxicating liquor, enter any quarry, or any of the buildings connected with the operation of the same, where quarrymen or other workmen are employed, nor shall intoxicating liquors be brought into any such places.

Provided, however, that nothing herein contained shall prevent the carrying of any alcoholic spirits or other stimulants into such quarry or buildings for the purpose of administering to anyone injured therein.

ELECTRICAL EQUIPMENT.

RULE 1108. DEFINITIONS.

(a) Potential and Voltage.—The terms "potential" and "voltage" are synonymous and mean electrical pressure.

(b) Difference of Potential.—The expression "difference of potential" means the difference of electrical pressure existing between any two points of an electrical system or between any point of such a system and the earth as determined by a voltmeter.

(c) Potential of a Circuit.—The potential or voltage of a circuit, machine or any piece of electrical apparatus is the potential normally existing between the conductors of such circuit or the terminals of such machine or apparatus.

(d) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit cannot exceed three hundred (300) volts, the supply shall be deemed a low-voltage supply.

(e) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit may at any time exceed three hundred (300) volts, but cannot exceed six hundred fifty (650) volts, the supply shall be deemed a medium-voltage supply.

(f) Where the conditions of the supply of electricity are such that the difference of potential between any two points of the circuit may at any time exceed six hundred fifty (650) volts, the supply shall be deemed a high-voltage supply.

(g) Grounding.—Grounding any part of an electrical system shall consist in so connecting such part to the earth that there shall be no material difference of potential between such part and the earth.

(h) The term "carrying capacity" shall be taken to mean carrying capacity of a given wire as prescribed for various insulated wires in the National Electrical Code, published by the National Board of Fire Underwriters, and the United States Bureau of Mines' standard for bare wires.

RULE 1109. CARE OF EQUIPMENT AND PRACTICES.

(a) No person shall, without authority, install or handle electric wires, lights, conductors or electrical apparatus of any kind or enter an electrical machine room.

(b) No person shall be allowed to work on or with electrically-driven apparatus unless he shall have been previously instructed in the performance of his duties by a competent person and shall have been duly authorized by the quarry superintendent or quarry foreman.

(c) Instruction for the disengaging of persons from contact with live wires and the resuscitation of persons suffering from electric shock shall be posted in every generating station and substation. All employees working with electrical apparatus shall be required by the quarry superintendent to familiarize themselves with these instructions and shall be capable of applying them before entering upon such work.

RULE 1110. GROUNDING.

The frames and bed plates of generators, transformers, compensators, rheostats and motors shall be effectively grounded. All metallic coverings, armoring of cables other than trailing cables, and the neutral wire of three-wire systems shall also be grounded.

RULE 1111. SWITCHBOARDS.

Switchboards shall consist of a substantial framework of iron pipes, angle irons or bar iron, on which shall be mounted a panel or panels of incombustible, non-absorbent insulating material that is mechanically strong and has insulating qualities suitable for the voltage at which it is used.

The panels of insulating material may be omitted if each piece of equipment carried on the switchboard is provided with an individual base of insulating material of the character specified for the panels and of adequate dimensions, or has its current-carrying parts mounted on similar insulation self-contained in the equipment, which shall be especially designed for mounting on iron pipe, angle-iron or bar-iron frameworks.

RULE 1112. DANGER SIGNALS.

All medium and high-voltage machines and apparatus shall be conspicuously marked by the use of the word "danger."

RULE 1113. OVERHEAD LINES.

Overhead transmission lines between the generating station or substation and the quarry entrance shall be supported upon insulators, which shall be adequate in quality, size and design for the voltage transmitted. Where such line is more than five hundred (500) feet in length, lightning arresters shall be installed in connection therewith at the entrance to the quarry. Such line, except in the case of trolley wires, shall be maintained not less than ten (10) feet above the ground at the lowest point.

RULE 1114. BRANCH CIRCUITS.

Every branch circuit shall be provided with a switch of ample carrying capacity, on each phase, within fifty (50) feet of the point where it leaves the main circuit.

RULE 1115. LIGHTING CIRCUITS.

Wires for all lighting circuits shall be covered with an insulation adequate for the voltage of the circuit, and, unless encased in pipes or other metallic covering, shall be strung on porcelain or glass insulators. Separate uncased wires shall be kept at least three (3) inches apart, except where they enter the fittings. Metallic casings, if used, shall be efficiently grounded.

RULE 1116. CABLES ENTERING FITTINGS.

(a) The exposed ends of cables where they enter fittings of any description shall be so protected and finished off that moisture cannot enter the cable, or the insulating material leak out if of an oily or viscous nature.

(b) Where unarmored cables or wires pass through metal frames or into boxes or motor casings the holes shall be substantially lined with insulated bushings.

RULE 1117. JOINTS IN CONDUCTORS.

All joints in conductors shall be mechanically and electrically efficient and shall be soldered wherever necessary. All joints in insulated wire shall, after the joint is complete, be reinsulated to the same extent as the remainder of the wire.

RULE 1118. JOINTS IN CABLES.

Where cables are joined, suitable junction boxes shall be used, or the joints shall be soldered and the insulation, armoring or leading covering replaced in as good condition as it was originally.

RULE 1119. FUSES, CIRCUIT BREAKERS AND SWITCHES.

(a) Fuses and automatic circuit breakers shall be constructed so as effectively to interrupt the current when a short circuit occurs or when the current through them exceeds a predetermined value. No open type or link fuses shall be used.

(b) All points at which a circuit has to be made or broken shall be provided with proper switches, which shall be so installed that they cannot be closed by gravity.

(c) Fuses shall be stamped or marked, or shall have a label attached, indicating the maximum current that they are intended to carry. Fuses shall be adjusted or replaced only by an authorized and competent persons.

(d) The capacity of fuses used to protect feeders shall not exceed the current capacity of the feeder by more than twenty-five (25) per cent.

(e) All switches, circuit breakers and fuses shall have noncombustible bases.

RULE 1120. STATIONARY MOTORS.

Every stationary motor and every portable motor, together with its starting device, shall be protected by a fuse on each phase or (in the case of motors of more than forty (40) horsepower) by a circuit breaking device on at least one phase of direct current motors and on each phase of alternating current motors, and by switches arranged to cut off entirely the power from the motor. The above devices shall be installed in a convenient position near the motor and in sight of it.

RULE 1121. ELECTRIC LIGHTING.

(a) Lamp Sockets. The exterior of the sockets of all fixed incandescent lamps installed after these rules go into effect shall be entirely nonmetallic.

(b) Flexible Lamp Cord. The use of flexible lamp cord for lighting connections is prohibited, except for portable incandescent lights to be used in connection with the inspection and repair of machinery and equipment, and in that case the cord shall have extra heavy insulation. Such portable lights shall be protected by a wire cage large enough to inclose both lamp and socket and shall be provided with a handle to which the light and socket shall be firmly attached and through which the leading-in wires shall be carried.

(c) Incandescent Lamps. Incandescent lamps shall be so placed that they cannot come into contact with combustible material, and shall be so placed that an adequate circulation of air may take place on all sides of them.

RULE 1122. DUTIES OF EMPLOYEES.

Every employee shall be responsible for carrying out all rules which immediately concern or affect his conduct.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules—Mines and Quarries with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission and that the same is true and correct copy and transcript of said Rules—Mines and Quarries and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL]

WILLIAM S. COFFEY, Secretary.

Rule and Amendment of Rules on Sanitation of Factories and Mercantile Establishments.

Rule 100. The rules on sanitation shall apply to all factories and mercantile establishments except as otherwise provided in rules for special industries.

The term "owner," as used in these rules, shall mean the owner or owners of the freehold of the premises, or the lessee or joint lessees of the whole thereof, or his, her or their agent in charge of the property.

The term "tenant," as used in these rules, shall be construed to mean the person, firm or corporation in actual possession of the premises.

The term "approved" material shall mean material approved by the Industrial Commission. (A list of such approved materials will be on file in the Department of Labor.)

The term "water-closet compartment" shall mean an enclosure surrounding an individual water-closet.

The term "toilet-room" shall mean any room containing more than one water-closet or urinal or containing one or more water-closet compartments.

The term "hereafter installed" shall mean installed after April 15, 1915.

The term "existing" shall mean installed before April 15, 1915.

Rule 101. Separate water-closet compartments or toilet-rooms shall be provided for each sex in every factory and mercantile establishment where both males and females are employed. Such water-closets shall be designated for the use of males or females and clearly marked "men" or "women" at the entrance of the toilet-room or of the water-closet compartment if not located in a toilet-room.

Rule 102. Responsibility. The owner shall be responsible for the observance and punishable for the non-observance of the following rules provided in this Code, anything in any lease to the contrary notwithstanding, namely: 101, 102, 103, 104, 105, 106, 107, 108, 111, 112, 115, 116, 117, 118, 119, 120, 121, 122, 124, 125, 126, 127, 128, 129, 131, 132, 133, 134, 135, 136, 138, 140, 142, 145, 148, 151, 152, 153, 173, 174, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 195, 196.

The tenant shall be responsible for the observance and punishable for the non-observance of the following rules provided in this Code, namely: 143, 155, 156, 158, 159, 160, 161, 162, 163, 164, 165, 167, 168, 170, 172, 175, 176, 177, 178, 179 and 180.

Both the owner and the tenant shall be responsible for the observance and punishable for the non-observance of the following rules provided in this Code, anything in any lease to the contrary notwithstanding, namely: 109, 110, 113, 114, 123, 130, 137, 139, 141, 144, 146, 147, 149, 150, 154, 157, 166, 169, 171, 193, 194.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.:

I, William S. Coffey, Secretary of the State Industrial Commission of the State of New York, do hereby certify that I have compared the foregoing copy of Rules on Sanitation with the original thereof, duly adopted by the State Industrial Commission on the 1st day of July, 1918, and duly filed in the office of said Commission and that the same is a true and correct copy and transcript of said Rules on Sanitation and of the whole thereof.

In witness whereof, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 9th day of July, 1918.

[SEAL]

WILLIAM S. COFFEY, Secretary.

DEPARTMENT OF FINANCE.

WARRANTS MADE READY FOR PAYMENT IN DEPARTMENT OF FINANCE
TUESDAY, JULY 16, 1918.

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.

CHARLES L. CRAIG, Comptroller.

Finance Voucher No.	Invoice Dates or Contract Number.	Received in Depart- ment of Finance.	Name of Payee.	Amount.
Board of Aldermen.				
87062	4-30-18 49004	7-3-18	N. Y. Telephone Co.	\$41 33
86057		7-3-18	H. W. Johns-Manville Co.	\$147 75
86013	5-14-18	7-3-18	Cavanagh Bros. & Co.	121 00
86029	3-19-18	7-3-18	Remington Typewriter Co.	153 90
86005	6-14-18	7-3-18	W. Konop	528 00
86025	5-13-18	7-3-18	Stanley & Patterson	41 16
86059	3-8-18	7-3-18	T. E. Quinn	52 00
86060	4-1-18	7-3-18	T. J. Cummings Plumbing Co.	55 00
Bellevue and Allied Hospitals.				
85854	6-7-18	7-3-18	Watson Elevator Co.	\$238 00
85884		7-3-18	Lee Tire & Rubber Co. of N. Y., Inc.	224 48
85914		7-3-18	William Farrell & Son.	1,907 75
85931	4-29-18	7-3-18	Specification Soap & Oil Co., Inc.	496 40
85924		7-3-18	Merck & Co.	108 24
85865		7-3-18	Wappeler Electric Co., Inc.	117 09
85870	5-17-18	7-3-18	Charles Weiss & Sons	473 50
85873	5-18-18	7-3-18	Chas. W. Brucher	216 95
85923	2-19-18	7-3-18	Lewis Mfg. Co.	883 86
85882	5-23-18	7-3-18	Louis F. Wolff	336 00
85839		7-3-18	Kelland Motor Car Co.	450 80
85846	6-4-18	7-3-18	Waite & Bartlett Mfg. Co.	110 00
85860	6-4-18	7-3-18	Peters & Heins	128 00
85828		7-3-18	Agent & Warden of Auburn Prison	396 90
87035	6-10-18	7-8-18	National Biscuit Co.	18 43
87055	6-11-18	7-8-18	Otis Elevator Co.	44 57
87060	5-14-18	7-8-18	Edison Storage Battery Co.	55 13
87056	6-8-18	7-8-18	Chas. Kolataze	8 00
87054	6-6-18	7-8-18	Underwood Typewriter Co., Inc.	4 75
87053	6-14-18	7-8-18	McQuillen & Chave	78 00
87051	6-6-18	7-6-18	Stanley & Patterson	12 00
87050		7-9-18	Alex F. Reid & Sons	67 65
87061	12-31-17	7-8-18	Borden's Farm Products Division	39
85859	5-29-18	7-3-18	T. H. Adie	189 88
85861	4-12-18	7-3-18	Studebaker Corp. of America	69 36
85850	3-4-18	7-3-18	Watson Elevator Co.	54 00
59934		49096	4-27-18 Columbus Trust Co., City of Newburgh, N. Y., assignee of Granite City Soap Co., Inc.	2,992 54
85782		49478	7-2-18 Anchor Products Co., Inc.	777 27
85781		49507	7-2-18 Manhattan Supply Co.	2,564 40
Municipal Civil Service Commission.				
82943	12-11-17	6-25-18	Remington & Sherman Co.	\$260 00
Court of General Sessions.				
86044		7-3-18	Walter D. Clark	\$500 00
86045		7-3-18	Richard P. Lydon	500 00
86046		7-3-18	Samuel A. Brown	500 00
86050		7-3-18	Francis D. Gallatin	200 00
86051		7-3-18	Charles E. Nammack	200 00
86052		7-3-18	John B. Cosby	200 00
86912	6-15-18	7-8-18	Munson Supply Co.	3 15
Surrogates' Court, New York County.				
87242	5-1-18	7-8-18	Banks Law Pub. Co.	\$15 00
Supreme Courts.				
84767	6-29-18	6-28-18	Library Bureau	\$2,288 00
County Clerk, Queens County.				
84444	6-24-18	6-28-18	Munson Supply Co.	\$6 30
College of the City of New York.				
84930	47498	6-29-18	Pattison & Bowns	\$4,665 05
Board of City Record.				
87839		7-10-18	Brooklyn Daily Eagle	\$990 75
87840		7-10-18	Brooklyn Standard Union	1,088 96
87841		7-10-18	Brooklyn Daily Times	1,019 40
87842		7-		

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.
86403		7- 5-18	Royal Co. of N. Y., assignee of Herman Sacks Roofing & Contracting Co., Inc.	53 48	86162	7- 3-18	L. Crocco & Sons	\$104 90	
86400		7- 5-18	American Ornamental Iron Works	48 25	85742	7- 3-18	James S. Barron & Co.	413 39	
86406	3-15-18	7- 5-18	Royal Co. of N. Y., assignee of American Ornamental Iron Works	4 89	85730	7- 2-18	Krakau Poultry Co., Inc.	234 75	
87223	4- 1-18	7- 9-18	George Morley	70 00	87338	5- 31-18	Frank J. Murray Co., Inc.	170 75	
87203	5- 6-18	7- 9-18	Oswald Benedit	40 00	87345	6- 5-18	E. Belcher Hyde	40 00	
87201	4-19-18	7- 9-18	Oswald Benedit	23 00	87333	5- 1-18	Chas. W. Golder	90	
87202	4-25-18	7- 9-18	Mauro Yarusso	58 00	84653	49391	6-28-18	Frank J. Murray Co., Inc.	351 55
87199		7- 9-18	I. Youdelman	51 50	84653	49391	6-28-18	Bank of United States, Assignee of Frank J. Murray Co., Inc.	3,559 93
87197	4-22-18	7- 9-18	Duncan Stewart	79 00	84611	4-17-18	John Simons Co.	140 00	
87191	4-19-18	7- 9-18	Henry Pearl & Sons Co.	45 00					
87192	3-30-18	7- 9-18	Stephen C. Parker	35 65					
87195	5-10-18	7- 9-18	I. Langner	51 00					
87194	4-18-18	7- 9-18	W. H. Temple	18 00					
86397		7- 5-18	Royal Co. of N. Y., assignee of American Ornamental Iron Works	71 68	10521	7- 3-18	James J. Donovan	\$400 00	
86407		7- 5-18	John F. Ferguson	80 75	10487	7- 3-18	John E. Herrity	375 00	
86396	3-10-18	7- 5-18	Royal Co. of N. Y., assignee of Louis Messer	28 85	10488	7- 3-18	E. Styles Potter	100 00	
86118		7- 3-18	Royal Co. of N. Y., assignee of Louis Messer	70 40	88269	7-11-18	E. Styles Potter	225 00	
85527	4- 9-18	7- 2-18	Royal Co. of N. Y., assignee of Chas. Williams Co., Inc.	75 00	88064	7-10-18	United Electric Service Co.	5 45	
86794	4-12-18	44501	7- 8-18	Gregg Pub. Co.	8 04	85149	6-25-18	Rex Rubber & Novelty Co.	15 40
86592	4-30-18	49256	7- 6-18	Peerless Manifold Book Co.	76 75	86123	6-28-18	Baker, Murray & Imbrie, Inc.	15 35
86109	4-15-18		7- 3-18	Royal Co. of N. Y., assignee of Louis Messer	7 35	86122	6- 18	I. & M. Steinberg	86 00
86087	4-22-18		7- 3-18	H. Hanig	45 00	87481	7- 2-18	Eagle Spring Water Co.	3 90
86114		7- 3-18	Lignum Carpenter Works	75 12					
86111	3-18-18		7- 3-18	Julius Haas & Sons, Inc.	36 97				
86107	4-15-18		7- 3-18	Benjes & Stiefel	37 21				
86105	3-14-18		7- 3-18	Royal Co. of N. Y., assignee of American Ornamental Iron Works	50 11				
86098	3-29-18		7- 3-18	Julius Haas & Sons, Inc.	60 05				
87209	5-31-18	48945	7- 9-18	Eddie Dayrie	79 80				
87211	6- 1-18	49267	7- 9-18	George Thomson	84 00				
86595	5- 1-18	48965	7- 6-18	Domenico Salute	83 60				
86784	5-29-18	48963	7- 8-18	James B. Reid	73 50				
87213	6- 3-18	48960	7- 9-18	Harris Neisloss, assignee of Harry Max Neisloss	88 20				
86785	6- 1-18	48971	7- 8-18	John C. Swade	94 50				
86786	3-16-18	47233	7- 8-18	Charles E. Merrill Co.	7 50				
86796	3-16-18	47230	7- 8-18	D. C. Heath & Co.	6 80				
86619	5-22-18	49264	7- 6-18	M. J. Tobin Co., Inc.	23 00				
86620		49241	7- 6-18	M. B. Brown Ptg. & Bdg. Co.	36 20				
86788	4-12-18	49261	7- 8-18	A. G. Spalding & Bros.	1 56				
86535	1- 4-18	47064	7- 5-18	Hardman, Peck & Co.	45 00				
87134		47230	7- 9-18	D. C. Heath & Co.	34 85				
87183			7- 9-18	Josephine A. Dempsey	9 60				
87685			7-10-18	Frederic W. Mar	3 00				
79096	3- 1-18		6-17-18	New York Times	21 75				
85610			7- 2-18	Edward E. Stapleton	113 79				
85529			7- 2-18	Alfred Whiteley, Inc.	181 00				
88271			7-11-18	Maude D. Kreig	36 92				
88272			7-11-18	Delia A. Barry	27 70				
86089			7- 3-18	Jacob D. Ausenberg	125 50				
86113			7- 3-18	Julius Haas & Sons, Inc.	186 82				
86399	3-30-18		7- 5-18	American Ornamental Iron Works	5 50				
86543	4-11-18		7- 5-18	N. Y. & Queens Elec. Light & Power Co.	86096				
87217	3- 6-18		7- 9-18	Emil Ascher	85 42				
87218	4- 4-18		7- 9-18	Peter Henderson & Co.	1 55				
87220	4-22-18		7- 9-18	Rand, McNally & Co.	10 50				
87221	2-23-18		7- 9-18	A. G. Spalding & Bros.	34 20				
87222	2-27-18		7- 9-18	Narragansett Machine Co.	9 75				
87237	3-22-18		7- 9-18	Peerless Manifold Book Co.	21 90				
87230	4- 9-18		7- 9-18	Candee, Smith & Howland Co.	10 35				
86541	3-20-18		7- 5-18	Ross & Snyder, Inc.	43 90				
85620	3-28-18		7- 2-18	Wm. M. Van Riper	24 85				
85612	4- 5-18		7- 2-18	Frank Kiebitz	78 90				
87227	4-10-18		7- 9-18	School of English	1 36				
85525			7- 2-18	D. J. Carey	90 95				
85602	4-11-18		7- 2-18	M. Wilinsky	51 95				
85609	3-25-18		7- 2-18	Frank Kiebitz	47 20				
85608	4-18-18		7- 2-18	Edward E. Stapleton	49 60				
86398			7- 5-18	Royal Co. of N. Y., assignee of Herman Sacks Roofing & Contracting Co., Inc.	79 16				
86393			7- 5-18	Royal Co. of N. Y., assignee of Louis Messer	45 19				
86409			7- 5-18	Royal Co. of N. Y., assignee of H. A. Jimmerson	11 90				
86798	3-21-18	48801	7- 8-18	Kruse Printing Ink Co.	61 75				
87160	4-20-18	41629	7- 9-18	American Book Company	12 30				
87159	4-20-18	41640	7- 9-18	Scott, Foresman & Co.	90				
87162	2-28-18	47024	7- 9-18	Remington Typewriter Co., Inc.	10 00				
86624	3-30-18	47373	7- 6-18	Baker & Taylor Co.	2 98				
86622	11-27-17	46509	7- 6-18	S. C. Johnson & Son	72				
86793	3- 2-18	47401	7- 8-18	Macmillan Co.	27 12				
86800		48799	7- 8-18	Kalt Lumber Co.	95 43				
86615	3-16-18	47229	7- 6-18	Ginn & Co.	45 00				
86797	3-16-18	41644	7- 8-18	D. C. Heath & Co.	22 40				
87144	1-31-17	46524	7- 9-18	E. Steiger & Co.	2 24				
87129	1-15-18	46522	7- 9-18	Parker P. Simmons Co., Inc.	4 80				
86538	3-30-18	47373	7- 5-18	Baker & Taylor Co.	4 24				
86387		46517	7- 5-18	J. M. Saulpaugh's Sons	10 92				
87147	3-23-18	41759	7- 9-18	E. P. Dutton & Co.	17 50	</			

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.	
86325	3-2-18	7-3-18	Hale Desk Co.	283 88	85644	7-2-18	Samuel E. Hunter	273 54		
86297	5-31-18	7-3-18	N. Y. Cordage Co.	592 85	87265	3-1-18	Albert Jacobs	5 12		
86287	3-12-18	7-3-18	Jacob Gescheidt & Co.	160 00	87291	7-9-18	Augusta Co.	28 74		
86309	5-31-18	7-3-18	Nason Mfg. Co.	112 03	86835	7-9-18	Maxwell Motor Sales Corp.	37 86		
86315		7-3-18	W. F. Irish Co.	125 59	86825	5-31-18	7-8-18	Edward Mackey	32 25	
86318	5-23-18	7-3-18	Walter T. Murphy	139 00	85641	6-6-18	7-2-18	Cushman's Sons, Inc.	53 40	
86323	6-7-18	7-5-18	Lazere & Kaplan, Inc.	479 00	86827	6-13-18	7-8-18	Columbus Mfg. & Supply Co., Inc.	30 00	
88283		7-11-18	Nicholas E. Caputo	8 00	87287	6-29-18	7-9-18	Eugene O. R. McArdle	5 50	
88279		7-11-18	Samuel L. Mailman	17 00	87286	6-19-18	7-9-18	Remington Typewriter Co.	2 60	
88278		7-11-18	G. L. Wurtzel	31 00	87276	5-24-18	7-9-18	Bloomingdale Bros., Inc.	8 95	
86298	5-24-18	7-3-18	W. F. Irish Co.	18 00	87295		7-9-18	F. N. Du Bois & Co.	4 94	
86852	6-28-18	7-8-18	J. A. Manneck	36 50	87282	6-3-18	7-9-18	Laurence Belting Co., Inc.	2 80	
86285		7-3-18	John A. McCarthy	997 50	87281	6-18-18	7-9-18	General Motor Truck Co.	80	
86291	5-20-18	7-3-18	Autographic Register Co.	69 00	87278	5-15-18	7-9-18	Connelly Iron Spongs & Governor Co.	50 10	
		President of the Borough of The Bronx.				87272		7-9-18	East River Mill & Lumber Co.	11 34
88273		7-11-18	Lincoln Hospital & Home	\$2 00	87271	6-15-18	7-9-18	Belmont Packing & Rubber Co.	4 02	
88274		7-11-18	William J. Walker	43 00	87269	5-24-18	7-9-18	Milton, Bradley Co.	22 50	
88275		7-11-18	Patrick Wynn	14 00	87319		7-9-18	Delaware & Hudson Co.	5 74	
88276		7-11-18	James De Pasquale	15 00	86834	6-14-18	7-8-18	M. L. Simon, Inc.	3 36	
88277		7-11-18	Salvatore Scoco	10 00	86560	6-15-18	7-2-18	Colt-Stratton Co.	24 52	
86327	49082	7-3-18	Bronx Hay & Grain Co.	537 99	85962	49322	7-3-18	J. D. Stout & Co.	1,161 30	
		President of the Borough of Brooklyn.				85957	48866	7-3-18	Westchester Fish Co., Inc.	748 65
86333	6-11-18	7-3-18	Alois L. Hofaker	\$117 80	85959	49391	7-3-18	Frank J. Murray Co., Inc.	280 91	
86336	5-28-18	7-3-18	Warner Quinlan Asphalt Co.	3,935 61	85967	5-13-18	49180	7-3-18	R. W. Geldart	472 50
86342	6-14-18	7-3-18	Saverno Products Co., Inc.	655 11	85966	5-8-18	49484	7-3-18	Saverno Products Co., Inc.	438 38
87555		7-9-18	John Gannon	86 91	85968	49483	7-3-18	Alexander Propper & Co.	972 43	
87560	6-18-18	7-9-18	Ford Service Station	74 32	85958	6-17-18	49405	7-3-18	Conron Bros. Co.	85 55
87547		7-9-18	C. W. Keenan	10 75	85643	5-3-18	7-2-18	A. Silz	164 16	
87546	5-31-18	7-9-18	Royal Eastern Electrical Supply Co.	1 80				Sheriff, Richmond County.		
87544	5-10-18	7-9-18	Thomas M. De Laney, Inc.	11 93	86519	7-1-18	James Lucey	48 53		
87597	4-5-18	7-9-18	Stevenson & Marsters, Inc.	16 65	86522	5-31-18	7-5-18	Edward McCrum	38 05	
87598	2-7-18	7-9-18	Stevenson & Marsters, Inc.	34 00				Department of Street Cleaning.		
87565	5-15-18	7-9-18	Sivers' Garage	9 00	86283	49382	7-3-18	Jacob Fradus Contracting Co., Inc.	2,017 39	
87563	5-20-18	7-9-18	Oriental Rubber & Supply Co., Inc.	4 55	86284		7-3-18	Jacob Fradus Contracting Co., Inc.	2,533 60	
87562	5-9-18	7-9-18	C. & B. Auto Repair Co.	3 15	86366		7-3-18	Chas. Hvass & Co., Inc.	780 00	
87561	6-14-18	7-9-18	Stewart Products Service Station	5 75	86356	49168	7-3-18	Barclay Naval Stores Co.	200 00	
87556	6-11-18	7-9-18	Harry Brown	2 50	86361	49168	7-3-18	Ferdinand R. Horn	193 50	
87551	6-6-18	7-9-18	Underwood Typewriter Co., Inc.	2 00	86367		7-3-18	Chas. Hvass & Co., Inc.	780 00	
87550	5-28-18	7-9-18	Eco Clock Co.	13 75	86369		7-3-18	United States Rubber Co.	560 00	
		President of the Borough of Queens.				86375	49382	7-3-18	Smith-Worthington Co.	180 00
87307		7-9-18	Wm. T. Hushion	\$9 40	86378	49382	7-3-18	Croker National Fire Prevention Engineering Co.	207 00	
87308		7-9-18	Henry A. Bornscheuer, Acting Chief Clerk	73 51	86383	49168	7-3-18	Sherfin-Williams Co.	102 50	
87309		7-9-18	Henry A. Bornscheuer, Acting Chief Clerk	61 74	86381	49168	7-3-18	Arthur C. Jacobson & Sons, Inc.	364 27	
87310		7-9-18	Robert H. Farrell, Chief Clerk	177 90	86280	49168	7-1-18	Angelo Maricondo	27 00	
85107	47272	7-1-18	Edward W. Fitzpatrick	238 64	85576	48007	6-28-18	Thomas Lenane	290 25	
86257	49473	7-3-18	Joseph L. Sigretto & Co.	2,256 75	83618	11-1-17	7-2-18	J. W. Gasteiger & Son	120 02	
		President of the Borough of Richmond.					6-25-18	International Motor Co.	252 30	
81176	5-27-18	6-20-18	J. A. Snyder & Bro.	85 00	86000	49068	7-3-18	Tenement House Department.		
88281		7-11-18	A. J. McGowan	2 00	86270	49068	7-3-18	G. W. Bromley & Co.	90 00	
86510	6-11-18	7-5-18	Worthington Pump & Machinery Corp.	26 00	86270	49068	7-3-18	Board of Water Supply.		
86244	49047	7-3-18	Northfield Feed & Grain Co.	65 06	86757		7-11-18	Losia Morgareidge	50 16	
86243	49048	7-3-18	Edward Wisely & Son	1,200 89	86749	49068	7-6-18	Standard Oil Co. of N. Y.	78 24	
86240	5-31-18	7-3-18	Agent & Warden of Clinton Prison	90 00	86752	49068	7-6-18	John P. Kane Co.	80 00	
		Public Service Commission.				86200	49068	7-6-18	Manhattan Electrical Supply Co., Inc.	41 65
85002	38425	7-1-18	U. S. Realty & Improvement Co., As- signee of Canavan Bros. Co.	6,000 00	86202	49068	7-3-18	East River Mill & Lumber Co.	178 50	
84999	49533	7-1-18	Friestedt Underpinning Co.	2,509 34	86188	49068	7-3-18	East River Mill & Lumber Co.	127 00	
		Department of Public Charities.				86203	49068	7-3-18	Standard Oil Co. of N. Y.	120 00
85964	6-6-18	49518	James A. Webb & Son, Inc.	773 28	88384	49068	7-11-18	East River Mill & Lumber Co.	127 00	
85965	49478	7-3-18	Anchor Products Co., Inc.	535 97			7-11-18	Edison Electric Illuminating Co. of Brooklyn	54,383 53	
85960	49378	7-3-18	Nathan Strauss, Inc.	267 96	88338	49068	7-11-18	Edison Electric Illuminating Co. of Brooklyn	52,709 96	
85961	49381	7-3-18	S. D. Woodruff & Sons	4,950 11			7-11-18	Henry Greenberg	333 65	
85646	4-23-18	7-2-18	John Bellmann	177 00	86231	49068	7-3-18			

VOUCHERS RECEIVED IN DEPARTMENT OF FINANCE TUESDAY, JULY 16, 1918.

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. CHARLES L. CRAIG, Comptroller.

Invoice Date	Vouch- or Con- tract Number.	Name of Payee.	Amount.
Supreme Courts.			
90242		Alfred Wagstaff	\$100 00
90110		Cons	

Invoice Finance Vouch- er No. or Con- tract Number.	Date Name of Payee.	Amount.	Invoice Finance Vouch- er No. or Con- tract Number.	Date Name of Payee.	Amount.	Invoice Finance Vouch- er No. or Con- tract Number.	Date Name of Payee.	Amount.
89825	48826 Sanitary Supply & Spec. Co.	29 80	89799	5- 2-18 J. Friedman	11 60	89985	John G. Kimpel	25 00
89826	48712 Henry Holt & Co.	72 85	89800	4- 2-18 H. Hanig	42 85	89986	Jos. J. Lordi	10 00
89827	41636 Houghton-Mifflin Co.	15 94	89801	3- 3-18 E. Leipuner	31 00	89987	Benj. Tilton	25 00
89828	46556 Kalesh & Co.	38 00	89802	4- 8-18 A. Weiss	15 00	89988	Lincoln Hospital & Home	48 25
89829	46508 Arthur C. Jacobson & Sons	8 48	89803	5- 6-18 J. H. Jabens	72 58	89989	S. Halprin Bros.	2 80
89830	46510 Kalt Lumber Co.	41 78	89804	4-13-18 Brooklyn Window Shade Co.	23 77	89990	Tony Marchesano	36 00
89831	46502 Alfred Field & Co.	75	89805	4-17-18 Louis Immerschein	99 50	89991	M. Marion Apfel	40 00
89832	46499 Devoe & C. T. Raynolds Co.	44 20	89806	4-16-18 H. Hordon	207 00	89992	B. A. Fischel	40 00
89833	46515 Scientific Equipment Co.	1 82	89807	4-19-18 J. Kurzbar	42 25	89993	Irving W. Voorhees	15 00
89834	46517 J. M. Saulpaugh's Sons	65 76	89870	41632 Underwood & Underwood	47 50	90078	7- 5-18 Frank J. Butler	376 74
89835	46526 M. J. Tobin	8 87	89871	47135 L. E. Knott Apparatus Co.	9 04	90048	Receiver of Taxes	46
89836	46520 Saverno Products Co.	1 76	89872	46918 A. E. Moeller	576 00	90049	Receiver of Taxes	2 61
89837	46565 J. E. Pittinger	6 00	89873	47986 L. C. Smith & Bros. Type- writer Co.	50 00	90050	Receiver of Taxes	1 84
89838	46527 Tower Mfg. & Nov. Co.	3 57	89874	46512 Metropolitan Supply Co.	231 84	90051	Oscar D. Dike et al.	24 00
89839	46509 S. C. Johnson & Son	25	89875	46513 Montgomery & Co., Inc.	312 35	90052	Oscar D. Dike et al.	105 60
89840	46526 M. J. Tobin	113 62	89876	46515 Scientific Equipment Co.	24 35	90053	Oscar D. Dike et al.	58 50
89841	44517 Chas. Scribner's Sons	94 50	89877	46570 A. G. Spaulding & Bros.	153 38	90054	P. Kane Co.	9 00
89842	48824 E. W. A. Rowles Co.	4 20	89878	47940 4-29-18 L. Imerschein	32 02	90055	New York Central R. R. Co.	2 00
89843	48827 Saverno Products Co.	3 14	89879	4-29-18 H. Gold	92 15	90056	Morgan E. Coman	5 00
89844	48818 Prang Co.	2 64	89880	47942 4-28-18 H. Gordon	71 10	90057	John G. Kissner, Rector, Church of Our Lady of Per- petual Help	9 45
89853	46520 Saverno Products Co.	110 35	89881	47943 1-18-18 H. Hanig	23 95		Minot W. Seaman	342 00
89854	47507 M. B. Brown Ptg. & Bdg. Co.	12 00	89882	47944 4-13-18 Louis Maerschein	58 00		N. Guttman	4 65
89855	46513 Montgomery & Co., Inc.	64 44	89883	47945 3- 8-18 H. R. Kidney, A. & G., Au- burn	84 90		Henry Brady	32 55
89856	46490 Abraham & Straus	212 56	89884	47946 5- 2-18 H. M. Silkiss	17 00		Pease & Elliman	259 00
89857	48712 Henry Holt & Co.	123 00	89885	47947 4-29-18 H. Gordon	18 00		Greenwald Bros.	5 00
89858	46200 W. D. Harper, Inc.	550 90	89886	47948 4-18-18 J. D. Ausenberg	90 00		Whitehall Realty Co.	33 60
89859	47018 Owen M. Dawson	306 31	89887	47949 3-30-18 Bloomingdale Bros.	49 90		Morewood Realty Holding Co.	5 00
89778	48781 H. T. Dakin	27 50	89888	47950 4-22-18 H. Gordon	20 30		Morewood Realty Holding Co.	5 00
89779	48843 Wadsworth, Howland & Co., Inc.	336 58	89889	47951 3-14-18 Bloomingdale Bros.	9 00		P. Nienhous Bros.	5 00
89780	41657 Atkinson, Mentzer & Co.	98	89890	47952 4-12-18 H. Gold	21 95		Henry W. Berg	5 00
89781	44521 World Book Co.	60	89891	47953 5- 4-18 A. A. Brauer	61 40		Amelia K. Angeloch	17 33
89782	47226 American Book Co.	10 20	89892	47954 4-16-18 H. Gordon	5 50		Gustave Schwarz	170 10
89783	41645 D. Appleton & Co.	11 28	89893	47955 4-17-18 Louis Immerschein	36 00		Gus. Schwarz	159 60
89784	49219 Richard D. Borsmann	61 88	89894	47956 Department of Finance.	16 24		Fuan Realty Corp.	7 50
89785	48793 Hammacher, Schlemmer & Co.	33 12	89895	47957 5- 1-18 Nickel Towel Supply Co.	21 60		183d St. & Concourse Corp.	84 50
89786	41670 Rand McNally Co.	14 90	89896	47958 7- 1-18 Morey Larue Laundry Co.	6 50		A. M. Cudner Real Estate Co.	12 00
89787	48829 Schoverling, Daly & Gales	65 00	89897	47959 7- 3-18 Evans Products Corp.	10 50		Jackson Bros.	12 65
87788	48712 Henry Holt & Co.	180 00	89898	47960 6- 1-18 Peerless Towel Supply Co.	4 84		Nicholas F. Walsh	10 70
89789	41843 Wadsworth, Howland & Co., Inc.	8 40	89899	47961 6-24-18 Remington Typewriter Co.	9 40		Mermelstein Bros. & Jackel	11 39
89790	41629 American Book Co.	36	89900	47962 6-18-18 American Writing Machine Co., Inc.	50		Max Wilinsky	26 91
89791	46513 Montgomery & Co., Inc.	10 44	89901	47963 7- 6-18 Fallon Law Book Co.	2 00		Wm. Kempton et al.	75 00
89792	41670 Rand McNally Co.	16 00	89902	47964 6-28-18 International Postal Supply Co. of N. Y.	137 50		Wm. Kempton et al.	395 04
89793	48814 New Home Sewing Machine Co.	19 75	89903	47965 3- 1-18 M. Iser	75 00		Margaret Keough	200 00
89794	49243 A. B. Dick Co.	35 00	89904	47966 7- 3-18 Star Fixture Co.	55 00		Margaret Keough	516 80
89795	48779 Combination Rubber Mfg. Co.	400 00	89905	47967 Maintenance Co.	29 50		Annie Koci	175 00
89764	47016 Combination Rubber Co.	381 00	89906	47968 Department of Health.	90234		Annie Koci	391 93
89765	47014 Jas. S. Barron & Co.	18 14	89907	47969 7- 1-18 Guarantee Roofing Co.	6 00		John Kovarick et al.	75 00
89766	46522 Parker P. Simmons Co., Inc.	64 00	89908	47970 4-30-18 Bedford Park Garage	60 00		John Kovarick et al.	135 32
89767	46513 Montgomery & Co., Inc.	7 50	89909	47971 5-21-18 A. H. Patterson	20 45		Francesco Lamponi	100 00
89768	48776 Cavanagh Bros. & Co.	69 92	89910	47972 6- 8-18 Clover Farms, Inc.	26 01		Francesco Lamponi	860 22
89769	46200 W. D. Harper, Inc.	59 58	89911	47973 5-25-18 D. H. Julian	2 63		Margaret Young Langdon	3,250 00
89770	46525 Syndicate Trading Co.	7 00	89912	47974 5-21-18 John Simmons Co.	155 00		Margaret Young Langdon	635 94
89771	46493 Bloomingdale Bros.	1 51	89913	47975 5-31-18 L. Rosenberg Hardware Co., Inc.	1 36		John Edward Jackle et al.	80 00
89772	46526 M. J. Tobin	4 74	89914	47976 5- 4-18 Baker, Murray & Imbrie, Inc.	15 25		John Edward Jackle et al.	202 04
89773	46200 W. D. Harper, Inc.	185 84	89915	47977 5-31-18 Oriental Rubber & Supply Co., Inc.	5 35		Rose LaQuidara	119 18
89774	46496 H. T. Dakin	16 64	89916	47978 6- 8-18 Fallow Law Book Co.	8 20		Arthur Hetherington et al.	229 42
89775	46515 Scientific Equipment Co.	139 33	89917	47979 5-27-18 Robt. J. Wilson	8 20		Dennis C. Lennon	366 37
89776	46565 J. E. Pittinger	5 17	89918	47980 4-22-18 Mersfelder & White	20 00		Annie Kawasoye	254 87
89777	46504 Hammacher, Schlemmer & Co.	18 80	89919	47981 6-13-18 Union Paper Co.	15 00		Denis J. Hickey	111 50
89913	48863 Jos. A. Graf	495 00	89920	47982 6-12-18 F. S. Banks & Co.	460 00		Richard Howland Hunt et al., L. W. & T. Catherine Hunt, Dcd.	321 83
89914	48865 Wm. D. Moore & Sons, Inc.	2,213 10	89921	47983 5-29-18 Asceptic Products Co.	20 00		Chas. Howe	1,100 00
89915	43187 Johnson Service Co.	652 50	89922	47984 5-24-18 Lenz Apparatus Co., Inc.	71 80		Chas. Howe	258 69
89916	45577 Manhattan Supply Co.	1,873 94	89923	47985 4-18-18 Merck & Co.	13 68			
89917	46695 Cobb, Macey & Dohme, Inc.	1,439 10	89924	47986 5-27-18 Powers, Weightman, Rosen- garten Co.	3 10	89715	6-24-18 Hammacher, Schlemmer & Co.	\$0 79
89918	47907 National Regulator Co.	495 00	89925	47987 3-22-18 Powers, Weightman, Rosen- garten Co.	12 96	89716	Manhattan Electrical Sup- ply Co.	3 51
89919	47897 Jandous Electric Equipment Co.	1,980 00						

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.
President of the Borough of Brooklyn.			89674 6-5-18 Remington Typewriter Co...	90		90029 H. W. Johns-Manville Co...	14 00	
89979 48438 Sicilian Asp. Pav. Co.	\$11,513 25		89676 6-17-18 Tower Bros. Stationery Co...	70 56		90030 6-1-18 Theo. W. Morris & Co....	161 05	
President of the Borough of Richmond.			89677 5-31-18 Wadsworth Garage, Inc....	34 84		90031 6-5-18 Theo. W. Morris & Co....	63 80	
90114 49047 Northfield Feed & Grain Co.	\$691 60		Wadsworth Garage, Inc...	4 10		90032 6-17-18 John Simmons Co....	7 20	
90115 48904 Jos. Bailey	65 25		Wadsworth Garage, Inc...	25 00		90033 5-17-18 John Simmons Co....	16 98	
90116 48905 John L. Halloran, Trustee under the Will of Michael J. Halloran	85 50		89678 2-7-18 Wilkinson Bros. & Co....	179 79		90034 5-15-18 Peter A. Stackwell	41 04	
Public Service Commission.			89679 Wolff Bros., Inc....	30 60		90035 5-10-18 Wm. P. Youngs & Bros....	52 50	
89681 5-3-18 J. & H. Berge	\$72 25		89680 6-27-18 Henry Bainbridge	40 80		90036 6-3-18 Craven Steam Boiler Works, Inc....	593 25	
89682 6-21-18 Geo. Damon & Sons....	7 50		89683 5-31-18 Edison Electric Ill. Co. of Bklyn....	261 00		90037 6-27-18 Eugene Prager	508 00	
89683 5-31-18 Eagle Spring Water Co....	123 20		89684 6-11-18 Philip Greenblatt	151 61		90038 5-1-18 Babcock & Wilcox Co....	25 20	
89684 6-11-18 Eagle Spring Water Co....	100 10		89685 6-24-18 N. Y. Tel. Co....	16 65		90039 5-16-18 Oriental Rubber & Supply Co. Inc....	37 50	
89685 6-24-18 C. S. Littel & Co....	10 06		89686 6-24-18 H. U. Singh....	30 00		90040 4-30-18 Mrs. Patrick Sheehan	25 00	
89686 4-26-18 Addressograph Co....	78		89687 6-24-18 A. R. Phillips	410 70		90041 9-1-18 New Amsterdam Gas Co....	12 50	
89686 5-29-18 Atlas Stationery Corp....	4 50		89688 7-1-18 7th Avenue Const. Co....	35 00		90042 6-7-18 Puch	35 00	
89686 6-8-18 Atlas Stationery Corp....	7 00		89689 7-1-18 8th Avenue Const. Co....	105 00		90043 6-25-18 Studebaker Corp. of Am....	19 02	
89686 6-19-18 Cobb, Macey, Dohme, Inc....	23 20		89690 7-1-18 9th Avenue Const. Co....	839 98		90044 6-14-18 Fellows Tire Co., Inc....	247 18	
89686 5-29-18 Deutschmeister & Ochs....	19 75		89691 7-1-18 10th Avenue Const. Co....	1,431 45		90045 12-28-17 Wm. Farrell & Son	2,265 75	
89686 6-19-18 Diesges & Clust	3 50		89692 7-1-18 11th Avenue Const. Co....	2,337 00		90011 6-19-18 L. Crocco & Sons	191 76	
89686 5-22-18 Engineering News Record....	5 60		89693 7-1-18 12th Avenue Const. Co....	7,646 88		90012 5-31-18 Saml. E. Hunter	87 70	
89686 5-22-18 Fabric Fire Hose Co....	1,022 00		89694 7-1-18 13th Avenue Const. Co....	27,551 34		90013 5-31-18 Frank J. Murray Co., Inc..	402 21	
89686 6-15-18 Robt. J. Freeman	1 35		89695 7-1-18 14th Avenue Const. Co....	14,023 92		90014 5-31-18 Nathan Strauss, Inc....	962 78	
89686 5-9-18 Theo. Moss & Co....	6 53		89696 7-1-18 15th Avenue Const. Co....	124,313 81		90015 6-29-18 Westchester Fish Co., Inc..	165 52	
89687 6-14-18 Geo. Murphy, Inc....	1 42		89697 7-1-18 16th Avenue Const. Co....			90016 6-30-18 McElroy's Garage	194 22	
89687 6-10-18 N. Y. Camera Exchange....	40 40		89698 7-1-18 17th Avenue Const. Co....			90017 6-30-18 Seventy-ninth Street Garage	45 36	
89687 6-18-18 Pannier Bros. Stamp Co., Inc....	12 55		89699 7-1-18 18th Avenue Const. Co....			90018 4-18-18 Cain Sales Co....	22 80	
89687 6-11-18 Powers Photo Engraving Co.	13 74		90000 7-1-18 19th Avenue Const. Co....			90019 5-13-18 Fairbanks Co....	38 50	
89687 6-11-18 Rex Harris Fire Appliance Co. of N. Y....	2 64		90001 7-1-18 20th Avenue Const. Co....			90020 6-11-18 Madison Trading Co., Inc.	36 60	
			90002 7-1-18 21st Avenue Const. Co....			90021 6-13-18 C. G. Braxmar Co....	4 50	
			90003 7-1-18 22nd Avenue Const. Co....			90022 4-20-18 Bloomingdale Bros....	105 54	

LAW DEPARTMENT.

The following schedules form a brief extract of the transactions of the office of the Corporation Counsel for the week ended June 29, 1918, as required by section 1546 of the Greater New York Charter:

Note—The City of New York, or the Mayor, Aldermen and Commonalty of The City of New York is defendant unless otherwise mentioned.

SCHEDULE "A."
Suits and Special Proceedings Instituted.

Court.	Reg.	Fo.	Commenced.	Title.	Nature of Action.
Supreme...	124	39	June 24, 1918	McClelland, Louis S., vs. Richard Enright et al....	To restrain interference with concert of War Hospital Entertainment As- sociation.
Supreme...	124	40	June 24, 1918	Grand Lodge of U. S. Independent Order of Free Sons of Israel vs. Nathan Greenberg et al....	To foreclose mortgage.
Mun., Bkln...	124	41	June 24, 1918	Abrams, Lizzie	Personal injuries, fall, ice, S. 9th st. and Bedford ave., \$1,000.
Supreme...	124	42	June 24, 1918	Malone, Peter, et al. (Matter of)	For examination of Commissioner of Public Markets, under section 1534 of Charter.
City.....	124	43	June 21, 1918	McLaughlin, Andrew, vs. Thomas J. Brady et al....	For assault, \$2,000.
Magistrates	124	44	June 25, 1918	Gordon, Joseph, vs. Thomas Ryan, etc....	Summons only served.
Sup., K. Co.	124	45	June 25, 1918	Layne, May	Personal injuries, fall, condition of sidewalk, Jerome and Court sts., Bk., \$10,000.
Co., K. Co.	124	46	June 25, 1918	Eldridge, Frederick T., vs. Oscar H. Bedell et al....	To foreclose mortgage. Balance on contract, furnishing pota- to Dept. of Correction, \$1,830.78.
Sup., B. Co.	124	48	June 26, 1918	Dollar Savings Bank of City of N. Y. vs. Richard I. Epstein et al....	To foreclose mortgage.
Municipal	124	49	June 26, 1918	Martin, George J., and ano., etc....	Summons only served.
Municipal	124	50	June 26, 1918	Kalbach, Andrew E., as Receiver, etc. (ads. The City)	For damage to Trailer No. 14, be- longing to Public Works Dept., struck by car, 1st ave. and 9th st., \$97.64.
Supreme...	124	51	June 27, 1918	Mairs, James H., and ano., etc. (ex rel.) vs. Charles L. Craig....	Mandamus to compel readjustment of taxes for 1915 to 1917.
Supreme...	124	52	June 27, 1918	Bates, Ellis A., vs. Bd. of Elections	For order directing Board to change party affiliation on enrollment lists.
Municipal	124	53	June 27, 1918	Pleayl, George, etc., (ads. The City)	For rental of runway, Bassett ave., Givans Creek, Baychester, etc., \$43.34.
Municipal	124	54	June 27, 1918	Siebel, Frederick (ads. The City)	For rental of runway, Bassett ave., Givans Creek, Baychester, etc., \$388.84.
Municipal	124	55	June 27, 1918	Manderer, Maxwell, etc. (ads. The City)	For rental of runway, Bassett ave., Givans Creek, Baychester, etc., \$115.38.
Co., K. Co.	124	56	June 27, 1918	Metropolitan Life Insur- ance Co. vs. Eli H. Bishop et al....	To foreclose mortgage.
Supreme...	124	57	June 27, 1918	Central Trust Co. of N. Y. vs. Abraham L. Stone et al....	To foreclose mortgage.
Supreme...	124	58	June 27, 1918	Marks, Annie	Personal injuries, fall, snow and ice, 113 E. 102d st., \$10,000.
Mun., Bkln...	124	59	June 27, 1918	Carrozza, Raffaele, vs. J. F. Cogan Co. and ano.	For injury to horses, excavation, Ralph and Forster aves., Bk., \$600.
Co., K. Co.	124	60	June 27, 1918	New York Title & Mortgage Co. vs. Charles S. Moore et al....	To foreclose mortgage.
Supreme...	124	61	June 27, 1918	Goldstein, Mollie, vs. Peter P. Cappel et al....	To partition premises, 16 Ludlow st., etc.
Supreme...	124	62	June 27, 1918	O'Kane, Catherine	Personal injuries, fall, snow and ice, 326 Marion st., Bk., \$10,000.
Supreme...	124	63	June 27, 1918	Tully, Sarah	Personal injuries, fall, snow and ice, 95th st. and Broadway, \$10,000.
Mun., Bkln...	124	64	June 26, 1918	Gewertz, Namon, and ano., etc.	Summons with notice for \$83 served.
Sup., K. Co.	124	65	June 26, 1918	Argyle Holding Co., Inc., vs. City of N. Y. et al....	For damage to easements, etc., rail- road structure, 86th st., Bk., \$2,500.
Sup., K. Co.	124	66	June 25, 1918	Colne, William W. (ex rel.), vs. Alfred E. Smith et al....	Certiorari to review determination of defendants in unseating relator as Alderman.
Supreme...	124	67	June 29, 1918	Epstein, Pinus D., and ano. (Matter of)	For order dispensing with lost mort- gage.
State Comr.	124	68	June 29, 1918	Davidson, Rose, et al. (Matter of)	Petition to compel Bd. of Education to certify appointments as principals from eligible lists for 1910.
Sup., K. Co.	124	69	June 29, 1918	Gunn, Rose	Personal injuries, fall, snow and ice, 164 Nevins st., \$20,000.
U. S. Dist. Bklt.	498	June 29, 1918	Berthet, Isidor, and ano. etc. (Matter of).	Bankruptcy proceedings.	

SCHEDULE "B."
Judgments, Orders and Decrees Entered.

Michele Fiorita; City of New York vs. Chandler W. Seymour et al.; Joseph Friedman; Bird S. Coler, as Commissioner, etc., vs. Laura Gerwer; Same vs. Genevieve Gerwer; Same vs. Joseph Gerwer; Same vs. Frank Gerwer; Same vs.

Anna Gerwer; Same vs. John Gerwer; Mary A. Murphy; Hudson Boarding and Livery Stables Co.; Jacob Tomshinsky; Fishel Bernstein; Joseph L. Myers; Max Rubinshick; Department of Health vs. A. Stefano; City of New York vs. New York Railways Co. (No. 5); City of New York vs. Sophie Lembert; Max Minkin, infant; City of New York vs. Consolidated Gas Co.; Same vs. New Amsterdam Gas Co.; Richard Treter (and 432 similar actions); Marie Buellesbach; John Smith (and 14 similar actions); John H. Carter; Rubin Beck; Cryder & Co.—Entered orders discontinuing actions without costs.

People ex rel. International Art Publishing Co. vs. L. Purdy et al (1915)—Entered order discontinuing proceeding without costs.

Bertha Rosenthal; Joseph Rosenthal—Entered judgment in favor of defendant upon the merits, and for \$123.59 costs.

Jacob M. Weingarten—Entered judgment in favor of defendant upon the merits and for \$120.50 costs.

Julius DiMondo—Entered judgment in favor of defendant upon the merits, and for \$123.06 costs.

Sarah J. Russell—Entered judgment dismissing complaint by default, and for \$105 costs in favor of defendant.

Rapid Transit (Walton

bill of costs argued before Lehman, J.; decision reserved; J. A. Leddy for the City. "Motion granted."

Catherine Cook—Tried before Platzek, J., and a jury; verdict for plaintiff for \$50; D. C. Broderick for the City.

Ann T. O'Connor—Motion to dismiss action for lack of prosecution submitted to Crane, J., and granted; A. Stern for the City.

Theresa Gigler—Tried before Ford, J., and a jury; verdict for defendant; D. C. Broderick for the City.

William J. Mullin—Motion to dismiss action for lack of prosecution submitted to Robitzek, J., in Municipal Court, and granted; A. Stern for the City.

People ex rel. Elida Johansen vs. J. F. Gilchrist—Motion for peremptory writ of mandamus argued before Lehman, J.; decision reserved; R. L. Tarbox for the City.

International Garden Club vs. J. P. Hennessy et al.—Motion for injunction pendente lite argued before Ottinger, J.; decision reserved; J. Lehman for the City. "Motion granted."

Bronx Parkway Commission vs. F. Cippolla et al.—Tried before Ottinger, J.; decision reserved; E. J. Kenney for the City.

Harry H. Downes—Motion to dismiss action for lack of prosecution submitted to Coleman, J., in Municipal Court; decision reserved; A. Stern for the City.

Samuel Ziff and another—Tried before Bogenshutz, J., in Municipal Court; decision reserved; J. Moroney for the City.

John Muldoon vs. City of New York et al.—Reference proceeded and closed; J. Moroney for the City.

People ex rel. Dudley H. Morris vs. R. E. Enright—Motion for peremptory writ of mandamus argued before Lehman, J.; decision reserved; A. Sweeny for the City. "Motion denied."

Ellis A. Bates vs. J. R. Voorhies et al.—Motion for order changing enrollment argued before Lehman, J.; decision reserved; R. L. Tarbox for the City.

Philip L. Sondeheim vs. Adelaide A. Smith et al.—Motion to resettle order directing cancellation of tax lien argued before Scudder, J.; decision reserved; I. Phillips for the City.

Sarah Kaminsky vs. J. E. Farley—Tried before Robitzek, J., in Municipal Court; judgment for plaintiff; E. J. Talley for the City.

Driggs avenue and Monitor street school site; Driggs avenue and North 4th street school site; New York avenue school site; Skillman avenue school site; Blake avenue and Osborn street school site—Objections to tentative decree argued before Callaghan, J., and overruled; J. B. Shanahan for the City.

Boone Silver vs. E. Riegelmann et al.—Motion for injunction pendente lite argued before Lazansky, J.; decision reserved; J. P. Reilly for the City.

People vs. Raffaele Daniello—Motion to vacate judgment and remittitur forfeiture of bail bond argued before Dike, J., in County Court and granted; S. K. Probasco for the City.

People vs. Saberio Ravelli; People vs. Joseph Gabrielle—Motion to vacate judgment and remit forfeiture of bail bond argued before Dike, J., in County Court, and granted; A. Horn for the City.

Hearings Before Commissioners of Estimate in Condemnation Proceedings.

Rapid Transit (Bronx River and Devoe street), 3 hearings; Sea View Hospital, 1 hearing; H. W. Mayo for the City.

Rapid Transit (Joralemon street), 3 hearings; E. J. Kenney for the City.

SCHEDULE "D."

Contracts, Etc., Drafted, Examined and Approved as to Form.

Department.	Contracts Approved as to Form.	Contracts Examined and Returned for Revision.	Advertisements Approved as to Form.
Water Supply, Gas and Electricity	8	..	2
Borough President, Manhattan	8	..	1
Board of Education	7	1	5
Central Purchase Committee	3	..	2
Borough President, Richmond	7	..	2
Borough President, Queens	2	..	1
Docks	1	..	1
Board of Elections	1	..	1
Armory Board	1	..	..
Board of Ambulance Service	1	..	..
Correction	1	..	..
Mayor	1	..	..
Borough President, Bronx	..	..	1
Parks	1	..	1
Total	42	1	17

Bonds Approved.

Finance Department	8	Public Service Commission	7
Leases Approved.			
Finance Department	2	Dock Department	1
Street Cleaning Department	1	Total	10

SCHEDULE "E."

Opinions Rendered to the Various Departments.

Department.	Opinions.	Department.	Opinions.
Finance Department	36	Park Department	1
Board of Estimate and Apportionment	6	Department of Plant and Structures	1
Department of Water Supply, Gas and Electricity	6	Department of Taxes and Assessments	1
City Clerk	3	Street Cleaning Department	1
Borough President, Manhattan	3	Department of Charities	1
Borough President, Bronx	2	Police Department	1
Mayor	2	Board of Elections	1
Dock Department	2	Total	69
Board of Education	1		
Municipal Civil Service Commission	1		

WILLIAM P. BURR, Corporation Counsel.



OFFICIAL DIRECTORY.

Unless otherwise stated, the Public Offices of the City are open from 9 a.m. to 5 p.m.; Saturdays to 12 noon.

ACCOUNTS, COMMISSIONER OF—Municipal Bldg., 12th fl., Phone, Worth 4315.
ALDERMEN, BOARD OF—Clerk's Office, Municipal Bldg., 2nd fl., Phone Worth 4438.
President's Office, City Hall, Phone, Cortlandt 6770.
AMBULANCE SERVICE BOARD OF—Municipal Bldg., 10th fl., Phone, Worth 748.
Ambulance Calls, Spring 3100.
ARMORY BOARD—Municipal Bldg., 8th fl., Phone, Worth 594.
ART COMMISSION—City Hall, Phone, Cortlandt 1197.
ASSESSORS, BOARD OF—Municipal Bldg., 8th fl., Phone, Worth 29.
BELLEVUE AND ALLIED HOSPITALS—26th st. & 1st ave., Phone, Mad. Sq. 8800.
BRONX, PRESIDENT, BOROUGH OF—3rd & Tremont aves., Phone, Tremont 2680.
BROOKLYN, PRESIDENT, BOROUGH OF—President's Office, 2nd floor, Borough Hall, Public Works, 2nd floor, Borough Hall, Highways, 5th & 12th floors, 50 Court st., Public Bldgs. and Offices, 10th fl., 50 Court st., Sewers, 9th floor, 215 Montague st., Buildings, 4th floor, Borough Hall, Topographical Bureau, 209 Montague st., Substructures, 215 Montague st., Telephone, Main 9100.

CENTRAL PURCHASE COMMITTEE—Municipal Bldg., 12th fl., Phone, Worth 4227.
CHAMBERLAIN—Municipal Bldg., 8th fl., Phone, Worth 4227.
CHIEF MEDICAL EXAMINER—Municipal Building, 2nd floor, Open all hours of the day and night, Phone, Worth 3711.
CHILDREN'S COURT—137 E. 22nd st., Phone, Gramercy 3611.
Brooklyn—102 Court st., Phone, Main 8611.
Bronx—355 E. 137th st., Phone, Melrose 9092.
Court Mondays, Thursdays, and Saturdays, Queens—30 Union Hall st., Jamaica, Phone, Jamaica 2624, Court Tuesdays and Fridays, Richmond—Bank Bldg., New Brighton, Phone, Tomp. 2190, Court held Wednesdays.

CHILD WELFARE BOARD OF—City Hall, Telephone, Cortlandt 4127.

CITY CLERK—Municipal Bldg., 2nd fl., Phone, Worth 4430.

CITY COURT—32 Chambers st., Phone, Cortlandt 122, Court opens 10 a.m. Trial Term, Part I, opens 9:45 a.m. Special Term, Chambers 10 a.m. to 4 p.m.; Saturdays to 12 noon.
Clerk's office open from 9 a.m. to 4 p.m.; Saturdays to 12 noon.

CITY MAGISTRATES' COURTS—General Office, 300 Mulberry st., Phone, Spring 9420.

All Courts open from 9 a.m. to 4 p.m., except Saturdays, Sundays, and legal holidays, when only morning sessions are held.

Manhattan—The Bronx.

First District—16 White st.

Second District—125 Sixth ave.

Third District—2nd ave. and 1st st.

Fourth District—151 E. 57th st.

Fifth District—121st and Sylvan pl.

Sixth District—162nd st. & Brook ave., Bx.

Seventh District—314 W. 54th st.

Eighth District—1014 E. 181st st., Bronx.

Twelfth District—1130 St. Nicholas ave.

Night Court for Women—125 Sixth ave.

Night Court for Men—151 E. 57th st.

Domestic Relations (Man.)—151 E. 57th st.

Domestic Relations (Bronx)—1014 E. 181st st., Municipal Term—Room 500, Municipal Bldg., Traffic Court—301 Mott st.

Bronx—

General office, 44 Court st., Phone, Main 7411.

First District—318 Adams st.

Fifth District—Williamsburg Bridge Plaza.

Sixth District—195 Gates ave.

Seventh District—31 Snyder ave.

Eighth District—W. 8th st., Coney Island.

Ninth District—5th ave., and 23rd st.

Tenth District—133 New Jersey ave.

Domestic Relations—402 Myrtle ave.

Municipal Term—2 Butler st.

Queens—

First District—115 5th st., L. I. City.

Second District—Town Hall, Flushing.

Third District—Central ave., Far Rockaway.

Fourth District—Town Hall, Jamaica.

Richmond—

First District—Lafayette ave., New Brighton.

Second District—Village Hall, Stapleton.

CITY RECORD, BOARD OF—Supervisor's office, Municipal Bldg., 8th floor.

Distributing Division, 125-127 Worth st.

Telephone, Worth 3490.

CORRECTION, DEPARTMENT OF—Municipal Bldg., 24th fl., Phone, Worth 1610.

COUNTY CLERK, BRONX—Civil Records, 161st st. and 3d ave.

Criminal Branch, 1913 Arthur ave.

Telephone, Melrose 9266. Office hours 9 a.m.

to 4 p.m.; Saturdays to 12 noon.

COUNTY CLERK, KINGS—Hall of Records, Telephone, Main 4930.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

COUNTY CLERK, NEW YORK—County Court House, Phone, Cortlandt 5388.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

COUNTY CLERK, QUEENS—364 Fulton st., Jamaica, Phone, Jamaica 2608.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

COUNTY CLERK, RICHMOND—Richmond, Telephone, New Dorp 28.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

COUNTY COURT, BRONX—Tremont & Arthur aves., Phone, Trem. 3205.

COUNTY COURT, KINGS—120 Schermerhorn st., Phone, Main 4930.

Court opens at 10 a.m. Clerk's office open from 9 a.m. to 4 p.m.; Saturdays to 12 noon.

COUNTY COURT, QUEENS—Court House, L. I. C. Phone, H'ters Pt. 596.

Clerk's office, Phone, Jamaica 551.

County Judge's office—336 Fulton st., Jamaica, Phone, Jamaica 551.

Court opens at 10 a.m. Trial Term begins first Monday of each month, except July, Aug. and Sept., and on Friday of each week.

Clerk's office open from 9 a.m. to 5 p.m.; Saturdays to 12:30 p.m.

COURT JUDGE AND SURROGATE, RICHMOND—Surrogate's Court and office, Richmond, Phone, New Dorp 235. Surrogate's Chambers, Borough Hall, St. George, Phone, Tomp. 1

PUBLIC CHARITIES, DEPARTMENT OF—
Municipal Bldg., 10th fl. Phone, Worth 4440.
Brooklyn and Queens, 327 Schermerhorn st.,
Bklyn. Telephone, Main 2977.
Richmond—Borough Hall, St. George. Telephone,
Tompkinsville 1000.

PUBLIC MARKETS, DEPARTMENT OF—
Municipal Bldg., 23rd fl. Phone, Worth 1800.

PUBLIC SERVICE COMMISSION—
120 Broadway. Telephone, Rector 7500.
Open at all times, including Sundays and holidays.

QUEENS, PRESIDENT BOROUGH OF—
68 Hunters Pt. ave., L. I. C. Phone, Hunters Pt. 5400.

RECORDS, KINGS, COMMISSIONER OF—
Hall of Records, Bklyn. Phone, Main 6988.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

RECORDS, N. Y. COMMISSIONER OF—
Hall of Records. Telephone, Worth 3900.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

REGISTER, BRONX COUNTY—
1932 Arthur ave. Telephone, Tremont 6694.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

REGISTER, KINGS COUNTY—
Hall of Records, Bklyn. Phone, Main 2830.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

REGISTER, NEW YORK COUNTY—
Hall of Records. Telephone, Worth 3900.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

REVISION OF ASSESSMENTS, BOARD OF—
Municipal Bldg., 7th fl. Phone, Worth 1200.

RICHMOND, PRESIDENT BOROUGH OF—
New Brighton. Phone, Tompkinsville 1000.

SHERIFF, BRONX COUNTY—
1932 Arthur ave. Telephone, Tremont 6694.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

SHERIFF, KINGS COUNTY—
50 Court st. Telephone, Main 6845.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

SHERIFF, NEW YORK COUNTY—
51 Chambers st. Telephone, Worth 4300.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

SHERIFF, QUEENS COUNTY—
Court House, L. I. C. Phone, H't're Pt. 3766.
9 a.m. to 4 p.m.; Saturdays to 12 noon.

SHERIFF, RICHMOND COUNTY—
Richmond. Telephone, New Dorp 120.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

SINKING FUND, COMMISSIONERS OF—
Municipal Bldg., 7th fl. Phone, Worth 1200.

SPECIAL SESSIONS, COURT OF—
Manhattan—Centre and Franklin sts. Telephone, Franklin 3983.

Brooklyn—171 Atlantic ave. Phone, Main 4289.

Queens—Town Hall, Jamaica. Phone, Jamaica 2620. Court held every Tuesday.

Richmond—Borough Hall, St. George. Phone, Tompkinsville 324. Court held Wednesdays.

Bronx—Tremont and Arthur aves. Phone, Tremont 6056. Court held every Thursday.

Probation Bureau, Municipal Bldg., 3rd fl. Phone, Franklin 3983.

Courts open at 10 a. m.

STANDARDS AND APPEALS, BOARD OF—
Municipal Bldg., 9th fl. Phone, Worth 184.

STREET CLEANING, DEPARTMENT OF—
Municipal Bldg., 12th fl. Phone, Worth 4240.

SUPREME COURT, APPELLATE DIVISION—

First Dept.—Madison ave. and 25th st. Phone, Madison Square 3840. Court open from 2 p.m. to 4 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.

Second Dept.—Borough Hall, Bklyn. Phone, Main 1392. Court open from 1 p.m. to 5 p.m. Friday, Motion Day. Court open from 10 a.m. to 2 p.m.

SUPREME COURT, FIRST JUDICIAL DISTRICT—

Civil Division—Chambers st. Phone, Cortlandt 4580. Court opens at 10 a.m.

Criminal Division—Centre and Franklin sts. Phone, Franklin 6064. Court opens at 10:30 a.m. Clerk's office open from 9 a.m. to 4 p.m.; Saturdays to 12 noon.

Bronx County—161st st. and 3rd ave. Phone, Melrose 9721. Court opens at 10 a.m. Clerk's office open from 9 a.m. to 4 p.m.; Saturdays to 12 noon.

SUPREME COURT, SECOND JUDICIAL DISTRICT—

Kings County—26 Court st. Phone, Main 5460. Court opens at 10 a.m.

Kings County, Appellate Term—503 Fulton st. at Phone, Main 7452. Court opens at 10 a.m.

Queens County—Court House, L. I. C. City. Phone, Hunters Pt. 3896.

Richmond County—Trial Term held at Court House, Richmond. Phone, New Dorp 28.

Special Terms held at Borough Hall, St. George. Phone, Tompkinsville 1000. Clerk's office open 9 a.m. to 4 p.m.; Saturdays to 12 noon.

SURROGATE'S COURT, BRONX COUNTY—

1918 Arthur ave. Telephone, Tremont 776. 9 a.m. to 4 p.m.; Saturdays to 12 noon.

SURROGATES' COURT, KINGS COUNTY—

Hall of Records, Bklyn. Phone, Main 3954.

Court opens at 9 a.m. Clerk's office open 9 a.m. to 4 p.m.; Saturdays to 12 noon.

SURROGATES' COURT, N. Y. COUNTY—

Hall of Records. Telephone, Worth 3900.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

SURROGATE'S COURT, QUEENS COUNTY—

364 Fulton st., Jamaica. Phone, Jamaica 397.

9 a.m. to 4 p.m.; Saturdays to 12 noon.

TAXES AND ASSESSMENTS, DEPT. OF—

Municipal Bldg., 9th fl. Phone, Worth 1800.

TEACHERS' RETIREMENT BOARD—

Municipal Bldg., 13th fl. Phone, Worth 4227.

TENEMENT HOUSE DEPARTMENT—

Municipal Bldg., 19th fl. Phone, Worth 1526.

Bronx and Queens—503 Fulton st., Bklyn.

Telephone, Main 3825.

WATER SUPPLY, BOARD OF—

Municipal Bldg., 22nd fl. Phone, Worth 3150.

WATER SUPPLY, GAS AND ELECTRICITY—

Municipal Bldg., 23rd, 24th and 25th floors.

Telephone, Worth 4320.

Brooklyn—50 Court st. Phone, Main 3980.

Bronx—Tremont & Arthur aves. Phone, Tremont 3400.

Queens—Jackson ave., L. I. C. Phone, Hunters Pt. 3500.

Richmond—St. George. Phone, Tomp. 840.

WEIGHTS AND MEASURES, BUREAU OF—

Municipal Bldg., 3rd fl. Phone, Worth 1498.

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 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 Room 16, City Hall, on Thursdays at 11 a. m. at call of the Mayor.

JOHN KORB, Secretary.

Board of Review (Fire Department).
The Board of Review meets in Room 1100, Municipal Building, on Tuesdays, Wednesdays and Thursdays at 2:30 p. m.

Board of Revision of Assessments.

The Board of Revision of Assessments meets in Room 737, Municipal Building, Manhattan, upon notice of the Secretary.

JOHN KORB, Secretary.

Board of Appeals.
The Board meets every Tuesday at 10 a. m. in Room 919, Municipal Building.

JOHN P. LEO, Chairman.

Board of Standards and Appeals.
The Board meets in Room 919, Municipal Building, every Thursday at 10 a. m.

JOHN P. LEO, Chairman.

Board of City Record.
The Board of City Record meets in the City Hall at call of the Mayor.

PETER J. BRADY, Supervisor, Secretary.

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.

RICHARD E. ENRIGHT, 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.

RICHARD E. ENRIGHT, Commissioner.

STATE INDUSTRIAL COMMISSION—
DEPARTMENT OF LABOR.

Resolutions Adopted.

Whereas, the Glens Falls Portland Cement Co., of Glens Falls, N. Y., has made application for a variation from the provisions of section 8-a of the Labor Law to permit ten (10) men engaged in the work of packing and loading cement on boats at its plant at Glens Falls, N. Y., to work seven days per week; and

Whereas, it has been shown by the report of the Supervising Inspector in charge of the district wherein this plant is located that the process of manufacture is not necessarily continuous, that the company is required to ship during the summer months the entire output of the plant during the year, and in order to ship the goods it is necessary to work these men seven days per week owing to the inability to procure sufficient number of men to do the work; and

It appearing that an emergency exists warranting the granting of this variation for a limited period.

Be it resolved by the State Industrial Commission, That variation be and it hereby is granted to the Glens Falls Portland Cement Co., to permit not to exceed ten male adults employed in packing and loading cement on boats to work seven days per week until Aug. 31, 1918; if at the expiration of said time the emergency still exists, further application to be made and action taken by the Commission. This variation to take effect immediately.

Dated, July 10, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly adopted by the State Industrial Commission on the 10th day of July, 1918, and duly filed in the office of said Commission on the 1st day of July, 1918, and that the same is a true and correct copy and transcript of said resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918.

WILLIAM S. COFFEY, Secretary.

Whereas, the Signal Corp have certified to this Commission that the work being done by the Cutler Desk Co. for the United States Government is urgently needed for the prosecution of the War, therefore

Be it resolved by the State Industrial Commission, That the variation heretofore granted to the Cutler Desk Co., of Buffalo, N. Y., to permit the employment of the male adults engaged in work for the United States Government to work seven days per week, be and the same hereby is extended to run concurrently with the variation granted to the Curtis Aeroplane and Motor Co., which expires on Nov. 1, 1918, and which latter variation stipulates that the petitioning company will, as soon as possible to do so, institute three eight-hour shifts, or so arrange that the employees to which this variation applies will not be required nor permitted to work more than eight hours per day, seven days per week.

Dated, July 10, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly adopted by the State Industrial Commission on the 10th day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 13th day of July, 1918.

WILLIAM S. COFFEY, Secretary.

(jy17)

Whereas, Rule 15, relating to Smoking in Protected Portions of Factories or in Special Classes of Occupancies, which hearings were held in the office of the State Industrial Commission in Buffalo, June 10, 1918; Rochester, June 11, 1918; Syracuse, June 12, 1918; in the Chamber of Commerce, Utica, June 13, 1918; and in the office of the State Industrial Commission in New York City, June 14, 1918; Due notice of each hearing was published at least ten days before said hearing in various papers designated by the Commission in accordance with law; and

Whereas, the Industrial Council duly considered the said proposed Rule 15 of the Industrial Code, relating to Smoking in Protected Portions of Factories or in Special Classes of Occupancies, to be it

Resolved by the Industrial Commission of the State of New York, That Rule 15 of the Industrial Code, relating to Smoking in Protected Portions of Factories or in Special Classes of Occupancies, be and the same hereby is adopted as follows, to take effect July 1, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss.

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York

Code, relating to the Lighting of Factories and Mercantile Establishments, at a regular meeting held at the Capitol at Albany on May 22, 1918, and duly advised the Industrial Commission with regard thereto, be it

Resolved, by the Industrial Commission of the State of New York, That Rule 50 of the Industrial Code, relating to the Lighting of Factories and Mercantile Establishments, be and the same hereby is adopted as follows, to take effect July 1, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly filed in the office of the State Industrial Commission on the 1st day of July, 1918, and that the same is true and correct copy and transcript of the resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, rules relating to Mines and Quarries have been adopted by the Industrial Commission;

Whereas, such rules specifically relate to the Storing, Keeping, Moving, Thawing, Charging and Firing Explosives and the conduct of employees in Mines and Quarries; therefore

Be it resolved, That the rules now in force be repealed as follows, effective July 1, 1918:

Mines and Quarries, Rules Nos. 1 to 21, inclusive;

Storing, Keeping, Moving, Thawing, Charging and Firing Dynamite, Nos. 1 to 8, inclusive;

Daily Guidance of Employees, Nos. 1 to 9, inclusive.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly filed in the office of the State Industrial Commission on the 1st day of July, 1918, and that the same is a true and correct copy and transcript of the resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, public hearings have been held upon proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, which hearings were held in the office of the State Industrial Commission in Buffalo, May 7, 1918; Syracuse, May 8, 1918, and New York City, May 10, 1918. Due notice of each hearing was published at least ten days before said hearing in various papers designated by the Commission in accordance with law; and

Whereas, the said proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, were duly submitted to the Industrial Council for their consideration and advice; and

Whereas, the Industrial Council duly considered the said proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, at a regular meeting held at the Capitol at Albany on March 20, 1918, and duly advised the Industrial Commission with regard thereto, be it

Resolved, by the Industrial Commission of the State of New York, That Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, be and the same hereby are adopted as follows, to take effect July 1, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly filed in the office of the State Industrial Commission on the 1st day of July, 1918, and that the same is a true and correct copy and transcript of the resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, the H. H. Franklin Manufacturing Co., of Syracuse, N. Y., has made application to this Commission for a continuation of the variation from the provisions of section 8-a of the Labor Law, granted said company on May 8, 1918, permitting certain employees at its plant at Syracuse, N. Y., to work seven days per week until July 8, 1918; and

Whereas, it has been shown that this company has contracted with the British Government to supply material for the use of said Government, and that the work necessary to comply with the terms of said contract will cover a period until at least Sept. 10, 1918; and

It appearing that the Secretary of War has certified to this Commission that an emergency exists warranting the granting of such variation, therefore

Be it resolved, by the State Industrial Commission, That the H. H. Franklin Manufacturing Co., of Syracuse, N. Y., be and it hereby is granted a continuation of the variation from the provisions of section 8-a of the Labor Law, heretofore accorded said company to permit certain male adults engaged in work for the British Government at its plant at Syracuse, N. Y., to work seven days per week until Sept. 10, 1918. If at the expiration of such period the emergency still exists, further certificate to be furnished.

Dated, July 10, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly adopted by the State Industrial Commission on the 10th day of July, 1918, and duly filed in the office of said Commission, and that the same is a true and correct copy and transcript of said resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 13th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, the Empire Art Metal Co., Inc., of College Point, N. Y., has made application to this Commission for a variation from the provisions of section 8-a of the Labor Law to permit the men employed by it to work seven days per week; and

Whereas, an investigation by the Supervising Inspector in charge of the district shows that the process of manufacture is not necessarily continuous, but that this firm is engaged in work for the United States Government; and

It appearing that the Secretary of War has certified to this Commission that an emergency exists warranting the granting of said variation, therefore

Be it resolved, by the State Industrial Commission, that variation be and it hereby is granted to the Empire Art Metal Co., Inc., to permit the male adults employed on work for the United States Government in its plant at College Point, N. Y., to work seven days per week.

This variation to take effect immediately and to continue to and including Sept. 10, 1918. If at the expiration of said period the emergency still exists, further certificate to be furnished and action taken accordingly.

Dated, July 10, 1918.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly filed in the office of the State Industrial Commission on the 1st day of July, 1918, and that the same is a true and correct copy and transcript of the resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, rules relating to Mines and Quarries have been adopted by the Industrial Commission;

Whereas, such rules specifically relate to the Storing, Keeping, Moving, Thawing, Charging and Firing Explosives and the conduct of employees in Mines and Quarries; therefore

Be it resolved, That the rules now in force be repealed as follows, effective July 1, 1918:

Mines and Quarries, Rules Nos. 1 to 21, inclusive;

Storing, Keeping, Moving, Thawing, Charging and Firing Dynamite, Nos. 1 to 8, inclusive;

Daily Guidance of Employees, Nos. 1 to 9, inclusive.

STATE OF NEW YORK, OFFICE OF THE STATE INDUSTRIAL COMMISSION, ss:

I, WILLIAM S. COFFEY, Secretary of the State Industrial Commission of the State of New York, DO HEREBY CERTIFY that I have compared the foregoing copy of a resolution with the original thereof, duly filed in the office of the State Industrial Commission on the 1st day of July, 1918, and that the same is a true and correct copy and transcript of the resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the State Industrial Commission this 12th day of July, 1918. WILLIAM S. COFFEY, Secretary.

(SEAL)

iy17

Whereas, public hearings have been held upon proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, which hearings were held in the office of the State Industrial Commission in Buffalo, May 7, 1918; Syracuse, May 8, 1918, and New York City, May 10, 1918. Due notice of each hearing was published at least ten days before said hearing in various papers designated by the Commission in accordance with law; and

Whereas, the said proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, were duly submitted to the Industrial Council for their consideration and advice; and

Whereas, the Industrial Council duly considered the said proposed Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, at a regular meeting held at the Capitol at Albany on March 20, 1918, and duly advised the Industrial Commission with regard thereto, be it

Resolved, by the Industrial Commission of the State of New York, That Rules 1000 to 1076, inclusive, and 1100 to 1122, inclusive, of the Industrial Code, relating to Mines and Quarries, be and the same hereby are adopted as follows, to take effect July 1, 1918.

WEDNESDAY, JULY 24, 1918,

Borough of The Bronx.

FOR ADDITIONS AND ALTERATIONS TO THE ELECTRIC EQUIPMENT IN PUBLIC SCHOOL 42, WASHINGTON AVE. AND CLAREMONT PARKWAY, BOROUGH OF THE BRONX.

The time allowed to complete the whole work will be sixty (60) consecutive working days, as provided in the contract.

The amount of security required is \$400.

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 temporary Estimating Room, 6th floor, Brooklyn Branch of the Department of Education, 131 Livingston st., Bklyn.

C. B. J. SNYDER, Superintendent of School Buildings.

Dated, July 12, 1918. iy12,24

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS WILL BE RECEIVED BY the Superintendent of School Buildings of the Board of Education of The City of New York, at Room 2800, Municipal Building, Manhattan, until 11 a. m., on

WEDNESDAY, JULY 24, 1918,

Borough of The Bronx.

FOR ELECTRIC EQUIPMENT IN PUBLIC SCHOOL 42, WASHINGTON AVE. AND CLAREMONT PARKWAY, BOROUGH OF THE BRONX.

The time allowed to complete the whole work will be sixty (60) consecutive working days, as provided in the contract.

The amount of security required is \$400.

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 temporary Estimating Room, 6th floor, Brooklyn Branch of the Department of Education, 131 Livingston st., Bklyn.

C. B. J. SNYDER, Superintendent of School Buildings.

Dated, July 12, 1918. iy12,24

See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS WILL BE RECEIVED BY the Superintendent of School Buildings of the Board of Education of The City of New York, at Room 2800, Municipal Building, Manhattan, until 11 a. m., on

WEDNESDAY, JULY 24, 1918,

Borough of The Bronx.

FOR SANITARY ALTERATIONS AT PUBLIC SCHOOLS 16, 39 AND 45, BOROUGH OF THE BRONX.

The time allowed to complete the whole work will be sixty (60) consecutive working days, as provided in the contract.

The amount of security required is as follows: P. S. 16, \$500; P. S. 39, \$500; P. S. 45, \$800.

The deposit accompanying bid shall be five per cent. of the amount of security.

A separate bid must be submitted for each school, and separate awards will be made thereon.

FOR ALTERATIONS AND ADDITIONS TO HEATING APPARATUS IN MORRIS HIGH SCHOOL, 166TH ST., BOSTON RD. AND JACKSON AVE., BOROUGH OF THE BRONX.

The time allowed to complete the whole work will be forty (40) consecutive working days, as provided in the contract.

The amount of security required is Six Hundred Dollars (\$600).

The deposit accompanying bid shall be five per cent. of the amount of security.

Borough of Queens.

FOR ALTERATIONS TO PUBLIC SCHOOL 101 (PORTABLE SCHOOL BUILDING), ON THE NORTHERLY SIDE OF RUSSELL PL., FOREST HILLS GARDENS, FOREST HILLS, BOROUGH OF QUEENS.

The time allowed to complete the whole work will be ninety (90) consecutive working days, as provided in the contract.

The amount of security required is Eighteen Hundred Dollars (\$1,800).

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 temporary Estimating Room, 6th floor, Brooklyn Branch of the Department of Education, 131 Livingston st., Bklyn.

C. B. J. SNYDER, Superintendent of School Buildings.

Dated, July 12, 1918. iy12,24

See General Instructions to Bidders on last page, last column, of the "City Record."

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 372 of the Laws of 1907, being section 823E of the Greater New York Charter, will hold a public hearing at 11 o'clock in the forenoon on Thursday, August 1, 1918, in Room 16, City Hall, Borough of Manhattan, relative to a request of the Com-

missioner of Docks that a resolution be adopted by the Commissioners of the Sinking Fund authorizing the purchase by The City of New York from The Atlantic Mutual Insurance Company of the interest of said company in the premises hereinafter described, acquired by it under and by virtue of letters patent from the People of the State of New York, for \$5,533.30, the amount paid by said patentee to the State for said interest in said premises, together with the sum of \$350 fixed by said letters patent for the expenses necessarily incurred by said The Atlantic Mutual Insurance Company in acquiring such patent and also the value of the improvements on said premises, and authorizing him to make and serve upon said The Atlantic Mutual Insurance Company, on behalf of The City of New York, an offer to purchase such interest from said company in accordance with the terms of such resolution so to be adopted.

Premises.

All that certain piece or parcel of land under

waters of New York Bay, in front of

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, and ninety per cent. (90%) upon the delivery of the deed, which shall be within sixty days from the date of the sale.

The deed so delivered shall be in the form of a bargain and sale deed without covenants.

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 June 13, 1918.

Dated, July 12, 1918.
LOUIS H. HAHLO, Deputy and Acting Comptroller, Department of Finance, Comptroller's Office.

jy15.31

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 5.

CEDAR PL.—REGULATING, GRADING, CURBING AND FLAGGING, from Malbone st. to Montgomery st. Area of assessment affects blocks 1301, 1302 and 1306.

MONTGOMERY ST.—REGULATING, GRADING AND CURBING, from Albany ave. to Troy ave. Area of assessment affects blocks 1417 and 1422.

SECTION 18.

REGULATING, GRADING, CURBING, FLAGGING AND PAVING IN 81ST ST., from Clonal rd. to Narrows ave., and in NARROWS AVE., from 81st to 83d sts. Area of assessment affects blocks 5975, 5983, 5986, 5994, 5995, 6003 and 6004.

SECTION 19.

19TH AVE.—GRADING, PAVING AND CURBING, from Bath ave. to Cropsey ave. Area of assessment affects blocks 6438 and 6439.

— that the above assessments were confirmed by the Board of Assessors on July 9, 1918, and entered July 9, 1918, 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 September 7, 1918, 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 noon.

Dated, New York, July 9, 1918.
jy16.26 CHARLES L. CRAIG, Comptroller.

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.

8TH AVE.—REGULATING AND PAVING,

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 assessment for OPENING AND ACQUIRING TITLE to the following named avenue in THE BOROUGH OF QUEENS:

THIRD WARD.

OPENING AND ACQUIRING TITLE TO

MARSTON AVE., from Murray st. to Dunsing st.; DUNING ST., from Marston ave. to Matthew pl.; and MATTHEW PL., from Dunsing st. to Hoagland st. Confirmed June 18, 1918; entered July 9, 1918. Area of assessment includes all those lands, tenements and hereditaments and premises situate and being in the Borough of Queens, in The City of New York, which, taken together, are bounded as shown on the following diagram:

EXPLANATORY NOTE:

— indicates the boundary of the area of assessment.
○ indicates the position of angle point which is not otherwise clearly fixed.
All distances indicated are in feet and are to be measured at right angles or normal to the street lines to which they are referred.
The position of a line adjoining a railroad, which is not otherwise fixed, is intended to coincide with the boundary line of the railroad right-of-way.
The original of this diagram is on file in the office of the Chief Engineer, Room 1347, Municipal Building.

BOARD OF ESTIMATE AND APPORTIONMENT
OFFICE OF THE CHIEF ENGINEER

DIAGRAM SHOWING AREA OF ASSESSMENT
IN THE PROCEEDING FOR ACQUIRING TITLE TO
MAPSTON AVENUE
FROM MURRAY STREET TO DUNING STREET
DUNING STREET
FROM MARSTON AVENUE TO MATTHEW PLACE AND
MATTHEW PLACE
FROM DUNING STREET TO HOAGLAND STREET
BOROUGH OF QUEENS

New York, September 23, 1915.

CHARLES L. CRAIG, Comptroller
Dated, New York, July 9, 1918. jy16.26

C4021

The above entitled assessment was entered on the day herein before 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 Sept. 7, 1918, 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 987 of the Greater New York Charter.

The above assessments are payable to the Collector of Assessments and Arrears at his office in the Municipal Building, Court House Square, L. I. City, between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 9, 1918. jy13.24

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.

KISSELL AVE.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

121ST ST.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

121ST ST.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

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— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

121ST ST.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

121ST ST.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

121ST ST.—REGULATING, GRADING, LAYING BRICK GUTTERS AND CROSSWALKS, CONCRETE CURB from Castleton ave. to Forest ave. Area of assessment affects block 132, 133 and 135.

— that the above assessments were confirmed by the Board of Assessors on July 2, 1918, and entered July 2, 1918, 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 Aug. 31, 1918, 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 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 15 and 19, St. George, New Brighton, Borough of Richmond, and on Saturdays from 9 a. m. to 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

CHARLES L. CRAIG, Comptroller.

Dated, New York, July 2, 1918. jy10.20

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.

ave., No. 621; Stone ave., No. 640; Sutter ave., northwest corner, Crescent st.; Willow st., No. 41; Wyona st., No. 363; and 20th st., Nos. 469-483. Affecting property in front of which work was done.

—that the above assessments were confirmed by the Board of Revision of Assessments on June 28, 1918, and entered June 28, 1918, 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 August 27, 1918, 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 1019 of the Greater New York Charter.

The above assessment is payable to the Collector of Assessments and Arrears at his office in the Offerman Building, 503 Fulton st., Brooklyn, N. Y., between the hours of 9 a. m. and 2 p. m., and on Saturdays from 9 a. m. to 12 noon.

Dated, New York, June 28, 1918.

iy10,20 CHARLES L. CRAIG, Comptroller.

Corporation Sale of Buildings and Appurtenances Thereto on City Real Estate by Sealed Bids.

AT THE REQUEST OF THE BOARD OF

Education, public notice is hereby given that the Commissioners of the Sinking Fund, by virtue of the powers vested in them by law, will offer for sale by sealed bids certain buildings and standing upon property owned by The City of New York, acquired by it for school purposes in the

Borough of Brooklyn.

Being the buildings and appurtenances thereto on the plot of ground 60 feet by 90 feet on the easterly side of Warwick st., 190 feet northerly from Belmont ave., in the Borough of Brooklyn, 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 June 27, 1918, the sale by sealed bids of the above described buildings and appurtenances thereto will be held by direction of the Comptroller on

THURSDAY, JULY 18, 1918,

at 11 a. m., in lots and parcels, and in manner and form, as follows:

Parcel No. 1. Three two-story brick buildings, No. 437, No. 439 and No. 441 Warwick st., Brooklyn.

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, Manhattan, until 11 a. m. on the 18th day of July, 1918, and then publicly opened for the 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 notice of the acceptance of their bids.

The Comptroller reserves the right to reject any and all bids and to waive any defects or irregularities 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 enclosed in properly sealed envelopes, marked "Proposals to be opened July 18, 1918," 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, Manhattan," 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."

CHARLES L. CRAIG, Comptroller.

Dated, June 28, 1918.

The Engineer's estimate of the quantities is as follows:

Type "A," or Sewer Department Standard. 2,129 linear feet 8-foot 3-inch by 8-foot 6-inch double barrel reinforced concrete sewer.

295 linear feet 8-foot 0-inch by 8-foot 0-inch double barrel reinforced concrete siphon sewer.

640 linear feet 24-inch cast iron pipe siphon.

11 manholes, complete.

1 cleaning shaft, complete.

4 basin manholes, complete.

7 inlets, complete.

50 linear feet 12-inch vitrified pipe basin connections.

100 linear feet 10-inch vitrified pipe basin connections.

144 six-inch spurs (24 inches long) on concrete sewer.

1 grit chamber, complete.

1 up-stream drop chamber, complete.

1 down-stream drop chamber, complete.

1 transition section, complete.

Underpinning northerly 48-inch C. I. P. water main, complete, as shown on plan.

Underpinning masonry aqueduct ad southerly 48-inch C. I. P. water main, complete, as shown on plan.

Underpinning 72-inch steel pipe water main, complete, as shown on plan.

Underpinning 18,400 cubic yards of earth fill, for sewer embankment, as shown on plan.

1,200 cubic yards of cinder fill, for sewer embankment, as shown on plan.

19.5 linear feet of breast wall (8 feet 8 inches high).

180 linear feet of galvanized pipe rail.

3,200 linear feet of wooden fence.

8,000 linear feet of piling.

40,000 feet B. M. timber for foundation.

83,000 feet B. M. timber for sheeting and bracing.

1,500 lbs. structural steel (bolts, nuts and washers).

25 cubic yards Class "A" concrete (exclusive of concrete shown on plan).

2,000 lbs. reinforcing steel (exclusive of steel shown on plan).

20 cubic yards of rock excavation.

530 square yards of cobble stone gutter (cement grouted joints).

Underpinning Elevated R. R. column, together with permanent foundation.

16 linear feet 6-inch vitrified pipe house connection drains.

Type "B."

2,129 linear feet 8-foot 3-inch by 8-foot 6-inch double barrel reinforced concrete sewer.

295 linear feet 8-foot 0-inch by 8-foot 0-inch double barrel reinforced concrete siphon sewer.

640 linear feet 24-inch reinforced concrete pipe siphon (Precast Type "B").

11 manholes, complete.

1 cleaning shaft, complete.

4 basin manholes, complete.

7 inlets, complete.

50 linear feet 12-inch vitrified pipe basin connections.

100 linear feet 10-inch vitrified pipe basin connections.

144 six-inch spurs (24 inches long) on concrete sewer.

1 grit chamber, complete.

1 up-stream drop chamber, complete.

1 down-stream drop chamber, complete.

1 transition section, complete.

Underpinning northerly 48-inch C. I. P. water main, complete, as shown on plan.

Underpinning masonry aqueduct ad southerly 48-inch C. I. P. water main, complete, as shown on plan.

Underpinning 72-inch steel pipe water main, complete, as shown on plan.

Underpinning 18,400 cubic yards of earth fill, for sewer embankment, as shown on plan.

1,200 cubic yards of cinder fill, for sewer embankment, as shown on plan.

19.5 linear feet of breast wall (8 feet 8 inches high).

180 linear feet of galvanized pipe rail.

3,200 linear feet of wooden fence.

8,000 linear feet of piling.

40,000 feet B. M. timber for foundation.

83,000 feet B. M. timber for sheeting and bracing.

1,500 lbs. structural steel (bolts, nuts and washers).

25 cubic yards Class "A" concrete (exclusive of concrete shown on plan).

2,000 lbs. reinforcing steel (exclusive of steel shown on plan).

20 cubic yards of rock excavation.

530 square yards of cobble stone gutter (cement grouted joints).

Underpinning Elevated R. R. column, together with permanent foundation.

16 linear feet 6-inch vitrified pipe house connection drains.

The quantities for rock excavation, 25 cubic yards of Class "A" concrete and 2,000 lbs. reinforcing steel (exclusive of concrete and steel shown on plan), are for the purpose of securing prices in the event that rock is encountered and that the concrete and steel shall be required.

The time allowed for completing the above work will be three hundred (300) working days.

The amount of security required will be One Hundred and Fifteen Thousand Dollars (\$115,000).

The bidder must state the price of each item or article contained in the specification or schedule herein contained or hereafter annexed, per square yard, linear foot, or other unit of measure, by which bids will be tested. Bids will be compared and each contract awarded at a lump or aggregate sum.

Blank forms may be obtained, and the plans or drawings may be seen, at the office of the President of the Borough of Queens.

Dated, July 13, 1918.

iy13,24 MAURICE E. CONNOLLY, President.

See General Instructions to Bidders on last page, last column, of the "City Record."

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 Electricity.

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.

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.

CHARLES L. CRAIG, Comptroller.

BOROUGH OF QUEENS.

Proposals.

SEALED BIDS OR ESTIMATES WILL BE received by the President of the Borough of Queens, at his office, 4th floor, Queens Subway Building, Hunterspoint ave., L. I. City, until 11 a. m. on

WEDNESDAY, JULY 24, 1918.

NO. 1. FOR THE CONSTRUCTION OF A COMBINED SEWER AND APPURTENANCES IN GENESEE ST., FROM LIBERTY AVE. TO N. CONDUIT AVE.; AND A STORM WATER SEWER IN GENESEE ST., FROM N. CONDUIT AVE. TO S. CONDUIT AVE., FOURTH WARD.

NO. 2. FOR REGULATING AND PAVING WITH A PERMANENT PAVEMENT CONSISTING OF IMPROVED GRANITE BLOCK WITH BITUMINOUS GROUTED JOINTS ON A CONCRETE FOUNDATION, AND ALL WORK INCIDENTAL THERETO, IN WILBUR AVE., FROM WILLIAM ST. TO SUNSWICK ST., FIRST WARD, BOROUGH OF QUEENS.

The time allowed for doing and completing the above work will be forty (40) consecutive working days.

The amount of security required will be Eight Thousand Dollars (\$8,000).

The Engineer's estimate of the quantities is as follows:

100 linear feet of new bluestone curb set in sand.

100 linear feet of old curb, redressed and reset in sand.

340 cubic yards of concrete in place.

2,000 square yards of improved granite block pavement (including sand bed and bituminous grouted joints), and one year's maintenance.

10 square yards of improved granite block pavement relaid (including sand bed and bituminous grouted joints), and no maintenance.

10 square yards of asphalt block pavement (including concrete foundation, mortar bed and sand joints) to be relaid.

NO. 3. FOR CURBING, WHERE NECESSARY AND PAVING WITH A PRELIMINARY PAVEMENT OF BITUMINOUS MACADAM, TOGETHER WITH ALL WORK INCIDENTAL THERETO, IN ABBINGDON RD. FROM LEFFERTS AVE. TO BREVOORT ST., 2D AND 4TH WARDS.

The time allowed for doing and completing the above work will be forty (40) consecutive working days.

The amount of security required will be thirty-five Hundred Dollars (\$3,500).

The Engineer's estimate of the quantities is as follows:

200 linear feet of cement curb, and one year's maintenance.

2,420 square yards of bituminous macadam pavement and one year's maintenance.

100 square yards of second-hand granite block pavement, and one year's maintenance.

50 linear feet of concrete curb with steel nosing and cement grouted joints.

30 square yards of water-bound macadam pavement restored.

4 sewer manholes adjusted (not to be bid for).

NO. 4. FOR REGULATING AND PAVING WITH A PERMANENT PAVEMENT OF SHEET ASPHALT UPON A CONCRETE FOUNDATION SIX INCHES IN THICKNESS, TOGETHER WITH ALL WORK INCIDENTAL THERETO, IN MADISON ST. FROM A LINE ABOUT 10 FEET EAST OF DOUBLEDAY ST. TO FREMONT ST., SECOND WARD, BOROUGH OF QUEENS.</

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., THURSDAY, AUGUST 1, 1918 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

Candidates must be at least 21 years of age on or before the closing date for the receipt of applications.

The subjects and weights of the examination are: Experience, 4; Technical, 6; 75 per cent. required; 70 per cent. general average required.

A qualifying physical examination will be given.

Duties—The duties of the position consist of the responsible design of the mechanical equipment of buildings, including the making of studies, drawings, sketches, computations and the writing of specifications for heating and ventilating and power equipment. Incumbents may have charge of other draftsmen of a lower grade.

Requirements—Candidates must present evidence of having had at least three years' experience as a mechanical draftsman or engineer, of such a character as to acquire ability to design the mechanical equipment of buildings or equivalent experience. Credit will be given in lieu of experience for training in technical or trade schools.

The range of salary for this grade is from \$1,800 to but not including \$2,400 per annum.

There are at present two vacancies in the Board of Education at respectively \$1,962 and \$2,100 per annum. Vacancies occur from time to time in other City departments.

jy11,ai CHARLES I. STENGLE, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

WEDNESDAY, JULY 10, 1918, TO WEDNES-

DAY, JULY 24, 1918,

for the position of

TABULATING MACHINE OPERATOR (MOON-HOPKINS MACHINE), GRADE 2.

All examinations are open to both men and women unless otherwise stated.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., WEDNESDAY, JULY 24, 1918, 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form "B."

Candidates must be at least 18 years of age on or before the closing date for the receipt of applications.

The subjects and weights of the examination are: Practical test, 8; 70 per cent. required. Arithmetic, 2. 70 per cent. general average required.

A qualifying physical examination will be given.

Duties—Tabulating Machine Operator (Moon-Hopkins Machine) will be required to prepare orders for supplies, which will include listing the number of units, unit price, extension and total of each order; to compute the final ratings of candidates in civil service examinations, listing the mark in each subject, and extending the average on the machine. Two eligible lists will be prepared, one for billing machine work and one for computing final ratings of examinations. Candidates must specify for which list they wish to be examined.

Requirements—Candidates should have been employed in a position giving them practical experience in the operation of the Moon-Hopkins Machine.

Salary—\$600 to but not including \$1,200 per annum; usual salary \$600 per annum.

Vacancies—There is a vacancy in the office of the Municipal Civil Service Commission. Other vacancies occur from time to time.

Persons who filed applications for Tabulating Machine Operator (Moon-Hopkins Machine), Grade 2, between June 11 and July 2, 1918, need not file applications for this examination.

jy10,24 CHARLES I. STENGLE, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

MONDAY, JULY 1, 1918, TO TUESDAY,

JULY 23, 1918,

for the position of

AUTOMOBILE ENGINEMAN.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., MONDAY, JULY 29, 1918, 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

Candidates must be at least 21 years of age.

The subjects and weights of the examination are: Experience, 7; 70 per cent. required. Technical, 3; 75 per cent. required.

A qualifying physical examination will be given.

Duties—To operate, to make minor repairs and adjustments on and to clean, oil and maintain motor vehicles in good running condition.

Requirements—Candidates must show a continued experience of at least two years in the operation of motor vehicles. They will be tested on their knowledge of the mechanism of the gasoline engine, transmission and the care of motor vehicles. They must present a New York State license as Automobile Engineman at the time of filing applications.

Usual range of annual compensation \$960 to \$1,200. Appointments are usually made at the lowest salary rate. Vacancies occur from time to time in the several departments.

jy8,29 CHARLES I. STENGLE, 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, JULY 5, 1918, TO FRIDAY, JULY

26, 1918,

for the position of

PROBATION OFFICER (FEMALE).

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., FRIDAY, JULY 26, 1918, 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

Candidates must be at least 21 years of age on or before the closing date for the receipt of applications.

The subjects and weights of the examination are: Experience, 4; Technical, 6; 75 per cent. required. 70 per cent. general average required.

A qualifying physical examination will be given.

Duties—The duties of incumbents of this position are to investigate cases of persons awaiting disposition by the Courts, or Penitentiary or Reformatory inmate awaiting disposition by the Parole Commission; to report to the proper authorities upon such investigations; to exercise helpful authoritative supervision over persons on probation or on parole; and to enforce orders regarding such persons.

Candidates should be familiar with the laws affecting probation and parole, and with the most approved methods of probation work. It is desirable that they should possess at least one year of social service or investigative experience of a nature tending to qualify them for this position or its equivalent. Persons who have had substantial experience in probation or correctional case work will receive special consideration.

The entrance salary for this position is \$1,200. There are occasional vacancies in the Magistrate Courts, the Court of Special Sessions and the Parole Commission.

jy11,ai CHARLES I. STENGLE, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

WEDNESDAY, JULY 24, 1918, TO THURSDAY,

JULY 28, 1918,

for the position of

MEDICAL SUPERINTENDENT, SEA VIEW HOSPITAL, GRADE 5.

All examinations are open to both men and women, unless otherwise stated.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., TUESDAY, JULY 23, 1918, 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

A qualifying physical examination will be given.

Duties—General supervision of Sea View Hospital (Tuberculosis), with a present census of about nine hundred (900) inmates; the Medical Superintendent will have jurisdiction over the medical and hospital service; he will exercise general supervision over the working staff, and will be responsible for the general condition of the buildings and grounds.

Requirements—Candidates must be licensed to practice medicine in the State of New York. They must have at least one year's internship in a hospital of recognized standing, and must have had thereafter at least five years' medical administrative experience. Special consideration will be given to candidates who have had tuberculosis hospital administrative experience.

Salary—\$4,380 annually with maintenance. One vacancy, Sea View Hospital, Department of Public Charities.

jy1,23 CHARLES I. STENGLE, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

WEDNESDAY, JULY 3, 1918, TO THURSDAY,

JULY 25, 1918,

for the position of

CLERK, FIRST GRADE (MALE).

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., THURSDAY, JULY 25, 1918, 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: Arithmetic, 4; Handwriting, 3; Letter-writing, 3; 70 per cent. general average required.

A qualifying physical examination will be given.

Duties—General supervision of Sea View Hospital (Tuberculosis), with a present census of about nine hundred (900) inmates; the Medical Superintendent will have jurisdiction over the medical and hospital service; he will exercise general supervision over the working staff, and will be responsible for the general condition of the buildings and grounds.

Requirements—Candidates must be licensed to practice medicine in the State of New York. They must have at least one year's internship in a hospital of recognized standing, and must have had thereafter at least five years' medical administrative experience. Special consideration will be given to candidates who have had tuberculosis hospital administrative experience.

Salary—\$4,380 annually with maintenance.

One vacancy, Sea View Hospital, Department of Public Charities.

jy1,23 CHARLES I. STENGLE, Secretary.

PUBLIC NOTICE IS HEREBY GIVEN THAT applications will be received by the Municipal Civil Service Commission, Municipal Building, Manhattan, New York City, from

WEDNESDAY, JULY 11, 1918, TO WEDNES-

DAY, JULY 31, 1918,

for the position of

INSPECTOR OF GAS, GRADE 2.

No applications delivered at the office of the Commission, by mail or otherwise, after 4 p. m., WEDNESDAY, JULY 31, 1918, 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.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

A qualifying physical examination will be given.

Duties—All applicants must present with their applications a copy of birth certificate as recorded in the Department of Health or a transcript of school record. The present salary range is from \$300 to but not including \$600 per annum. The requirement of paragraph 12, Rule VII, that no person who has entered any examination for appointment to a competitive position and failed, or who has withdrawn from an examination, shall be admitted within nine months from the date of such examination to a new examination for the same position, is waived for this examination.

Candidates must be at least 14 years of age and not more than 18 years of age on or before the closing date for the receipt of applications. Vacancies occur constantly.

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.

Applicants must be citizens of the United States and residents of the State of New York.

Applications for this examination must be filed on Form D.

A qualifying physical examination will be given.

Duties—Inspectors of Plumbing are employed in the Bureaus of Buildings in the several Boroughs to inspect and report upon the plumbing work in new and old buildings to insure compliance with the legal provisions of the plumbing code concerning general sanitation, and to make tests of plumbing, drainage and gas systems.

Requirements—In accordance with section 406 of the Greater New York Charter, candidates must be plumbers who shall have served at least five years as such. They are expected to be familiar with all branches of plumbing and gas fitting and with the several laws and regulations relative thereto. A knowledge of plan reading is also required.

Section 1573, subdivision 3, of the Greater New York Charter directs that the Examining Board of Plumbers shall examine in conjunction with the Municipal Civil Service Commission applicants for positions of Inspectors of Plumbing. The names of all candidates who file applications will be transmitted to the Examining Board of Plumbers in accordance with these provisions. The attention of candidates is drawn to the notice of the Examining Board of Plumbers printed below.

Salary—Grade 2 comprises salaries of \$1,200 to but not including \$1,800 per annum. Usual salary upon appointment, \$1,200 per annum.

Vacancies occur from time to time.

CHARLES I. STENGLE, 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, JULY 5, 1918, TO FRIDAY, JULY

26, 1918,

for the position of

EXAMINING BOARD OF PLUMBERS, Municipal Building, 9th Floor.

PUBLIC NOTICE IS HEREBY GIVEN THAT in accordance with chapter 755 of the Laws

of 1913, the Examining Board of Plumbers will examine, in conjunction with the Municipal Civil Service Commission, all persons who file applications for examination as Inspectors of Plumbing. In accordance with subdivision 5 of section 1573 of the Greater New York Charter, each person applying for examination will be charged a sum of Five Dollars, to be collected by this Board on the date designated by the Municipal Civil Service Commission for holding the practical test.

All applications for examination are to be made to the Municipal Civil Service Commission in accordance with its advertisement of this date.

MICHAEL J. MCGR

290 linear feet old curbstone reset in concrete.
430 linear feet new curbstone set in concrete.
125 linear feet bluestone heading stones set in concrete.
70 linear feet granite heading stones set in concrete.
370 cubic yards concrete.
2,235 square yards asphalt pavement (5 years maintenance).
10 square yards adjacent pavement to be relaid.

5 new standard iron covers and heads for sewer manholes.
Time allowed, 30 consecutive working days.
Security required, \$3,400.

Each bid must be accompanied by a deposit of \$170 in cash or certified check made payable to the order of the Comptroller of The City of New York.

NO. 3, FOR REGULATING AND REPAVING WITH PERMANENT ASPHALT PAVEMENT ON A 6-INCH CONCRETE FOUNDATION THE ROADWAY OF S. 3D ST. FROM A LINE 113 FEET EAST OF DRIGGS AVE. TO A LINE 222 FEET EAST OF DRIGGS AVE.

The Engineer's estimate is as follows:
5 linear feet old curbstone reset in concrete.
5 linear feet new curbstone set in concrete.
60 cubic yards concrete.
365 square yards asphalt pavement (5 years maintenance).

Time allowed, 20 consecutive working days.
Security required, \$400.

Each bid must be accompanied by a deposit of \$20 in cash or certified check made payable to the order of the Comptroller of The City of New York.

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 contracts 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 Bureau of Highways, Room 502, No. 50 Court st., Brooklyn.

EDWARD RIEGELMANN, President.
Dated, July 12, 1918.
See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS WILL BE RECEIVED BY the President of the Borough of Brooklyn, at Room 2, Borough Hall, Brooklyn, until 11 a. m., on

WEDNESDAY, JULY 17, 1918.
NO. 1, FOR FURNISHING AND DELIVERING 10,000 SQUARE FEET OF BLUE-STONE FLAGGING 2 INCHES THICK.

To be delivered as follows:

6,000 square feet to Corporation Yard, Wallabout Basin, foot of Hewes st.

4,000 square feet to Corporation Yard, DeKalb ave. near Irving ave.

NO. 2, FOR FURNISHING AND DELIVERING 4,500 CUBIC YARDS OF ONE AND ONE-HALF INCH BROKEN TRAP ROCK AND 2,000 CUBIC YARDS OF TRAP ROCK SCREENINGS.

To be delivered as follows:
2,500 cubic yards of stone and 1,000 cubic yards of screenings to Corporation Yard, 19th ave. and 56th st.

2,000 cubic yards of stone and 1,000 cubic yards of screenings to Corporation Yard, Neck rd. and Gravesend ave.

NO. 3, FOR FURNISHING AND DELIVERING 1,500 CUBIC YARDS OF SAND GRITS.

To be delivered as follows:
750 cubic yards to Corporation Yard, Wallabout Basin, foot of Hewes st.

750 cubic yards to Corporation Yard, DeKalb ave. near Irving ave.

NO. 4, FOR FURNISHING AND DELIVERING 20,000 WOOD PAVING BLOCKS, TO BE DELIVERED TO CORPORATION YARD, WALLABOUT BASIN, FOOT OF HEWES ST.

The time for the completion of the contract in each case is on or before Dec. 31, 1918.

Security required in each case is 30 per cent. of the amount for which the contract is awarded.

Each bid must be accompanied by a deposit of not less than 1½ per cent. of the amount of the bid, in cash or certified check payable to the order of the Comptroller of The City of New York.

The bidder will state the price of each item or article contained in the specifications or schedules, per cubic yard or other unit of measure of the contract for which he desires to bid, by which the bids will be tested.

Delivery will be required to be made in such quantities and at such times as may be directed.

Blank forms may be obtained at the office of the Bureau of Highways, Room 502, No. 50 Court st., Brooklyn.

EDWARD RIEGELMANN, President.
Dated, June 29, 1918.
See General Instructions to Bidders on last page, last column, of the "City Record."

SEALED BIDS WILL BE RECEIVED BY the President of the Borough of Brooklyn, at Room No. 2, Borough Hall, Brooklyn, until 11 a. m., on

WEDNESDAY, JULY 17, 1918.

NO. 1, FOR REGULATING AND REPAVING WITH ASPHALT PAVEMENT ON THE PRESENT CONCRETE FOUNDATION THE ROADWAY OF 45TH ST. FROM 2D AVE. TO 3D AVE.

The Engineer's estimate is as follows:
20 linear feet old curbstone reset in concrete.
40 linear feet new curbstone set in concrete.
2 cubic yards concrete.
2,405 square yards asphalt pavement (5 years' maintenance).

3 square yards adjacent pavement to be relaid.
Time allowed, 20 consecutive working days.
Security required, \$1,700.

Each bid must be accompanied by a deposit of \$85 in cash or certified check made payable to the order of the Comptroller of The City of New York.

NO. 2, FOR REGULATING AND REPAVING WITH ASPHALT PAVEMENT ON THE PRESENT CONCRETE FOUNDATION THE ROADWAY OF 26TH ST. FROM 3D AVE. TO 4TH AVE.

The Engineer's estimate is as follows:
35 linear feet old curbstone reset in concrete.
40 linear feet new curbstone set in concrete.
2 cubic yards concrete.
2,295 square yards asphalt pavement (5 years' maintenance).

2 square yards adjacent pavement to be relaid.
Time allowed, 20 consecutive working days.
Security required, \$1,600.

Each bid must be accompanied by a deposit of \$80 in cash or certified check made payable to the order of the Comptroller of The City of New York.

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 contracts 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 Bureau of Highways, Room 502, No. 50 Court st., Brooklyn.

EDWARD RIEGELMANN, President.
Dated, June 21, 1918.
See General Instructions to Bidders on last page, last column, of the "City Record."

FIRE DEPARTMENT.

Proposals.

SEALED BIDS WILL BE RECEIVED BY the Fire Commissioner at his office 11th floor, Municipal Building, Manhattan, until 10.30 a. m., on

MONDAY, JULY 22, 1918.

FOR FURNISHING AND DELIVERING FIFTEEN (15) GASOLINE-PROPELLED AND PUMPING ENGINES.

The time allowed for the performance of the contract is the number of consecutive calendar days stated in the schedule which is part of the contract.

The amount of security required for the performance of the contract is 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 shall state the price of each item contained in the Engineer's estimate. The bids will be compared and the contract awarded at a lump or aggregate sum for the contract.

Bidders are requested to make their bids or estimates upon the blank form prepared by the President, a copy of which, with the proper envelope in which to enclose the bid, can be obtained upon application therefor at the office of the Engineer, Bureau of Engineering, Borough Hall, St. George, S. L., where plans and

specifications, including the specifications in the form approved by the Corporation Counsel, may be seen and other information obtained.

CALVIN D. VAN NAME, President.
Dated, July 9, 1918.

See General Instructions to Bidders on last page, last column, of the "City Record."

11 square yards of asphalt block pavement, including 6-inch concrete foundation, restored, 40 cubic yards of steam cinders, furnished and spread.

The time for the completion of the work and the full performance of the contract is eighteen (18) consecutive working days.

The amount of security required for the performance of the contract is 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 shall state the price of each item contained in the Engineer's estimate. The bids will be compared and the contract awarded at a lump or aggregate sum for the contract.

Bidders are requested to make their bids or estimates upon the blank form prepared by the President, a copy of which, with the proper envelope in which to enclose the bid, can be obtained upon application therefor at the office of the Engineer, Bureau of Engineering, Borough Hall, St. George, S. L., where plans and

specifications, including the specifications in the form approved by the Corporation Counsel, may be seen and other information obtained.

CALVIN D. VAN NAME, President.
Dated, July 9, 1918.

See General Instructions to Bidders on last page, last column, of the "City Record."

DEPARTMENT OF PUBLIC CHARITIES.

Proposals.

SEALED BIDS WILL BE RECEIVED BY the Department of Public Charities, 10th floor, Municipal Building, Borough of Manhattan, until

10.30 o'clock a. m., on

MONDAY, JULY 22, 1918.

FOR FURNISHING ALL THE LABOR AND MATERIALS REQUIRED FOR REPAIRS AND REPLACEMENTS TO ROOFS, GUTTERS, LEADERS, ETC., OF BRENNAN, SCHUYLER AND JONES HALLS AT THE CITY HOSPITAL, BLACKWELLS ISLAND, THE CITY OF NEW YORK.

The time allowed for doing and completing the entire work and the full performance of the contract is forty-five consecutive working days.

The security required will be One Thousand Dollars (\$1,000).

The deposit accompanying the bid shall be five per cent. (5%) of the amount of security required.

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 Contract Clerk of the Department, 10th floor, Municipal Building, Manhattan, where specifications may be seen.

BIRD S. COLER, Commissioner.
Dated, July 10, 1918.

See General Instructions to Bidders on last page, last column, of the "City Record."

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 will 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 building by any tenant free, for rent or otherwise, excepting the necessary watchman 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 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 the 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 walls, 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 Bureau of Sewers that the work has been properly 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 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 money 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 date of possession, and the successful bidder will provide and furnish all materials or 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 furring, plaster, chimneys, projecting brick, etc., on the faces of such party walls are to be taken down and removed. The walls shall be made permanently self-supporting, beam holes, etc., bricked up, and the wall pointed and made to exclude wind and rain and present a clean exterior. The roofs 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 relocated 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 relocated 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 release 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.

NOTICE TO CONTRACTORS.

GENERAL INSTRUCTIONS TO BIDDERS ON WORK TO BE DONE FOR, OR SUPPLIES TO BE FURNISHED TO THE CITY OF NEW YORK.

The person or persons making a bid for any service, work, materials or supplies for The City of New York, or for any of its departments, bureaus or offices, shall furnish the same in a sealed envelope, indorsed with the title of the supplies, materials, work or services for which the bid 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 bids 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 shall contain the name and place of residence of the person making the same, and the 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 a bid for the same purpose, and is in all respects fair and without collusion or fraud and that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer or employee 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, which it relates, or in any portion of the profits thereof. The bid must be verified by the oath, in writing, of the party or parties making the bid that