

NOTICE OF ADOPTION OF FINAL RULE

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notice is hereby given pursuant to the authority vested in the Commissioner of the Department of Environmental Protection (“Department” or “DEP”) by Section 1043(a) of the New York City Charter and section 24-346 of the Administrative Code of the City of New York that the Department promulgates and adopts amendments to its rules governing and restricting the use and supply of water to clarify language, update references to national standards and local codes, and to reflect changes in technology and practice related to the installation, repair, and maintenance of water services and service connections, and to the selection, sizing, and use of water meters. These amendments also implement Local Law 47 for the year 2016 by establishing DEP’s authority to deny a permit application and to revoke, suspend, cancel, or terminate any previously issued permit due to the non-payment of civil penalties.

Statement of Basis and Purpose

The New York City Department of Environmental Protection (“DEP” or “Department”) is amending its rules governing and restricting the use and supply of water (Title 15, chapter 20 of the Rules of the City of New York (“RCNY")), to clarify language, update references to national standards and local codes, and to reflect changes in technology and practice related to the installation, repair, and maintenance of water services and service connections, and to the selection, sizing, and use of water meters. These amendments also implement Local Law 47 for the year 2016 by establishing DEP’s authority to deny a permit application and to revoke, suspend, cancel, or terminate any previously issued permit due to the non-payment of civil penalties.

These changes reflect DEP’s efforts to improve the clarity of the rules and eliminate outdated rules and specifications. The amendments were developed partly in response to recommendations from oversight agencies.

Additionally, working with the City’s rulemaking agencies, the Law Department, the Mayor’s Office of Management and Budget, and the Mayor’s Office of Operations conducted a retrospective review of the City’s existing rules, identifying rules that should be repealed or modified to reduce regulatory burdens, increase equity, support small businesses, and simplify and update content to help support public understanding and compliance. In light of this review, DEP is making various plain language changes in chapter 20 of title 15 of the RCNY to help make it easier to read and understand.

In addition to the replacement of outmoded terms with current terms, the following amendments are being made:

- Subdivision (a) of Section 20-01 is amended to add meter attachment to the list of purposes for which a permit is required and to clarify that permits are not transferable.
- A new subdivision (b)(4) is added to Section 20-01 to provide for the denial of permit applications, and the revocation, suspension, cancellation, or termination of any previously issued permit, for unpaid fines.
- Subdivision (c) of Section 20-01 is amended to clarify the appeal process for Licensed Plumbers who have been cited for violating DEP rules.
- Subdivision (a) of Section 20-02 is amended to replace an outmoded plumbing term with a current term, as well as to clarify the conditions under which two or more tax lots may not share one service connection.
- Subdivision (b) of Section 20-03 is amended to clarify metering requirements for internal water mains, and to clarify an existing term.
- Subdivisions (f), (h), and (q) of Section 20-03 are amended to include more current technical standard references for pipe materials, mechanical piping joints and backfill requirements for service line excavation.
- Subdivision (x) of Section 20-03 is amended to delete the requirement that the meter permit be returned when the property owner does not allow the installation of the meter. This change is being made based on suggestions from the plumbing industry.
- Subdivisions (a), (b), and (c) of Section 20-04 are amended to provide updated standard references. Subdivision (c) is also amended to add a validity period for the approval of the Cross Connection Control Review.
- Subdivisions (d) and (e) of Section 20-04 are amended to clarify the installation requirements, initial testing requirements, and annual testing requirements for Backflow Prevention Devices; and to simplify the language of the rule by splitting the initial and annual testing requirements across 2 subdivisions.
- A new subdivision (i) is added to Section 20-04 to provide requirements for backflow device removal, decommission, relocation, or swapping.
- Subdivision (a) of Section 20-05 is amended to clarify internal water main backflow and metering requirements and to replace outdated and/or confusing plumbing terms with current terms.

- Subdivision (c) of Section 20-05 is amended to specifically reference American Water Works Association standards.
- Subdivision (d) of Section 20-05 is amended by deleting several paragraphs that repeat information already contained in an American Water Works standard, thereby simplifying the language of this rule. This subdivision is also amended to clarify DEP's ability to require meter manufacturers to submit information about the lead content of their products and to include a barcode tag that speeds processing of meter information at the time of a meter replacement or installation.
- Subdivisions (e) and (i) of Section 20-05 are amended to clarify bolt specifications, locations of electromagnetic meters and types of approved inlet and outlet valves.
- Subdivision (j) of Section 20-05 is amended to clarify that unmetered bypasses on service lines are prohibited, but that an owner such as a hospital that wishes to avoid water shutdown disruptions can install a metered bypass or have a set of two meters in parallel allowing one to remain in service while the other is replaced.
- Subdivision (s) of Section 20-05 is amended to clarify that electronic attachments used to obtain pulse data for a Building Management computer from a DEP meter are not a source of consumption data for billing purposes.
- Subdivision (t) is added to Section 20-05 to clarify that meters are the property of DEP and must be returned upon request. Subdivision (t) also clarifies that DEP will allow photographs to be submitted as proof that the meter has been replaced, unless DEP formally requests for the actual meter to be returned.
- Subdivision (a) of Section 20-05 is amended to clarify internal water main backflow and metering requirements, to require replacement of lead or galvanized metal water service pipes prior to installation of a water meter, and to replace outdated and/or confusing plumbing terms with current terms.
- Subdivision (a) of Section 20-07 is amended to specifically include internal water mains as subject to DEP inspection.
- Subdivision (b) of Section 20-07 is amended to provide that Licensed Master Plumbers must request inspections and to simplify the language detailing the types of jobs and structures for which such a request for inspection is required.
- Subdivision (i) is added to Section 20-07 to add a water sampling test requirement for a job requiring the addition of taps to a new internal water main.
- Subdivision (a) of Section 20-08 is amended to remove archaic language that might prevent modern automatic faucets from using the flow of water to charge their battery.

- Subdivision (b) of Section 20-08 is amended to extend the hours of use of hydrant permits and to clarify the requirement for a backflow preventer for connections to a hydrant for purposes other than firefighting.
- Section 20-10 (the Glossary) is amended by adding five new definitions, revising 11 definitions, and removing two definitions.
- The Appendix is amended by replacing 8 existing figures with 4 new figures.

A public hearing regarding the amendments was held on December 31, 2020. Based on comments received at the hearing or submitted in writing, the following changes are being made:

- The repeal of the suction tank section (20-04(h)) is being reversed and the section left in place.
- A validity period for Cross Connection Plan approvals has been added to section 20-04
- Section 20-05 is amended to allow photographs to be submitted as proof of meter replacement, unless DEP requests for the actual meter to be returned.
- A definition has been added in section 20-10 for the term "connection".

The term “shall” indicates a requirement, the term “should” indicates a recommendation for good waterworks practice and the term “may” is permissive.

New material is underlined.

[Deleted material is in brackets.]

Chapter 20 of Title 15 of the Rules of the City of New York is amended to read as follows:

Section 1. Subdivision (a) of Section 20-01 of Title 15 of the Rules of the City of New York is amended to read as follows:

(a) *General information.* Subject to the provisions of this chapter, permits will be issued for the following purposes upon receipt of proper applications and permit fees:

Hydrant, Use of

Meter Accuracy Test

Meter Attachment

Meter Disconnect for Repair or Change of Piping (“Break Seal”)

Meter Setting, New, Replacement or Additional

Meter Testing and Repair Company

Plug, Tap/Wet Connection (Termination of Service)

Service [Pipe] Connection, Relay of

Service [Pipe] Connection, Repair of

Service [Pipe] Connection, Thawing of

Tap Installation

Tap Installation and Plug of Prior Tap

Tap Location, Electrical Indicator

Wet Connection Installation (including Internal Water Main)

Wet Connection Installation and Plug of Prior Tap or Wet Connection

All work under a permit [shall] must be performed by the [permittee] permit holder and/or persons directly employed and supervised by the [permittee] permit holder. Permits are not transferable and valid for the work described thereon.

§ 2. Subdivision (b) of Section 20-01 of Title 15 of the Rules of the City of New York is amended by adding a new paragraph (4) to read as follows:

(4) (i) The Commissioner may deny any permit application, and may revoke, suspend, cancel, or terminate any previously issued permit, where any party related to the work, including but not limited to the contractor, building owner, or licensed master plumber, has docketed, unpaid civil penalties imposed by the New York City Environmental Control Board or a tribunal of the Office of Administrative Trials and Hearings for violations of sections 20-01, 20-02, 20-04, 20-05, 20-06, or 20-08 of these Rules or sections 24-308, 24-337 or 24-339 of the Administrative Code. (ii) In determining whether to exercise the power granted by subparagraph (i) of this paragraph, the Commissioner shall consider whether such applicant or permittee has other unpaid penalties, taxes or other debt owed to the city; the amount of the unpaid civil penalties imposed by the environmental control board or a tribunal of the office of administrative trials and hearings; whether the violation underlying the unpaid penalties imposed by the environmental control board or a tribunal of the office of administrative trials and

hearings was issued by the Department of Environmental Protection or another agency; whether such violation is one of a series of violations returnable to such board or tribunal and the nature of the underlying violation; whether the unpaid civil penalties imposed by the environmental control board or a tribunal of the office of administrative trials and hearings were imposed pursuant to a finding of default that was subsequently vacated or whether the applicant or permittee has made a request to vacate such default and obtain a new hearing pursuant to the rules of such board or tribunal; or any other consideration the commissioner deems appropriate.

§ 3. Paragraph (3) of subdivision (c) of Section 20-01 of Title 15 of the Rules of the City of New York is amended to read as follows:

(3) Upon review of the appeal, the Commissioner or his/her designee may, in his/her discretion, grant or deny the petition. Appeals shall be processed within thirty (30) calendar days of receipt of such appeal. If the Department [shall] fails to process an appeal within thirty (30) calendar days the appeal shall be granted, provided that the petitioner has responded to all requests for information submitted by the Department.

§ 4. The title of subdivision (e) of Section 20-01 of Title 15 of the Rules of the City of New York is amended to read as follows:

(e) *Permits at [job] work site.*

§5. Subdivision (a) of Section 20-02 of Title 15 of the Rules of the City of New York is amended to read as follows:

(a) *Separate supply.* A separate corporation stop (tap) and service [pipe] connection shall be installed for each building supplied with City water, except for buildings that have service [pipes] connections supplied by internal water mains as described in 15 RCNY § 20-03(b). One tax lot cannot be supplied with water from another tax lot. [Siamese] Y-type corporation stops (taps) or service [pipes] connections on the inlet side of the main house control valve or upstream of the backflow prevention device are prohibited. A service [pipe]

connection connected to the City main by a T-connection, or by any means other than a corporation stop (tap) or a wet connection, shall be controlled by a gate valve placed in the service [pipe] connection, and located within two (2) feet of the point of connection to the main. Any property that meets any of the following conditions must be in full compliance with this subdivision:

- (1) Any property constructed after January 1, 1992.
- (2) A sale of property either supplying City water to another tax lot or being supplied with City water from another tax lot;
- (3) The installation of a new service connection and/or renovation of an existing service connection where such installation or renovation shall constitute a substantial improvement to or alteration of the property, as defined in § 24-334(2) of the administrative code of the City of New York;
- (4) The renovation of a property supplying City water to another tax lot or being supplied with City water from another tax lot where such renovation shall constitute a substantial improvement to or alteration of the property, as defined in § 24-334(2) of the administrative code of the City of New York; and
- (5) Conversion of a property's billing from metered to flat-rate or flat-rate to metered.

Notwithstanding the foregoing provisions of this subdivision, any property that receives a written waiver from the Department dated after January 1, 2021 shall be considered in full compliance with this subdivision.

§ 6. The title of subdivision (f) of Section 20-02 of Title 15 of the Rules of the City of New York is amended to read as follows:

(f) *Permits at [job] work site.*

§ 7. Subdivision (g) of Section 20-02 of Title 15 of the Rules of the City of New York is amended to read as follows:

(g) *Plugs.* If an approved excavation for the removal or destruction of a single corporation stop (tap) reveals that the service [pipe] connection is supplied by two (2) or more corporation stops (taps), the Licensed Master Plumber making the excavation [shall] must plug or destroy the additional corporation stops (taps). The Department will make its records relative to the location of any corporation stop (tap) to be plugged or destroyed available to the licensed plumber. The Licensed Master Plumber shall be solely responsible for locating the corporation stop (tap). A separate permit will be required for each corporation stop (tap) destroyed.

§ 8. Paragraph (5) of subdivision (h) of Section 20-02 of Title 15 of the Rules of the City of New York is amended to read as follows:

(5) Three-way connections to be abandoned [shall] must have all piping disconnected and removed from the branch hub of the three-way, and an approved plug inserted into the hub. The plug [shall] must be anchored to the main as directed by the Department. All work [shall] must be done by a Licensed Master Plumber, and the [permittee] permit holder [shall] must pay all costs associated with shutting the main.

§ 9. Paragraphs (1), (2), and (3) of subdivision (k) of Section 20-02 of Title 15 of the Rules of the City of New York are amended to read as follows:

(1) *Fire connections.* The Department of Buildings shall determine the size and type of all fire water service [pipes] connections to be installed. The size of

corporation stops (taps) or wet connections for fire service [pipes] connections shall be subject to the approval of the Department.

(2) *Combined service [pipes] connections/dual fire and domestic service [pipes] connections*. A connection for [domestic] combined purposes may be made from either a fire service [pipe] connection or a domestic service connection, only upon approval of the Department of Buildings. For such installations, valve(s) and meter(s) must be installed as required by §20-05 of these Rules.

(3) *Prohibitions*. Fire service [pipes] connections shall not be cross-connected with any system of piping except as described in §20-02(~~l~~k)(2), in accordance with the approved water system by the Department.

§ 10. Paragraphs (1), (2), and (3) of subdivision (m) of Section 20-02 of Title 15 of the Rules of the City of New York are amended to read as follows:

(1) When a [permittee] permit holder fails to provide a safe and adequately sized excavation for installation of a corporation stop (tap) or wet connection on the date and time for which an appointment has been scheduled, the installation will not be made and the [permittee] permit holder will be required to schedule a new appointment.

(2) When a [permittee] permit holder fails to have a completed service [pipe] connection installation or plug ready for inspection on the date and time for which an inspection has been scheduled, the [permittee] permit holder will be required to schedule a new appointment.

(3) If a [permittee] permit holder must leave an excavation open for a subsequent corporation stop (tap)/ wet connection [installation] or service [pipe] connection inspection, the excavation [shall] must be made safe, in accordance with DOT requirements.

§ 11. Subdivision (q) of Section 20-02 of Title 15 of the Rules of the City of New York is amended to read as follows:

(q) *Shut-off of tap by licensed master plumber.* A Licensed Master Plumber must secure a permit to open or shut a tap controlling a service [pipe connected] connection to a City water main for any repair, replacement or installation. If it is necessary to shut off the water main while repairing, replacing or installing a service [pipe] connection, the Licensed Master Plumber [shall] must immediately notify the Department. The shut off [shall] must be made only by the Department, and the [permittee] permit holder must pay all costs associated with shutting off the main. If a property is vacant and sealed longer than one year, the property owner must have the tap destroyed or plugged and the service line plugged. If the property owner fails to take this action, the Department may perform the work upon written notice to the property owner at the mailing address on file with the Department and assess the cost to the property owner.

§ 12. Paragraph (1) of subdivision (a) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(1) A Licensed Professional Engineer, Registered Architect or Licensed Master Plumber may obtain advance conceptual design approval for corporation stops (taps), wet connections, service [pipes] connections or relays by submitting a conceptual design drawing to the Department and paying the required fee. Information on the related water demand, existing service material, length of service [pipe] connection, proposed size of the corporation stop (tap)/ wet connection, type of service [pipe] connection and fire sprinkler [heads] and/or standpipe systems to be utilized must also be provided.

§ 13. Paragraphs (1) and (2) of subdivision (b) of Section 20-03 of Title 15 of the Rules of the City of New York are amended to read as follows:

(1) Design stage approval for internal water mains [shall] must be obtained from both the Department and the Department of Buildings. Approval for a meter [shall] must be obtained from the Department's Bureau of Customer Services and for [RPZ] Backflow Prevention Devices settings from the Department's Bureau of Water and Sewer Operations (Cross Connection Control Unit). Requests for approval [shall] must be made by a New York State-Licensed Professional Engineer or Registered Architect.

(2) Internal water mains [shall] must have, in addition to any meters required by §20-05 (a), [an] approved [meter] hydrants and backflow prevention devices in a meter vault or above-ground enclosure ("hot box") installed inside the property within two (2) feet of the property line. After installation, such hydrants and backflow prevention devices will be owned, maintained and repaired by the property owner while meters at the property line will be owned, maintained, and repaired [and read] by the Department. [If a private street in a development remains privately owned, then the meter at the property line shall be used for billing and any individual meters in the development shall be deemed the owner's submeters. If the City assumes possession of a private street in a development, then the] The meter at the property line shall be used solely for monitoring purposes and any individual meters in the development shall be used for billing unless the tax lot contains only one building in which case the property line meter will be used for billing.

§ 14. Subparagraphs (v) and (vi) of paragraph (3) of subdivision (b) of Section 20-03 of Title 15 of the Rules of the City of New York are amended to read as follows:

(v) Taps and wet connections to internal water mains [shall] must be installed by the Department. [The service pipes] Service connections [shall] must be installed by a New York City-Licensed Master Plumber with design stage approval to perform the work and must be inspected by the Department.

- (vi) Internal water mains must be disinfected in accordance with American Water Works Association (AWWA) [standards] Standard C651-14 for disinfection of water mains, prior to being accepted for individual service connections or being placed into service. A water quality sample result acceptable to the Department must be obtained for internal water mains prior to placing them into service or issuing design stage approval for connection to such internal water mains.

§ 15. Paragraph (1) of subdivision (d) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

- (1) [Minimum acceptable] Acceptable sizes of corporation stops (taps), wet connections and service [pipes] connections that provide domestic water supply shall be determined by the Department sizing tables. (See Appendix Tables #1, #2 and #3.)

The minimum tap size shall be three-quarter (¾) inch and the service connection shall be at least one (1) inch in diameter.

§ 16. Paragraph (5) of subdivision (f) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

- (5) All service [pipes] connections [shall] must conform to the most recent revision of the following standards, except that all service [pipes] connections, corporation stops, tail pieces, nuts and other fittings [shall] must not have a lead content that [shall not] exceeds 0.250%:

- (i) [Department of Citywide Administrative Services, division of Municipal Supply Services 32-P-3 Standard for Brass and Copper.

(ii) Department of Citywide Administrative Services, Division of Municipal Supply Services 32-T-1 Standard for Copper Tubing] New York City Plumbing Code section PC 605, except that above-ground, copper indoor service [pipe] connection four (4) inches or smaller, including the meter setting and piping for any backflow prevention device, [shall] must be Type K or Type L copper.

[(iii)] (ii) For three (3) inch and four (4) inch diameter iron pipe: ANSI/AWWA C151/A21.51, Class 52, Standard for Ductile Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

[(iv)] (iii) For greater than four (4) inch diameter pipe: ANSI/AWWA C151/A21.51, Class 56, Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

§ 17. Subdivision (h) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(h) *Joints*. Ductile iron [pipe] piping [shall] must have mechanical or push on joints with field-lock gaskets. Rodding of fittings, when necessary, [shall] must be in accordance with [DDC] NYC DEP Standard Sewer and Water Main Specifications (July 2014 or later editions).

§ 18. Subdivision (j) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(j) *House Control Valves*. House control valves, which [shall] must be made of material similar to the corresponding service [pipes] connections, [shall] must be

gate OS&Y type with the exception of those between the sizes of three-quarter ($\frac{3}{4}$) inch and two (2) inches, which may be full port ball valves. The lead content of such valves [shall] must not exceed 0.25[0]% as determined by current NSF International Standard/American National Standard NSF/ANSI 61. The house control valve [shall] must be placed [in] on the service [pipe] connection inside the building within two (2) feet of the building wall, and [shall] must be located where it is accessible at all times. All valves [shall] must be designed for a 150 psi minimum working pressure. For fire, sprinkler, and/or standpipe service [pipes] connections, and for any service [pipe] connection which supplies sprinkler heads, the house control valve [shall] must be an OS&Y Valve [or an indicating valve approved by the Department of Buildings]. Notwithstanding the preceding sentence, for fire or combined service [pipes] connections two (2) inches or smaller, the house control valve may be an OS&Y valve or a UL/FM-approved full-port ball valve approved by the Department of Buildings.

§ 19. Paragraphs (1) and (2) of Subdivision (k) of Section 20-03 of Title 15 of the Rules of the City of New York are amended to read as follows:

(1) Curb valves [shall] must be full port ball valves or non-rising stem gate valves designed for a minimum of 150 psi of working pressure.

(2) Curb valves [shall be required] must be included on all [domestic] water service [pipes larger than two (2) inch in size and on any water service pipe that provides for fire protection] connections that supply all systems. All curb valves [shall] must be set in the service [pipe] connection in the sidewalk area, and [shall] must be located eighteen (18) inches from the curb line or other such locations as may be approved by the Department.

§ 20. Subdivision (n) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(n) *Service [pipe] connection depth.* All service [pipes] connections [shall] must be installed at a depth of at least three and one-half (3 ½) feet, no more than six (6) feet below ground, unless a written waiver is obtained from the Department. Where a service [pipe] connection is installed with less than three and one-half (3 ½) feet of cover, it must be insulated and protected in accordance with the requirements described in §20-03(y). A service [pipe] connection [shall] must not be laid within six (6) inches of any other sub-surface structure, conduit or pipe. A service [pipe] connection [shall] must not be laid directly below, and parallel [with,] within six (6) inches of any other sub-surface structure, conduit or pipe.

§ 21. Subdivision (o) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(o) *Service in construction trench.* Service [pipes] connections laid in a construction trench [shall] must be adequately supported and protected from settlement (deflection).

§ 22. Subdivision (q) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(q) *Backfill.* Backfill around and one foot over a service [pipe] connection [shall] must be of clean earth, free of stones, and [shall] must be carefully tamped and compacted in accordance with the latest NYC DOT [specifications] Standard Highway Specifications (2015 or later editions). The remainder of the backfill [shall] must be free of stones larger than three (3) inches in diameter, and [shall] must be satisfactorily compacted either by tamping, flushing or both. Where tunneling has been permitted, the backfilling of the tunnel portion [shall] must be well compacted with clean earth fill free of stones.

§ 23. Subdivision (r) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(r) *Test of service [pipe]connection.* Each new or repaired service [pipe] connection shall be subject to a pressure test performed under street main pressure. This test [shall] must be conducted by the Licensed Master Plumber in the presence of a Department inspector. All service [pipes] connections and [appurtenances] accessories [shall] must remain uncovered for the duration of the test for observance of leakage.

§ 24. Subdivision (s) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(s) *Service [pipe] connection repairs.* A new service [pipe] connection must be installed where more than one-half ($\frac{1}{2}$) of an existing service [pipe] connection is in need of a repair or when any repairs are required and the existing service [pipe] connection is lead, galvanized steel or galvanized iron. All repairs must conform with the standards described in [§20-03 of these Rules] this section.

§ 25. Subdivision (v) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(v) *Protection of service [pipe] connection and house control valve.* (1) The property owner, and not the Department, is responsible for:

- (i) Preventing physical deterioration of the service, curb valve, house control valve or distribution pipe which may damage a meter or prevent its maintenance or replacement[.];
- (ii) [The owner shall be responsible for] Repairing or replacing equipment, service or distribution piping to allow maintenance, proper operation or replacement of the meter[.]; and
- (iii) [The owner, and not the department, is responsible for] The maintenance of the service and distribution pipe and its associated fittings and equipment.

(2) The meter setting is the responsibility of the Department.

§ 26. Subdivision (x) of Section 20-03 of Title 15 of the Rules of the City of New York is amended to read as follows:

(x) *Installation of a meter on unmetered properties whenever a domestic service [pipe] connection is replaced, repaired or relaid.* Whenever a domestic or combined service connection for an unmetered property is installed, replaced, repaired or relaid, a water meter [shall] must be installed to cover the entire premises in accordance with §20-05 of these Rules. When the work is not performed under emergency conditions, DEP will indicate on the permit that the property is unmetered. When the service [pipe] connection relay, repair or replacement occurs on an emergency basis, the Licensed Master Plumber may install a set of meter inlet and outlet valves and a spool piece of a length similar to the displacement meter for that size service if the Licensed Master Plumber does not have a meter available for installation at the time of the emergency visit. [If the property owner will not allow the installation of a water meter as part of the service replacement, installation, repair or relay, the Licensed Master Plumber must return the meter permit completed but include a statement that the owner would not allow the installation of a meter.]

§ 27. Subdivision (a) of Section 20-04 of Title 15 of the Rules of the City of New York is amended to read as follows:

(a) *Backflow prevention devices. Air Gap, Reduced Pressure Zone [devices] Assemblies (RPZs), and Double Check Valve Assemblies (DCVs) are approved backflow prevention devices (BFPs). Double Check Detector Assemblies (DCDAs) and Reduced Pressure Detector Assemblies (RPDAs), which are an outgrowth of DCVs, can be used only on the fire water service. [Backflow prevention devices] BFPs [shall] must be installed to prevent possible backflow[/backsiphonage] from a commercial property or dwelling*

unit into a City water main, private water main, or internal water main (see §20-05 (a) (2) (ii) of these Rules). A property owner [shall] must install an approved [backflow prevention device] BFP in every water service [pipe] connection that has a potential or actual cross connection hazard, as determined by the Commissioner.

§ 28. Subdivision (b) of Section 20-04 of Title 15 of the Rules of the City of New York is amended to read as follows:

(b) *Backflow prevention device requirements.* [Backflow prevention devices] Containment backflow prevention assemblies shall be installed on the service line upon entrance into the property, to address actual or potential hazards, as follows:

DEP CONTAINMENT REQUIREMENT

DEGREE OF HAZARD	PROTECTION REQUIRED
Hazardous [Facilities]	Air Gap or Reduced Pressure Zone [Device] <u>Assembly</u>
Aesthetically Objectionable	Double Check Valve Assembly
Non-Hazardous [Facilities] with Hazardous Fixtures ([such as] <u>large/chemically</u> treated boilers, cooling towers, etc.)	Double Check Valve Assembly (Provided that internal protective devices are installed for [the] <u>these</u> hazardous fixtures in accordance with Department of Building requirements).
Non-Hazardous Facilities	[None] <u>Internal Plumbing Control</u>

Subject to review by the Department, the degree of hazard shall be [determined] assessed by the property owner's New York State Licensed Professional Engineer, or Registered Architect [or Licensed Master Plumber] in accordance with [guidelines] regulations established by the New York State Department of Health (NYSDOH). Refer to the latest

Supplement to the NYSDOH Handbook for Cross Connection Control, as revised by DEP.

§ 29. Subdivision (c) of Section 20-04 of Title 15 of the Rules of the City of New York is amended to read as follows:

(c) *Cross connection control reviews.* A Cross Connection Control Review [shall be] is required prior to approval of a permit application for installation of a corporation stop (tap) or wet connection that will be used to supply water to a property that poses a backflow hazard. A Cross Connection Control Review [shall] is also [be] required prior to installation of a wet connection. Approval of Cross Connection submissions are for backflow prevention devices only and [shall] does not constitute approval of the meter setting or other aspects of the water service design. Cross Connection Control Reviews are valid for two (2) years from the date of approval.

§ 30. Subdivision (d) of Section 20-04 of Title 15 of the Rules of the City of New York is amended to read as follows:

(d) *Installation of backflow prevention devices and initial testing requirements.*

(1) Where the Commissioner determines that a facility poses a potential or actual hazard to the City Water Supply, he or she [shall] must direct the [building] property owner [or customer] to install an approved backflow prevention device in the service [pipe] connection.

(2) A [Licensed Master Plumber] Professional Engineer or Registered Architect [shall] must submit an application and installation plans for a backflow prevention device to the Department [of Buildings] for [a permit or an] approval to install a RPZ or a Double Check Valve Assembly along with the appropriate filing fee. After plan approval, a Licensed Master Plumber must submit an application to the Department of Buildings for a work permit to install a RPZ

or a Double Check Valve Assembly. [RPZ's] RPZs and Double Check Valve Assemblies [shall] must be installed in accordance with plans approved by the Department, and metering shall be permitted from the Department's Bureau of Customer Services, prior to work. A [Licensed] Professional Engineer or Registered Architect and a Licensed Master Plumber [shall] must inspect and certify that the completed installation conforms to the plans approved by the Department and is in proper working order by submitting an initial test report (From Gen 215-B) for each device to the Department within 30 days of testing the backflow prevention device.

- (3) A [building] property owner [or customer] who fails [of] to install a backflow prevention device as directed by the Commissioner or fails to submit an initial test report to the Department within 30 days of testing of the RPZs or Double Check Valve Assemblies [shall be] is subject to the issuance of [notices of violation] summonses, cease and desist orders, other civil and criminal actions and proceedings, and such fines, penalties and other enforcement measures as may be imposed pursuant to section 24-346 of the Administrative Code, including but not limited to the termination of the water supply to the [building] property or to any portion thereof or a facility therein which the [Environmental Control Board] Office of Administrative Trials and Hearings or the Commissioner may deem necessary to prevent or alleviate any hazard to the City Water Supply.
- (4) The [customer] property owner [shall] must pay any fees which the New York City Water Board may establish and publish in the Water and Wastewater Rate Schedule in connection with the termination or restoration of Water service to the [customer] property owner.

§ 31. Subdivision (e) of Section 20-04 of Title 15 of the Rules of the City of New York is amended to read as follows:

(e) *Backflow prevention device testing requirements after initial testing.* (1) [Each RPZ or Double Check Valve must be tested upon installation, device repair, at least once annually, and as otherwise required by the Building or Health Codes. Testing shall be performed by a backflow preventer tester who is certified by the New York State Department of Health and employed by a Licensed Master Plumber. An initial test report shall be submitted to the Department upon installation and testing of the RPZ or Double Check Valve. Within 12 months of the date on which the initial test report is submitted, an annual test report certifying that the backflow prevention device is operating properly shall be submitted to the Department. Every annual test report thereafter shall be submitted within 12 months of the date the last annual test report was submitted] In addition to the initial test required in subdivision (d), each RPZ or Double Check Valve Assembly must be tested upon device repair or device replacement, at least once annually, and as otherwise required by the Building or Health Codes.

(2) [Defects in any device tested shall be repaired within thirty (30) days, and the repair shall be followed by a retest. Retest results shall be submitted to the Department within thirty (30) days of completion of the repair] Within 12 months of the date on which the initial test report is submitted, an annual test report certifying that the backflow prevention device is operating properly must be submitted to the Department. Every annual test report thereafter must be submitted within 12 months of the date the last annual test report was submitted.

(3) Failure of a [building] property owner [or customer] to provide an annual test report, or a test report otherwise required by this section, certifying that an existing backflow prevention device installed pursuant to this section or otherwise is properly operating [shall be] is a violation of these rules and subjects the property owner to the issuance of a summons.

(4) Testing must be performed by a backflow preventer tester who is certified by the New York State Department of Health and employed by a Licensed Master Plumber.

(5) Any submitted RPZ or Double Check Valve Assembly test report must be complete originals. Initial test reports must include the Registered Architect or Professional Engineer stamp and the Licensed Master Plumber seal. Annual test reports must include the Licensed Master Plumber seal.

(6) Initial or annual test reports that do not show a properly working device will not be accepted by the Department. Defects in any device tested must be repaired within thirty (30) days, and the repair must be followed by a retest. Retest results must be submitted to the Department within thirty (30) days of completion of the repair.

(7) Test reports must be submitted as specified at the bottom of Form GEN215-B.

§ 32. Section 20-04 of Title 15 of the Rules of the City of New York is amended by adding a new subdivision (i) to read as follows:

(i) Backflow prevention assembly decommission/swapping/removal

(1) Containment backflow prevention assemblies shall not be ineffective, by-passed, made inoperative, or removed without a prior approval from the Department.

(2) A property having no auxiliary (untreated) water system is eligible to decommission the containment RPZ assembly that may not be required by current DEP regulations and local codes provided that:

(i) A Professional Engineer or Registered Architect shall inspect the property owner/customer's plumbing system(s), to confirm that no cross-connections are present, and submit an elaborated decommission report and plans on the backflow prevention assembly will be physically replaced with proper containment that is deemed adequate and effective for the ongoing degree of associated hazard.

(ii) The premises shall be surveyed by the Department authorized inspectors to determine the presence and prevalence of potential hazards to ensure the water system protection is in accordance with the Program requirements.

(3) A prior approval of the Department shall be obtained before a containment BFP assembly is removed, by-passed, relocated, replaced (swapped) or other assembly substituted.

(i) Removal:

The use of an assembly may be discontinued and removed from service upon presentation of sufficient evidence to the Department to verify that a health hazard no longer exists. A Professional Engineer or Registered Architect shall submit an exemption request for the containment backflow prevention assembly to the Department. A property owner who removes a backflow prevention assembly without the approval of the Department is in violation of these rules and is subject to the issuance of a summons.

(ii) Relocation:

An assembly may be relocated following confirmation/approval by DEP that the relocation will continue to provide the required level of protection and satisfy the installation requirements. Testing and certification of the relocated assembly shall be required upon relocation.

(iii) Replacement (Swapping):

An assembly may be removed for replacement (swapping) or repair provided that the water use is discontinued until the replaced assembly is installed or repair is completed and the assembly is returned to service. All replaced assemblies shall be commensurate with the degree of health hazard involved. Water use may be continued if the service connection is equipped with another backflow protection approved by the Department. Testing and certification of the replaced/repared assembly shall be required upon replacement/repair. Lead-Free assembly shall be installed for the human domestic consumption.

§ 33. The title of Subdivision (a) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(a) [~~Placement~~] Placement–General.

§ 34. Paragraph (2) of Subdivision (a) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(2) (i) Each building [shall] must have one (1) meter on each service [pipe] connection supplying the building set at the point of entry. However, the Department may issue a variance or approval allowing two (2) or more separate meters to serve residential and non-residential (or rate-eligible and ineligible) occupancies [on] in the same building or lot to comply with a rate or billing program established by the New York City Water Board.

(ii) Properties with internal water mains must have a meter and backflow prevention devices in a vault or above-ground enclosure located at the property line at each connection to the city water system.

(iii) Unmetered properties with a lead or galvanized metal service pipe shall not be permitted to install a water meter except when accompanied with complete replacement of the lead or galvanized service line.

§ 35. Subparagraphs (i) and (ii) of paragraph (5) of subdivision (a) of Section 20-05 of Title 15 of the Rules of the City of New York are amended to read as follows:

(i) Fire service [pipes] connections:

Fire service [pipes] connections in premises supplied with City water [shall] must have an approved [double detector check] backflow prevention assembly. It can be either a double check detector or reduced pressure

detector assemblies. Fire service [pipes] connections of two-and-one-half (2½) inches in diameter [shall] must be provided with [meter] valves, and fittings required for a three (3) inch service [pipe] connection. Fire service [pipes] connections supplying private hydrants [shall] must have fire service [meters] valves and fittings.

- (ii) Service [pipes] connections supplying both domestic and fire protection uses: DOB-approved combined services three inches (3”) or larger in diameter [shall] must have either a single fire [service] rate meter at the head of the service or, if separation between domestic and fire service piping branches occurs within sight of the head of the service, a meter approved for domestic service on the domestic service piping branch to domestic end uses and [a double detector check] an approved backflow prevention assembly on the fire service piping branch serving fire protection [equipment] system. Domestic services three inches (3”) or larger in diameter with fire sprinkler heads take off [shall] must use a fire [service] rate meter. Domestic services smaller than three inches (3”) in diameter with fire sprinkler heads take off [shall] must have a meter approved by the Department.

Pumped services to house tanks where the fire protection design is met by the volume of water in the house tank [shall] must use a turbine type or electronic type meter.

§ 36. Subparagraph (i)(a) of paragraph (2) of subdivision (c) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

- (i) A permit applicant’s written procedures and written training programs [shall] must include, at a minimum:

(a) Meter accuracy testing and reporting of results, as specified in the most recent version of American Water Works Association (AWWA) Manual M6;

§ 37. Paragraph (6) of subdivision (d) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(6) [For displacement type water meters, the following shall also be required:

(i) All five-eighth ($\frac{5}{8}$) inch through one (1) inch meters shall be of frost protection design with cast-iron bottom plates. Cast-iron bottom plates shall be made corrosion resistant by suitable coating and/or internal lining as approved by the Department.

(ii) All casing bolts, studs, nuts, screws and other external fastening devices shall be made of a bronze alloy or stainless steel conforming to AWWA standards, and shall be designed for easy removal following lengthy service.

(iii) There shall be no stuffing box for displacement-type meters. The motion of the disc or piston measuring element shall be transmitted to the sealed register through the upper wall of the main case utilizing a magnetic coupling.

(iv) All displacement meters shall be provided with a plastic strainer that can be easily removed for cleaning]

Positive displacement meters $\frac{5}{8}$ " through 1½" must conform to the most recent version of AWWA Standard C700. 2" positive displacement meters are not approved for use after January 1, 2021.

§ 38. Paragraph (7) of subdivision (d) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(7) All meters [shall] must have a main case composed of an alloy which [shall] does not have a lead content that [shall not] exceeds current NSF/ANSI Standard 61/372 limits. Upon request by DEP the meter manufacturer must submit all documentation associated with its product's compliance with NSF 61/372.

§ 39. Paragraph (11) of subdivision (d) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(11) The manufacturer [shall] must provide each meter supplied to a distributor after January 1, 2020 with a removable barcode tag and sticker meeting the Department's [specifications] Enhanced Barcode Specifications available on the DEP website.

§ 40. Subparagraph (i) of paragraph (1) of subdivision (e) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(i) Effective May 1, 2014, compound or dual-register meters [shall] may no longer be approved for use in new or replacement installations. [The replacement of measuring elements in existing compound meters shall be permitted.]

§ 41. Subparagraphs (iv) and (v) of paragraph (1) of subdivision (e) of Section 20-05 of Title 15 of the Rules of the City of New York are amended to read as follows:

(iv) Single-jet, electromagnetic, or other meters designed for variable flow rates [shall] must be used on services one-and-a-half (1½) inch and larger

in diameter and operating on street pressure, and may be used in buildings with booster pumps or pressurized system applications.

(v) Single-jet meters [shall] must be installed on a level horizontal plane +/- 10 degrees. Turbine, electromagnetic, and other meter types may be installed on an incline or vertical plane if a horizontal installation is not possible and the configuration is supported by the meter manufacturer's specifications. The meter register must always face outward for reading. Electromagnetic meters must be grounded according to the manufacturer's requirements and must not be located in the same room as a significant source of an electromagnetic field such as a motor generator.

§ 42. Paragraph (2) of subdivision (i) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(2) No fittings capable of a branch connection [shall be] are permitted in the section of [pipe] connection upstream of the meter or meter setter with the exception of an approved strainer. The strainer [shall] must be located immediately before the inlet side of the meter. The service [pipe] connection between the point of entry and the meter setting [shall] must be kept visible. No fittings, devices, or equipment [shall be] are permitted in the section of [pipe] connection upstream or downstream of the meter that interferes with the required laminar flow through the meter, except as otherwise approved by the Department, Bureau of Customer Services.

§ 43. Paragraph (4) of subdivision (i) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(4) Meter settings [shall] must have an inlet valve immediately upstream of the meter and any strainer, and an outlet valve downstream of the meter. For meters two (2) inches in size or smaller, the valves [shall] must be full-port ball valves. For meters larger than two (2) inches in size, the valves [shall] must be rising stem,

resilient seated, and epoxy-coated gate valves. If a backflow prevention device is located after the meter setting and both the backflow prevention device and meter setting are located on the same floor of a building, then an outlet valve serving [both the backflow prevention device and] the meter setting may be placed immediately after the device. If [the] a backflow prevention [device and meter setting] assembly [are] is located [on different floors of a building] after the meter setting, [each set of equipment shall have its own outlet valve and] then an outlet valve shall be placed immediately after the assembly and the meter test tee.

(i) Except for meters two (2) inches or smaller where space constraints prevent any approved meter technology from being installed with an inlet valve, or as noted in §20-05(a)(5), a house control valve [shall] must not be used in lieu of a meter inlet valve.

(ii) [A meter outlet valve is not required for fire meters on] On a dedicated fire service [or the fire service branch of a combined service, for a Detector Check Valve Assembly or if the property has approved backflow prevention equipment which includes an outlet valve] line, an approved backflow prevention assembly (DCDA or RPDA with by-pass meter) in conjunction with the building control valve are required. Additional valves are optional.

(iii) A plain tip test tee [shall] must be provided for meters 3/4" or 1" in diameter before the meter outlet valve or incorporated into the design of the meter outlet valve. For meters [up to two (2)] 1-1/2 inches in diameter, the test tee [shall] must be the same size as the meter. For meters 2 inches or larger than two (2) inches in diameter, the test tee [shall] must be two (2) inches. An exception shall be provided for installations using an outlet valve that incorporates an one-and-a-half (1½) inch rather than two (2) inch test tee into the design of its two (2) inch outlet valve. Factory-fabricated setters

five-eighths ($\frac{5}{8}$) inch through two (2) inches [shall] must have test ports as described in paragraph 6 of this subdivision. Test port plugs on meter bodies [shall] must be drilled for seal wire. Test tees [are not to be used as connections for domestic service] shall not be used as water supply connections. Where a meter is placed in a pit alongside a sewer trap, the meter test tee [shall] must be located outside of the pit in an accessible location.

§ 44. Paragraph (5) of subdivision (i) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

- (5) Connections [shall] must be made by coupling, union, flange union or approved compression fittings and bored for sealing with holes not less than three thirty-seconds ($\frac{3}{32}$) of an inch in diameter. Compression fittings are permitted for three quarter ($\frac{3}{4}$) inch through two (2) inch meters only. Unions, couplings or compression fittings that permit removal of the meter and/or setter without breaking the seal wire are prohibited. Grooved end mechanical pipe joining systems are not permitted between the meter inlet valve and the outlet side of the meter. If used on the service side of the house valve, such systems [shall] must be drilled for seal wire. In all other circumstances, pipe joining specifications [shall] must conform to the New York City Plumbing Code. All water meter settings of two (2) inches and smaller sizes [shall] must utilize valves and fittings constructed of bronze with a lead content that [shall] must not exceed current NSF/ANSI Standard 61 limits. Bolts, studs, nuts, screws and other external fastening devices used from the house valve through the meter outlet valve [shall] must be made of a bronze alloy or stainless steel conforming to AWWA standards, and [shall] must be designed for easy removal following lengthy service. Above-ground, indoor service [pipe] connection, including the meter setting and any backflow prevention device, [shall] must comply with standards for

water distribution pipe contained in the New York City Plumbing Code Section 604.

§ 45. Paragraph 8 of subdivision (i) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(8) Valves. All new displacement type water meter settings [shall] must utilize full port ball valves [or angle key valves] for the inlet and outlet control of the meter. [These] All valves [shall] must be furnished with handles for the manual operation of the valves without the need of a wrench. [Turbine and compound meters] Other meter types [shall] must be installed with full port ball valves (through two (2) inch only) or gate type OS&Y valves for meters larger than two (2) inches.

§ 46. Subdivision (j) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(j) *By-pass*. (1) Unmetered by-passes around meters are prohibited. [except those approved in writing by the Department, such as:] Properties that wish to avoid lengthy interruptions of water supply may install a metered by-pass or a set of two parallel meters, under permit and at their expense.

[(i) Tunnels where hazardous conditions may exist.

(ii) Selected properties having only one (1) source of supply where any shut-down would endanger public health and safety.

(2) If a by-pass is permitted by the Department, the installation shall conform to Appendix Figure #10 or #10A. The by-pass shall be configured so that the top case and interior meter can be removed for repairs or replacement.

(3) Properties that wish to avoid lengthy shutdowns related to replacement of large meters may install paired meters that can supply the building through one or the other meter on a service [pipe] connection.

§ 47. Subparagraph (i) of paragraph (5) of Subdivision (k) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(i) The enclosure [shall] must be capable of housing the water meter with all required valves, strainer and above-ground [appurtenances] accessories. It [shall] must have easy access for testing and maintenance including at least one (1) foot, clearance around the meter, piping and valves. The boxes [shall] must have lockable access doors or lids to prevent theft or vandalism. The enclosure [shall] must be anchored to a concrete base of eight (8) inches minimum for meters one and one-half (1½) inches or larger, and four (4) inches for meters less than one and one-half (1½) inches. The enclosure [shall] must have an approved remote meter reading receptacle mounted on the exterior.

§ 48. Subdivision (q) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

(q) *Encoding registers*. When used, all encoder-type remote registration systems [shall] must comply with all applicable requirements of AWWA Standard C707 and the following requirements:

- (1) The register [shall] must encode at least the six (6) most significant digits which will be read from the remote receptacle.
- (2) The unit [shall] must employ a leak detection indicator, gpm display or a test sweep hand on the face of the meter register.

- (3) Registers [shall] must read in cubic feet.
- (4) The assembly [shall] must have a tamper resistant locking device as well as a provision for seal wire, or other method approved by the Department.
- (5) The data stream must be, or be convertible to, [seven-bit] ASCII format, and is to be capable of interfacing directly to a[n] Department-approved automatic meter reading device [to transmit data via radio, cable T.V. or telephone lines to a central location].
- (6) All encoder registration systems [shall] must be capable of transmitting the data for a minimum distance of three hundred (300) feet utilizing solid twenty-two (22) gauge minimum non-shielded copper cable between the register and the remote receptacle or interface device.
- (7) All encoding registers [shall] must be subject to the approval of the Department.
- (8) The register [shall] must be capable of being read through a remote receptacle, and /or an automatic meter reading system.
- (9) All registers [shall] must be installed with wire to a [remote receptacle or] AMR transmitter with all three wires properly connected at the register head.

§ 49. Paragraph 3 of Subdivision (s) of Section 20-05 of Title 15 of the Rules of the City of New York is amended to read as follows:

- (3) Any device approved [shall be] is solely the responsibility of the [customer] property owner unless it is installed by the Department. The Department [shall] is not [be] liable for any maintenance or replacement of any approved attachments to the meter, and shall not perform any additional steps to salvage the devices should the meter require replacement. Meter attachments are not recognized as a source of data for billing purposes. A

technical representative of a meter attachment manufacturer may be a permit holder for Meter Attachment permits only.

§ 50. Section 20-05 of Title 15 of the Rules of the City of New York is amended by adding a new subdivision (t) to read as follows:

(t) Ownership of water meters.

All water meters used for billing purposes are the property of the Department. At the time of replacement or removal, one or more photographs of the meter must be provided to the Department that must include the serial number of the meter and the final meter read. The Department may, upon written request prior to the removal or replacement of a meter, require the return of a meter to the Department for testing or other purposes. Failure to 1) provide photographs of a meter; and 2) return a meter to the Department when requested by the Department, at the time of replacement or removal is a violation of this rule.

§ 51. Subdivision (a) of Section 20-07 of Title 15 of the Rules of the City of New York is amended to read as follows:

(a) *General regulations.*

All corporation stops (taps), wet connections (including internal water main), meters, service [pipe] connection installations, repairs, plugs and relays [shall be] are subject to inspection by the Department. A Licensed Master Plumber [shall] must certify that all work was performed in accordance with these Rules and all other applicable rules.

§ 52. Subdivision (b) of Section 20-07 of Title 15 of the Rules of the City of New York is amended to read as follows:

(b) *Mandatory inspections.*

The Licensed Master Plumber must request an inspection as described in §20-02(l) and §20-02(m). Inspections [shall be] are mandatory[, and may not be waived] for the following categories of work:

(1) [Corporation stops (taps) and service pipes supplying fire sprinkler systems

(2) Corporation stops (taps) and service pipes supplying fire protection systems.

(3) Corporation stops (taps) and service pipes supplying wet standpipes]

Corporation stops (taps/wet connections) and service connections supplying water to the fire suppression systems: sprinkler and/or standpipe and fire hydrants (private).

[(4)] (2) Corporation stops (taps/wet connections) and service [pipes] connections supplying combined water systems or domestic water systems to which fire [sprinkler heads] systems are connected.

[(5)] (3) Water service terminations (plug only).

[(6)] (4) Destruction of any tap or wet connection which requires an excavation separate from the one required for the new tap or wet connection.

[(7)] (5) Installed new wet connections and corresponding service [pipes] connections.

[(8)] (6) Relay or repair of sprinkler, fire, standpipe and domestic service [pipes] connections to which fire sprinkler heads are connected.

[(9)] Meters larger than one (1) inch.

Any parts of service pipes which are installed without excavation of a trench need not be made available for inspection.]

§ 53. Subdivision (c) of Section 20-07 of Title 15 of the Rules of the City of New York is amended to read as follows:

(c) *Inspection waiver.*

For domestic water service [pipe] connection installations where inspections are mandatory, as described in §20-07 (b), the [Licensed Master Plumber shall request an inspection as described in §20-02 (l) and 20-02 (m). The] Department in its discretion may waive such inspections. If the Department waives an inspection, the Licensed Master Plumber must submit the tap location with certification that all work was performed in accordance with these Rules and all other applicable rules.

§ 54. Subdivision (d) of Section 20-07 of Title 15 of the Rules of the City of New York is amended to read as follows:

(d) *Fee for inspections.*

[A] An upfront fee [shall] must be paid for each inspection in accordance with the Water and Wastewater Rate Schedule of the New York City Water Board.

§ 55. Section 20-07 of Title 15 of the Rules of the City of New York is amended by adding a new subdivision (i) to read as follows:

(i) *Water sampling test.*

Before taps are installed in a new internal water main, the main must pass a

water sampling test.

The main must be disinfected and a satisfactory water sample must be obtained by the Contractor in the presence of the Department representative only. A water sample will be considered satisfactory if it is free of bacteria, with acceptable color, odor, taste, temperature, turbidity, and has measurable residual chlorine, as determined by the Department.

§ 56. Paragraph 1 of Subdivision (a) of Section 20-08 of Title 15 of the Rules of the City of New York is amended to read as follows:

(1) *Prohibition of Use as a Source of Energy.*

The use of the pressure or flow of water as a source of energy is prohibited, except when specifically approved by the Department or for charging the battery of an electronic plumbing fixture.

§ 57. Subparagraph (ii) of paragraph (9) of Subdivision (a) of Section 20-08 of Title 15 of the Rules of the City of New York is amended to read as follows:

(ii) Garages, gasoline service stations, and other similar establishments which furnish car washing as part of their regular service and do not employ automatic car washing equipment [with appurtenances], as described above, may use buckets of water only.

§ 58. Paragraphs 1, 2, and 4 of Subdivision (b) of Section 20-08 of Title 15 of the Rules of the City of New York are amended to read as follows:

(b) Fire hydrant use.

(1) Fire hydrants on the raw may be routinely opened only by authorized employees of the Department and/or the Fire Department. All others seeking permission to open a fire hydrant must secure a permit from the Department, Bureau of Customer Service. Fire Hydrant Use Permits [must be displayed] shall be secured at the site where water is being used. Permits for the use of hydrants may not be granted when, in the view of the Department, water from a metered source is available to serve the end use described in the permit application. Permit applicants are required to describe the proposed use in detail and indicate why another alternative (e.g., existing metered source or construction meter) cannot be used. Only approved hydrant wrenches [shall] may be used. Water [shall] must be obtained from the smaller size hydrant nozzle only. Caps and chains are not to be broken and [shall] must be securely replaced after use.

(2) Fire Hydrant Use Permits [shall be] are valid only [between the hours of 7:30 a.m. and 7:30 p.m.] on the days specified therein, unless otherwise approved by the Department.

(4) With the exception of hoses used to extinguish fires, any hose connected to a fire hydrant must be equipped with [either] an approved [backflow prevention device or an approved four (4) inch air gap, unless in the Department's opinion, the application does not pose a backflow hazard, such as watering a community garden. Applications which do require an air gap or backflow prevention device include, but are not limited to, demolition dust control, pavement breaking, cutting and sawing, mixing and curing of concrete or mortar, well digging, washing/pumping of manholes, basements or sewers, application of pesticides, herbicides, paints, curing agents or fertilizers, washing down roadway construction, or make-up water] Reduced Pressure Zone backflow prevention assembly (RPZA). Applications which do require a RPZA include, but are not limited to,

demolition dust control, pavement breaking, cutting and sawing, mixing and curing of concrete or mortar, well digging, washing/pumping of manholes, basements or sewers, application of pesticides, herbicides, paints, curing agents or fertilizers, washing down roadway construction, or make-up water. (See Appendix Figure #6).

§ 59. Section 20-10 of Title 15 of the Rules of the City of New York is amended to read as follows:

§20-10 *Glossary.*

For the purposes of “The Rules Governing and Restricting the Use and Supply of Water”, the following definitions shall apply:

Aesthetically objectionable. A condition which could be objectionable to other water consumers, but would not adversely affect human health. Substances such as food-grade dyes, hot water, and stagnant water from fire lines in which no chemical additives are used may result in aesthetically objectionable conditions.

[**Air gap.** The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device, and the flood level rim of the receptacle, which shall be at least double the diameter of the supply pipe.]

Air gap separation. Air Gap Separation means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. The differential distance shall be at least double the diameter (D) of the supply pipe. In no case shall the air gap be less than 1 inch.

Applicant. Any person applying for a permit pursuant to these Rules.

AMR – Automatic Meter Reading. The use of radio or telephone-based technology to read water meters.

ANSI. The American National Standards Institute.

ASCII. American Standard Code for Information Interchange.

ASTM. The American Society for Testing Materials.

Automatic water regulating device. A self regulating valve or other device, the purpose of which shall be to limit the maximum use of City water on air conditioning and refrigeration units that do not have a water conserving device to 1.5 gpm per ton of refrigeration or air conditioning.

AWWA. The American Water Works Association.

Backflow prevention device. An approved air gap, reduced pressure zone (RPZ) device, or double check valve assembly (DCV) used to contain potential contamination within a facility.

[**Backflow/Backsiphonage.** The reversal of normal flow in a system caused by a negative pressure (vacuum or partial vacuum) in the supply piping.]

Backflow. The flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any source or sources other than its intended source. Backsiphonage is one type of backflow.

Ball valve. A valve capable of regulating, stopping or starting flow with a one-quarter (90°) turn of the valve by means of a movable ball which fits in a spherical seat.

BCS. Bureau of Customer Services.

Booster system. A pumped system used to deliver water at a higher pressure within a building.

Building. An enclosed structure having a specific block and lot (or tax sub-lot) and a separate entry from the street or an outdoor area.

City. The City of New York.

City water. Water supplied by the City of New York.

City water main. A water main owned and maintained by the City of New York under the jurisdiction of the Department.

Combined service. A water service which supplies both domestic and fire suppressions end uses and the fire protection requirements exceed the domestic demand and determine the size of the service.

Commissioner. The Commissioner of the New York City Department of Environmental Protection.

Completed meter permit. A meter permit returned to the Department that indicates the meter size, type, serial number, remote identification number, meter and remote

receptacle location, and date of installation that has been signed and sealed by the licensed plumber and lists the licensed plumber's business address.

Connection. A water service pipe which connects the customer or a development to a City Water Main, Private Water Main, or Internal Water Main.

Cross connection. [A physical connection or arrangement between two separate piping systems where one system contains potable water; the other contains steam, gas, a chemical, or water of questionable safety, and there may be a flow from one system to the other] An actual connection or a potential connection between any part of a potable water system and any other environment that would allow substances to enter the potable water system. Those substances could include gases, liquids, or solids, such as chemicals, water products, steam, water from other sources (potable or nonpotable), or any matter that may change the color or add odor to the water. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or any other temporary or permanent connecting arrangement through which backflow may occur are considered to be cross connections.

Curb valve. A shutoff valve on the service [pipe] connection in the sidewalk area outside the [building] property, generally located eighteen (18) inches from the curb line.

Customer. Any person to whom City water is supplied.

Day. Except as otherwise stated, day shall refer to calendar day.

DDC. New York City Department of Design and Construction.

Department or DEP. The New York City Department of Environmental Protection.

Distribution piping. All piping downstream of the water meter setting.

Degree of hazard. [The potential of a facility to cause contamination of the public water supply] The assessment or evaluation of a facility's domestic water system's cross-connections as they relate to the health hazard of the consumers of water. A facility may be rated Hazardous, Aesthetically Objectionable or Non-Hazardous.

Department. The New York City Department of Environmental Protection.

[**Detector assembly.** A device installed in a water service pipe, in lieu of a meter, which indicates that flow has occurred.]

Disinfection. Chlorination in accordance with methods approved by the Department.

Domestic service with sprinkler heads. A domestic service sized for domestic demands which has been approved by the Department of Buildings to supply a limited number of fire sprinkler heads.

Domestic use. Water consumed for purposes other than extinguishing fire.

DOT. New York City Department of Transportation.

Double check detector assembly. A device consisting of two (2) single independently acting check valves, suitable connections for testing the water tightness of each valve, and [an indicator] a by-pass meter that shows whether flow has occurred from the water service [pipe] connection into the premises, and a small double check valve housed together as one [unit] assembly.

Double check valve assembly. [A device consisting of two (2) single independently acting check valves, suitable connections for testing the water tightness of each valve, and inlet control valve and an outlet control valve housed together as one unit] A backflow prevention consisting of two internally loaded independently operating check valves, located between two tightly closing resilient-seated shutoff valves with four properly placed resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (i.e., a pollutant).

Drip line. The outer circumference of a tree's branches and the farthest point where water drips from the tree branches onto the ground.

Electronic meter (electromagnetic meter). A meter that operates using Faraday's Principle.

Encoder-Register. A device from which electronic meter reading data can be obtained from the meter semiautomatically and at a remote location.

Fee. A charge determined by the New York City Water Board.

Fire department. The New York City Fire Department.

Fire service meter. A water meter certified by an AWWA standard for such meters and approved by the Department for use on a service, subject to fire service flows.

Fire pump. A pump installed on a service connection to insure adequate flow for purposes of fire protection system.

Fire service. A service [pipe] connection that supplies water exclusively to a fire protection system (sprinkler, standpipe, combination of sprinkler and standpipe or hydrant).

Fixture units. A measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures.

Flood level rim. The edge of the receptacle from which water overflows.

Flushometer valve. A device which discharges a predetermined quantity of water to fixtures (urinals/tankless toilets) for flushing purposes and is actuated by direct water pressure.

Gooseneck. An extra three (3) to five (5) feet of water service [pipe] connection installed to the right of the corporation stop (tap) when facing the corporation stop (tap). (See Appendix Figure #2).

G.P.M. (gpm). The rate of flow of water in a service [pipe] connection, or through a meter or a pump, measured in gallons per minute.

Hazardous facility. A facility in which substances may be present that may endanger the health of other customers if introduced into the public water system. Examples include: laboratories, sewage treatment plants, chemical plants, hospitals, and mortuaries.

House tank (roof tank). An elevated water storage tank used to feed domestic and/or fire systems, which is usually located on the roof.

Hydrant. A standard New York City fire hydrant.

I.D. The inside diameter of a pipe.

Inspection. An investigation and review, by the City, of work performed by others under a permit by the Department, and which is evidenced by a certificate of inspection.

Internal fire protection system. A fire pump system, a sprinkler system [or], a standpipe system, combination sprinkler and standpipe system, or any fire suppression system approved by the Department of Buildings.

Internal water main. A water main constructed by a private entity in private property and not in a mapped street, record street or a street for which an opinion of dedication has been issued. Internal water mains are under the jurisdiction of the Department from the City or private water main up to and including the meter.

Irrigation system. [Piping] Connection used to supply water to vegetation.

Jacketed pipe insulation. Pipe insulation with a covering design to retard vapor infiltration into the insulation and for protection against physical abrasion and damage.

Licensed master plumber. A plumber licensed by the City agency having jurisdiction over such licenses to perform plumbing work within New York City.

Mapped street. A street that appears on the official map of New York City.

Meter. An instrument for measuring amounts of water consumed.

Meter register. The system component that converts the movement of the meter's impeller, turbine, or disc into an electronic signal or display. This component consists of a meter register and a signal (data) encoder assembly, and is assembled as either a single unit, or as separate units to be mounted on the meter.

Meter set date. The date the meter is installed.

Meter setter/resetter. A shop or factory-fabricated set of piping, valves and an electrical continuity bar installed as a unit designed to hold a water meter of two (2) inches or less in diameter.

MTU. Meter Transmitter Unit. An electronics box wired to the water meter. The MTU is part of the AMR system programmed to read the meter and transmit radio frequency readings to a remote receiving unit.

New York City Water Board. A corporate municipal instrumentality of the State of New York established by Chapter 515 of the Laws of 1984 which is authorized to establish and collect fees, rates and other service charges for use of, or for services furnished by, the New York City water and sewer systems.

Non-turf plants. Plants other than a lawn.

Nozzle. A spring loaded self-closing device used for controlling the flow of water from a hose.

Offset swing joint. An installation consisting of three (3) lengths of pipe and four (4) elbows which are installed in lieu of a gooseneck. (See Appendix Figure #2.)

OSHA. The Occupational Safety and Health Administration of the United States Department of Labor.

OS & Y valve. The outside [screw] stem and yoke valve used on fire lines.

Person. An individual, partnership, company, corporation, association, organization, governmental agency, administration, department, any other group of individuals, or an officer or an employee thereof.

Pit meter. A water meter installed in an outside pit or vault.

Private water main. A water main constructed by a private person in the bed of a final mapped street or record street.

Professional engineer. An engineer licensed by the New York State Education Department to practice professional engineering in New York State.

psi. The static pressure of water within a closed piping system, or the loss of water pressure due to flow through a piping system, flow control devices or flow measuring devices, measured in pounds per square inch.

Record street. A street that appears on the Tax Map of the City but may not be a mapped street.

Reduced Pressure Zone (RPZ) Device. [A minimum of two (2) independently acting check valves, with an automatically operated pressure differential relief valve located between the two (2) check valves] A backflow prevention device assembly consisting of a mechanical, independently acting, hydraulically dependent relief valve, located between two independently operating, internally loaded check valves that are located between two tightly closing resilient-seated shutoff valves with four properly placed resilient-seated test cocks. This assembly shall be tested at least annually and is suitable for direct high hazard cross-connections.

Reduced pressure principle detector assembly (RPDA). A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly specifically designed for such application. The meter shall register accurately for very low flow rates of flows up to 2 gallons per minute and shall show registration for all rates of flow. This assembly shall be used to protect against a health hazard (i.e. containment) on fire protection services only.

Registered architect. A person licensed by the New York State Education Department to practice architecture in New York State.

Relay. Replacement of an entire water service [pipe] connection without replacement of the corresponding corporation stop (tap) or wet connection.

Remote read resolution. Refers to the smallest increment of water volume provided in the meter reading transmitted to a remote location. For example, a water meter may generate a reading in cubic feet, units of tens of cubic feet, or units of hundreds of cubic feet.

Remote receptacle. A system component at a location away from the meter that receives the probe of a portable visual-display unit, or a portable meter reading unit.

Rodding. The installation of steel rods in order to secure and prevent movement of joints, valves, caps, plugs, fittings and [appurtenances] accessories.

Sealed Building. A building with windows and doors which are locked and covered or blocked by concrete block, bricks, sheet metal or other materials intended to prevent access. Windows covered with wooden boards shall not constitute a sealed building.

[Separation (section) valve. A valve installed in a City water main or private water main to ensure two (2) separate sources of water.]

[Service pipe. A water supply pipe which connects the customer or a development to a City water main, private water main or internal water main. Service pipes connecting a single customer's premises to a City water main or a private water main are under the jurisdiction of the Department from the City water main or private water main up to and including the meter outlet valve in metered properties, or the first valve within the property in unmetered properties. For properties with an internal water main and a meter vault at the property line, the Department's jurisdiction runs from the water main connection to the first valve inside the property line.]

Sidewalk valve. A valve on a domestic service pipe located in the sidewalk area, at a distance of two (2) feet (street side) from the property line.

Stuffing box. That part of a valve which contains packing or similar material which prevents leakage when the valve is operated.

Suction tank. A tank used to protect the City distribution system from a large, sudden water demand.

Swing joint connection. An acceptable method of connecting to either well water or City water.

Tap. A corporation stop approved by the Department which controls the flow of water.

Tax lot. A portion or parcel of land classified as such by the Department of Finance.

Tee connection. A three-way pipe fitting installed in a private water main or internal water main in lieu of a tap or wet connection.

Test tee. A downward pointing plain tip faucet or hose connection located after the water meter but before the meter outlet valve that is used for connecting an outlet hose for meter accuracy testing.

Title vested street. A mapped street or record street whose ownership has been accepted by the City of New York, or a street which has a Corporation Counsel Opinion of Dedication.

UL/FM. Underwriter's Laboratories/Fireman's Mutual.

Vacant building. A building which is not inhabited, or is occupied illegally.

Valve. A non-rising stem gate valve or full port ball valve.

Valve box. A standard New York City valve enclosure including the skirt, head and cover.

Waiver. The act of intentionally relinquishing a right or privilege.

Water conserving device. With reference to air conditioning or refrigeration systems, an evaporative condenser, water cooling tower, spray pond or economizer.

Water meter accuracy testing ("meter testing"). Refers to testing the accuracy of a water meter in the field, on an indoor test bench, using methods designed by the Department and in conformance with AWWA's Manual M6: "Water Meters – Selection, Installation, Testing and Maintenance."

Water meter setting. The water meter, inlet and outlet isolation valves, test tee, and associated approved piping and fittings.

Water outlet. An orifice through which water is supplied to a fixture, into the atmosphere, to a boiler or heating system, or to any device which requires water to operate.

Water service connection. A water supply pipe which connects the customer or a development to a City water main, private water main or internal water main. Service connections connecting a single customer's premises to a City water main or a private water main or internal water main are under the jurisdiction of the Department from the City water main or private water main or internal water main up to and including the meter outlet valve in metered properties, or the first valve within the property in unmetered properties.

Wet connection. The hardware required to install a connection larger than two (2) inches without interruption of water service. A wet connection shall consist of a sleeve and a corresponding valve approved by the Department.

§ 60. Appendix Table 3 and Figures 7, 7A, 7B, 8, 9, 9A, 10 and 10A of Chapter 20 of Title 15 of the Rules of the City of New York are REPEALED, and new Appendix Table 3 and Figures 7, 8, 9, and 10 are added to read as follows:

TABLE # 3: FLOWS ARE BASED ON A MAXIMUM PRESSURE LOSS OF TWO (2) psi IN THE SERVICE PIPE OR A MAXIMUM VELOCITY OF TEN (10) FT PER

TABLE # 3

MINIMUM SIZE OF SERVICE PIPES, CORPORATION STOPS (TAPS) AND WET CONNE

Based on the Rate of Flow in Gallons

<u>LENGTH OF SERVICE PIPE (ft.)</u>		<u>10</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>55</u>	<u>60</u>	<u>80</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>
<u>SERVICE PIPE SIZE (in.)</u>	<u>TAP/W.C SIZE (in)</u>	<u>ALLOWABLE FLOW (GPM)</u>															
<u>1</u>	<u>3/4</u>	<u>21</u>	<u>15</u>	<u>13</u>	<u>12</u>	<u>10</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>2</u>
<u>1</u>	<u>1</u>	<u>21</u>	<u>15</u>	<u>13</u>	<u>12</u>	<u>10</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>2</u>
<u>1-1/4</u>	<u>1</u>	<u>37</u>	<u>25</u>	<u>23</u>	<u>21</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>10</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>6</u>	<u>5</u>
<u>1-1/2</u>	<u>1</u>	<u>55</u>	<u>41</u>	<u>37</u>	<u>34</u>	<u>28</u>	<u>25</u>	<u>24</u>	<u>23</u>	<u>20</u>	<u>18</u>	<u>14</u>	<u>12</u>	<u>11</u>	<u>10</u>	<u>9</u>	<u>8</u>
<u>1-1/2</u>	<u>1-1/2</u>	<u>55</u>	<u>41</u>	<u>37</u>	<u>34</u>	<u>28</u>	<u>25</u>	<u>24</u>	<u>23</u>	<u>20</u>	<u>18</u>	<u>14</u>	<u>12</u>	<u>11</u>	<u>10</u>	<u>9</u>	<u>8</u>
<u>2</u>	<u>1-1/2</u>	<u>100</u>	<u>84</u>	<u>75</u>	<u>70</u>	<u>59</u>	<u>52</u>	<u>50</u>	<u>48</u>	<u>41</u>	<u>37</u>	<u>28</u>	<u>24</u>	<u>21</u>	<u>19</u>	<u>18</u>	<u>16</u>
<u>2</u>	<u>2</u>	<u>100</u>	<u>84</u>	<u>75</u>	<u>70</u>	<u>59</u>	<u>52</u>	<u>50</u>	<u>48</u>	<u>41</u>	<u>37</u>	<u>28</u>	<u>24</u>	<u>21</u>	<u>19</u>	<u>18</u>	<u>16</u>
<u>2-1/2</u>	<u>2</u>	<u>150</u>	<u>150</u>	<u>135</u>	<u>125</u>	<u>105</u>	<u>93</u>	<u>90</u>	<u>86</u>	<u>73</u>	<u>65</u>	<u>46</u>	<u>39</u>	<u>35</u>	<u>31</u>	<u>29</u>	<u>27</u>
<u>3</u>	<u>3</u>	<u>220</u>	<u>220</u>	<u>210</u>	<u>200</u>	<u>165</u>	<u>145</u>	<u>140</u>	<u>135</u>	<u>120</u>	<u>105</u>	<u>81</u>	<u>70</u>	<u>61</u>	<u>56</u>	<u>51</u>	<u>48</u>
<u>4</u>	<u>3</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>290</u>	<u>250</u>	<u>220</u>	<u>210</u>	<u>200</u>	<u>170</u>	<u>155</u>	<u>130</u>	<u>119</u>	<u>110</u>	<u>104</u>	<u>98</u>	<u>94</u>
<u>4</u>	<u>4</u>	<u>390</u>	<u>390</u>	<u>390</u>	<u>390</u>	<u>350</u>	<u>320</u>	<u>305</u>	<u>290</u>	<u>250</u>	<u>220</u>	<u>165</u>	<u>142</u>	<u>126</u>	<u>114</u>	<u>105</u>	<u>98</u>
<u>6</u>	<u>4</u>	<u>600</u>	<u>600</u>	<u>600</u>	<u>600</u>	<u>600</u>	<u>550</u>	<u>525</u>	<u>500</u>	<u>430</u>	<u>380</u>	<u>285</u>	<u>245</u>	<u>215</u>	<u>195</u>	<u>185</u>	<u>17</u>
<u>6</u>	<u>6</u>	<u>880</u>	<u>880</u>	<u>880</u>	<u>880</u>	<u>880</u>	<u>880</u>	<u>840</u>	<u>810</u>	<u>700</u>	<u>620</u>	<u>490</u>	<u>420</u>	<u>370</u>	<u>335</u>	<u>310</u>	<u>29</u>
<u>8</u>	<u>6</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1550</u>	<u>1400</u>	<u>1300</u>	<u>1010</u>	<u>865</u>	<u>765</u>	<u>670</u>	<u>640</u>	<u>59</u>
<u>10</u>	<u>8</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2450</u>	<u>2300</u>	<u>1840</u>	<u>1575</u>	<u>1395</u>	<u>1260</u>	<u>1160</u>	<u>10</u>
<u>12</u>	<u>10</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>3500</u>	<u>2950</u>	<u>2530</u>	<u>2245</u>	<u>2030</u>	<u>1870</u>	<u>17</u>

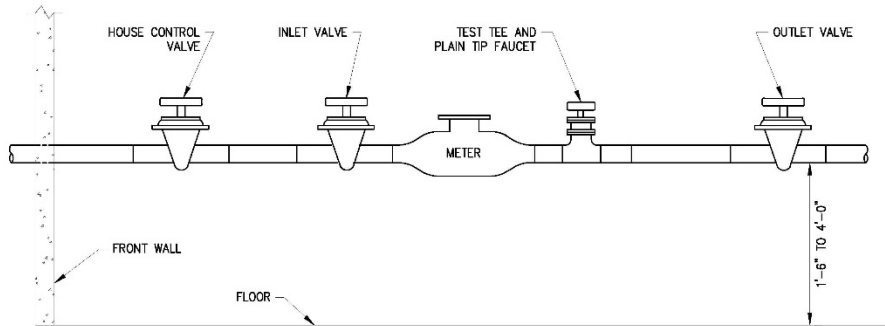
SECOND, WHICHEVER RESULTS IN A LESSER RATE OF FLOW

- Assumptions:**
- (a) Hazen-Williams Coefficient C = 100**
 - (b) Loss through tap is negligible**
 - (c) Loss through curb valve and house control is negligible**
 - (d) Loss through meter is negligible**
 - (e) Loss through backflow preventer is negligible**

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NOTES:

1. SEE RCNY TITLE 15 CHAPTER 20-05 FOR FULL METER SETTING/SIZING SPECS
2. METER SETTING TO BE PROPERLY SUPPORTED WITH PERMANENT SUPPORTS ANCHORED TO FLOOR OR WALL
3. ANY FLANGES OR BOLTS MUST BE DRILLED 1/8" HOLES FOR SEAL WIRE. BOLTS MUST BE BRONZE ALLOY 57% COPPER, OR STAINLESS STEEL. GALVANIZED BOLTS PROHIBITED.
4. METER ISOLATION VALVES SHALL BE FULL-PORT BALL VALVES. HOUSE CONTROL AND METER INLET VALVES MUST NOT HAVE TEST PORTS.
5. PLAIN-TIP TEST TEES SHALL BE METER SIZE
6. DRAWING IS SCHEMATIC. DISPLACEMENT METERS MAY BE PLACED ON INCLINE OR VERTICAL DEPENDING ON MANUFACTURER SPECS. REGISTERS MUST BE VISIBLE FOR READING.
7. IF BACKFLOW PREVENTER ("BFP") IS REQUIRED IT SHALL BE PLACED AFTER THE METER ACCORDING TO REQUIREMENTS OF DEP-BWSO CROSS CONNECTION CONTROL. THE METER AND BFP MAY SHARE AN OUTLET ISOLATION VALVE AND TEST PORT PORTS SHALL BE PROVIDED.
8. SINGLE-STRAND, THREE-CONDUCTOR, 22 GA WIRE (RED-BLACK-GREEN) SHALL BE CONNECTED TO THE THREE TERMINALS ON THE REGISTER HEAD AND SHALL BE RUN TO AN EXTERIOR WALL TO A REMOTE PAD, DEP AMR BOX OR DEP-SUPPLIED MOUNTING PLATE.
9. METER INLET VALVE AND METER MUST BE LOCATED IMMEDIATELY AFTER HOUSE CONTROL VALVE. IF THAT IS PHYSICALLY IMPOSSIBLE IN EXISTING BUILDING METER MUST AT LEAST BE WITHIN SIGHT OF POINT OF ENTRY IF WRITTEN VARIANCE PROVIDED. ANY EXPOSED PIPE AHEAD OF METER MUST BE LABELED PROHIBITING CONNECTIONS.
10. "LIST OF APPROVED METERS AND RELATED EQUIPMENT" AVAILABLE ON DEP WEBSITE WWW.NYC.GOV/DEP



TYPICAL METER SETTING
FOR DISPLACEMENT METERS
FIGURE 7 (N.T.S.)

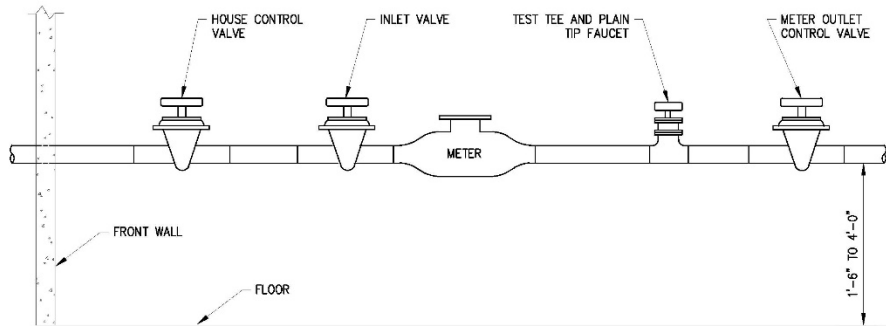


NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF CUSTOMER SERVICE

FIGURE 7

NOTES:

1. SEE RONY TITLE 15 CHAPTER 20-05 FOR FULL METER SETTING/SIZING SPECS
2. METER SETTING TO BE PROPERLY SUPPORTED WITH PERMANENT SUPPORTS ANCHORED TO FLOOR OR WALL.
3. ANY FLANGES OR BOLTS MUST BE DRILLED 1/8" HOLES FOR SEAL WIRE. BOLTS MUST BE BRONZE ALLOY 57% COPPER, OR STAINLESS STEEL. GALVANIZED BOLTS PROHIBITED.
4. METER ISOLATION VALVES SHALL BE FULL-PORT BALL VALVES. HOUSE CONTROL AND METER INLET VALVES MUST NOT HAVE TEST PORTS.
5. PLAIN-TIP TEST TEES SHALL BE METER SIZE.
6. DRAWING IS SCHEMATIC. ELECTRONIC METERS MAY BE PLACED INSTALLED HORIZONTAL, ON INCLINE OR VERTICAL DEPENDING ON MANUFACTURER SPECS. REGISTERS MUST BE VISIBLE FOR READING. SINGLE-JET METERS MUST BE HORIZONTAL OR NOT EXCEED 10 DEGREE INCLINE.
7. IF BACKFLOW PREVENTER ("BFP") IS REQUIRED IT SHALL BE PLACED AFTER THE METER ACCORDING TO REQUIREMENTS OF DEP-BWSO CROSS CONNECTION CONTROL. THE METER AND BFP MAY SHARE AN OUTLET ISOLATION VALVE AND TEST PORT EXCEPT THAT IF THE METER AND BFP ARE LOCATED ON TWO DIFFERENT FLOORS SEPARATE OUTLET VALVES/TEST PORTS SHALL BE PROVIDED.
8. SINGLE-STRAND, THREE-CONDUCTOR, 22 GA WIRE (RED-BLACK-GREEN) SHALL BE CONNECTED TO THE THREE TERMINALS ON THE REGISTER HEAD AND SHALL BE RUN TO AN EXTERIOR WALL TO A REMOTE PAD, DEP AMR BOX OR DEP-SUPPLIED MOUNTING PLATE.
9. METER INLET VALVE AND METER MUST BE LOCATED IMMEDIATELY AFTER HOUSE CONTROL VALVE. IF THAT IS PHYSICALLY IMPOSSIBLE IN EXISTING BUILDING METER MUST AT LEAST BE WITHIN SIGHT OF POINT OF ENTRY IF WRITTEN VARIANCE PROVIDED. ANY EXPOSED PIPE AHEAD OF METER MUST BE LABELED PROHIBITING CONNECTIONS.
10. "LIST OF APPROVED METERS AND RELATED EQUIPMENT" AVAILABLE ON DEP WEBSITE WWW.NYC.GOV/DEP



1"-2" DOMESTIC SERVICE WITH FIRE PROTECTION
SPRINKLERS FOR SINGLE-JET OR ELECTRONIC METER

FIGURE NO. 8

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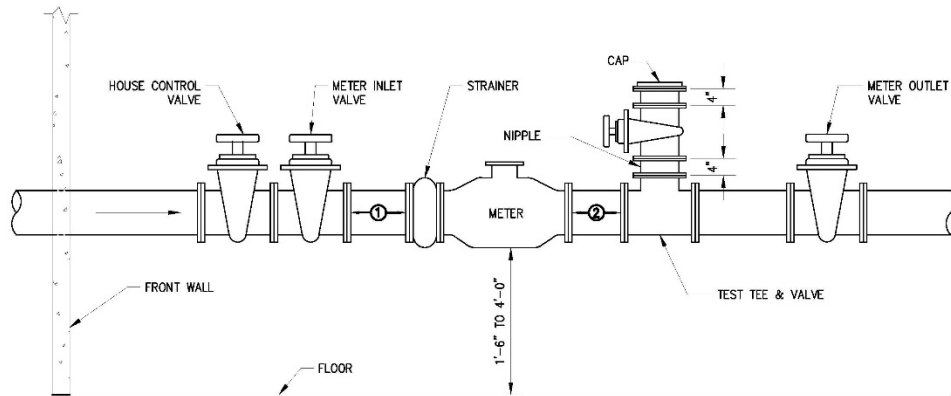
**NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF CUSTOMER SERVICE**

FIGURE 8

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NOTES:

1. SEE RONY TITLE 15 CHAPTER 20-05 FOR FULL METER SETTING/SIZING SPECS
2. METER SETTING TO BE PROPERLY SUPPORTED WITH PERMANENT SUPPORTS ANCHORED TO FLOOR OR WALL.
3. METER MANUFACTURER STRAINER IS REQUIRED FOR TURBINE METERS AND RECOMMENDED BUT NOT REQUIRED FOR OTHER METER TECHNOLOGIES 2" AND LARGER.
4. A MINIMUM OF FIVE (5) PIPE DIAMETERS OF STRAIGHT PIPE ARE REQUIRED BEFORE THE METER AND A MINIMUM OF THREE (3) PIPE DIAMETERS OF STRAIGHT PIPE AFTER THE METER FOR METERS IN NEW CONSTRUCTION INSTALLATIONS (5" AND 3"). REDUCED MANUFACTURER REQUIREMENTS FOR STRAIGHT PIPE MAY BE USED IF 5" AND 3" ARE PHYSICALLY IMPOSSIBLE.
5. CONCENTRIC REDUCERS OR DOWNSIZING FLANGES SHALL BE PLACED BEFORE LOCATION "1" AND AFTER LOCATION "2" AND SHALL NOT BE INCLUDED IN REQUIRED LENGTHS OF STRAIGHT PIPE BEFORE/AFTER THE METER. SEE 20-05(G) FOR METER SIZING RULES.
6. FLANGES OR BOLTS MUST BE DRILLED 1/8" HOLES FOR SEAL WIRE. BRONZE ALLOY 57% COPPER, OR STAINLESS STEEL, GALVANIZED BOLTS PROHIBITED.
7. METER ISOLATION VALVES SHALL BE FULL-PORT BALL VALVES THROUGH 2" AND RESILIENT SEAT EPOXY-COATED GATE VALVES FOR LARGER SIZES. VALVES BEFORE THE METER CANNOT HAVE TEST PORTS.
8. GROOVED-END PIPE OR TUBING IS NOT PERMITTED BETWEEN METER INLET VALVE AND THE METER OUTLET, OTHERWISE PIPE SPECS ARE PER NYC PLUMBING CODE. GROOVED-END PIPE OR TUBING BEFORE THE METER INLET VALVE SHALL BE DRILLED FOR SEAL WIRE.
9. TEST TEES SHALL BE METER SIZE UP THROUGH 2" AND 2" FOR ALL LARGER SIZES.
10. DRAWING IS SCHEMATIC. SOME METER TECHNOLOGIES MAY BE PLACED ON INCLINE OR VERTICAL DEPENDING ON MANUFACTURER SPECS. SINGLE-JET METERS MUST BE ON HORIZONTAL +/- 10 DEGREES. TURBINES MUST BE ON HORIZONTAL PLANE. REGISTERS MUST BE VISIBLE FOR READING.
11. IF BACKFLOW PREVENTER ("BFP") IS REQUIRED IT SHALL BE PLACED AFTER THE METER ACCORDING TO REQUIREMENTS OF DEP-BWSO CROSS CONNECTION CONTROLS. THE METER AND BFP MAY SHARE AN OUTLET ISOLATION VALVE EXCEPT THAT IF THE METER AND BFP ARE LOCATED ON TWO DIFFERENT FLOORS SEPARATE OUTLET VALVES SHALL BE PROVIDED.
12. SINGLE-STRAND, THREE-CONDUCTOR, MINIMUM 22 GA WIRE (RED-BLACK-GREEN) SHALL BE CONNECTED TO THE THREE TERMINALS ON THE REGISTER HEAD AND SHALL BE RUN TO AN EXTERIOR WALL TO A REMOTE PAD, DEP AMR BOX OR DEP-SUPPLIED MOUNTING PLATE.
13. "LIST OF APPROVED METERS AND RELATED EQUIPMENT" AVAILABLE ON DEP WEBSITE WWW.NYC.GOV/DEP



TYPICAL FOR TURBINE, SINGLE-JET,
OR ELECTRONIC METERS
FIGURE 9 (N.T.S)



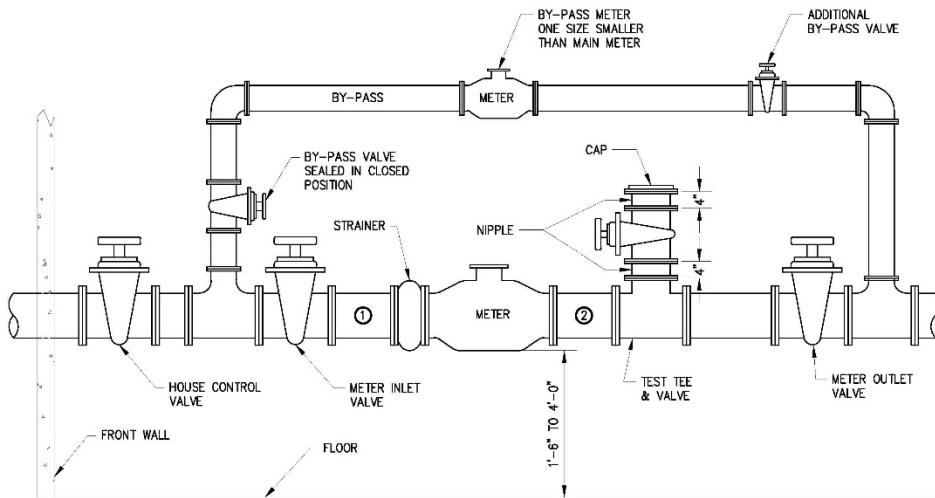
**NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF CUSTOMER SERVICE**

FIGURE 9

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NOTES:

1. SEE RONY TITLE 15 CHAPTER 20-05 FOR FULL METER SETTING/SIZING SPECS
2. METER SETTING TO BE PROPERLY SUPPORTED WITH PERMANENT SUPPORTS ANCHORED TO FLOOR OR WALL
3. METER MANUFACTURER STRAINER IS REQUIRED FOR TURBINE METERS AND RECOMMENDED BUT NOT REQUIRED FOR OTHER METER TECHNOLOGIES 2" AND LARGER
4. A MINIMUM OF FIVE (5) PIPE DIAMETERS OF STRAIGHT PIPE ARE REQUIRED BEFORE THE METER AND A MINIMUM OF THREE (3) PIPE DIAMETERS OF STRAIGHT PIPE AFTER THE METER FOR METERS IN NEW CONSTRUCTION INSTALLATIONS ("5 AND 3"). REDUCED MANUFACTURER REQUIREMENTS FOR STRAIGHT PIPE MAY BE USED IF "5 AND 3" ARE PHYSICALLY IMPOSSIBLE.
5. CONCENTRIC REDUCERS OR DOWNSIZING FLANGES SHALL BE PLACED BEFORE LOCATION "1" AND AFTER LOCATION "2" AND SHALL NOT BE INCLUDED IN REQUIRED LENGTHS OF STRAIGHT PIPE BEFORE/AFTER THE METER. SEE 20-05(G) FOR METER SIZING RULES.
6. FLANGES OR BOLTS MUST BE DRILLED 1/8" HOLES FOR SEAL WIRE. BRONZE ALLOY 57% COPPER, OR STAINLESS STEEL. GALVANIZED BOLTS PROHIBITED.
7. METER ISOLATION VALVES SHALL BE FULL-PORT BALL VALVES THROUGH 2" AND RESILIENT SEAT EPOXY-COATED GATE VALVES FOR LARGER SIZES. VALVES BEFORE THE METER CANNOT HAVE TEST PORTS.
8. GROOVED-END PIPE OR TUBING IS NOT PERMITTED BETWEEN METER INLET VALVE AND THE METER OUTLET, OTHERWISE PIPE SPECS ARE PER NYC PLUMBING CODE. GROOVED-END PIPE OR TUBING BEFORE THE METER INLET VALVE SHALL BE DRILLED FOR SEAL WIRE.
9. TEST TEES SHALL BE METER SIZE UP THROUGH 2" AND 2" FOR ALL LARGER SIZES.
10. DRAWING IS SCHEMATIC. SOME METER TECHNOLOGIES MAY BE PLACED ON INCLINE OR VERTICAL DEPENDING ON MANUFACTURER SPECS. SINGLE-JET METERS MUST BE ON HORIZONTAL +/- 10 DEGREES. TURBINES MUST BE ON HORIZONTAL PLANE. REGISTERS MUST BE VISIBLE FOR READING.
11. IF BACKFLOW PREVENTER ("BFP") IS REQUIRED IT SHALL BE PLACED AFTER THE METER ACCORDING TO REQUIREMENTS OF DEP-BWSO CROSS CONNECTION CONTROLS. THE METER AND BFP MAY SHARE AN OUTLET ISOLATION VALVE EXCEPT THAT IF THE METER AND BFP ARE LOCATED ON TWO DIFFERENT FLOORS SEPARATE OUTLET VALVES SHALL BE PROVIDED.
12. SINGLE-STRAND, THREE-CONDUCTOR, MINIMUM 22 GA WIRE (RED-BLACK-GREEN) SHALL BE CONNECTED TO THE THREE TERMINALS ON THE REGISTER HEAD AND SHALL BE RUN TO AN EXTERIOR WALL TO A REMOTE PAD, DEP AMR BOX OR DEP-SUPPLIED MOUNTING PLATE.
13. "LIST OF APPROVED METERS AND RELATED EQUIPMENT" AVAILABLE ON DEP WEBSITE WWW.NYC.GOV/DEP



TYPICAL METER SETTING WITH BY-PASS
(N.T.S.)

TYPICAL FOR TURBINE, SINGLE-JET OR ELECTRONIC METERS
FIGURE 10



**NEW YORK CITY ENVIRONMENTAL PROTECTION
BUREAU OF CUSTOMER SERVICE**

FIGURE 10