

**SECTION 22 10 06
PLUMBING PIPING SPECIALTIES -HOSE BIBBS**

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASSE 1011 - Performance Requirements for Hose Connection Vacuum Breakers; 2023.
- B. ASSE 1013 - Performance Requirements for Reduced Pressure Principle Backflow Prevention Assemblies; 2021.
- C. PDI-WH 201 - Water Hammer Arresters; 2017.
- D. ASSE 1011 - Hose Connection Vacuum Breakers; American Society of Sanitary Engineering; most current version.

1.02 SECTION INCLUDES

- A. Exterior Hose bibbs and appurtenances.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Not Used

2.02 HOSE BIBBS

- A. Where called for on drawings, a Hose Bibb with Torx bolt and accompanying tool, Model MDF-36DB (New York Special) with 2 (two) hose hooks and a locking cover, shall be installed according to manufacturer's specifications. Item shall be direct buried. Color shall be MDF-Green. Item shall be manufactured by Most Dependable Fountains, 4697 Winchester, Memphis, TN 38118, tel. (800) 552-6331 attn: Angela Horne or an equal product.
 - 1. Concrete for footing shall conform to the Concrete Specifications in this contract. The concrete footing (size and depth as per the Manufacturer) shall be fully covered with the indicated pavement material, without covering or hindering the Access Door of the Spray Shower.
 - 2. All new piping shall be rigid copper of sizes shown on the Drawings. Substitutions of smaller sizes will not be permitted. If sizes shown on the Drawings are not available in specified material, the Contractor shall furnish the next larger size at no increase in the contract price.
 - 3. Backflow Preventer (RPZ) shall be a type already approved by the New York City Department of Environmental Protection.
 - 4. Reduced-Pressure-Principle Backflow Preventers-Lead Free
 - a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Ames Co.
 - 2) Conbraco Industries, Inc.
 - 3) FEBCO; SPX Valves & Controls.
 - 4) Flomatic Corporation.
 - 5) Watts Industries, Inc.; Water Products Div.
 - 6) Zurn Plumbing Products Group; Wilkins Div.
 - b. Standard: ASSE 1013.
 - c. Operation: Continuous-pressure applications.
 - d. Pressure Loss: 12 psig maximum, through middle 1/3 of flow range.

- e. Body and shutoffs shall construct using Lead Free cast copper silicon alloy materials. Lead Free reduced pressure zone assembly shall comply with state codes and standards, where applicable, requiring reduce lead content.
 - f. There shall be no threads or screws in the waterway exposed to line fluids
 - g. Configuration: Designed for horizontal, straight through flow.
 - h. Accessories:
 - 1) The assembly shall also include two resilient isolation valves, four resilient seated test cocks.
 - 2) Air-Gap Fitting: ASME A112.1.2, matching backflow-preventer connection.
5. Solenoid valve shall be the Rain Bird PEB- Inline Industrial Irrigation Valve or equal. Size of solenoid valve shall be determined by size of "K" copper piping called for on Contract Drawings, 1" minimum.
 6. Shut-off Valve (gate valve): Gate Valves 2" and under, shall be lead-free bronze gate valve, Model number- T-113-LF Threaded by Nibco, Inc, phone 800.234.0227 or equal. Size of gate valve shall be determined by size of "K" copper piping called for on Contract Drawings, 1" minimum.
 7. Drain Valve (ball valve): Drain Valve (hose bibb) shall be a ½" bronze ball valve, two piece body, full port, with ¾ inch hose connection. Valve shall be either the Apollo Model 78-103-01, the Nibco Model T-585-70-HC or equal. Size of ball valve shall be determined by size of "K" copper piping called for on Contract Drawings, 1" minimum.
 8. Water Hammer Arrestor: The Water Hammer Arrestor shall be the piston type, as manufactured by Watts Drainage Products, model LF15M2-DR series, size to be determined in accordance with PDI-WH 201 (most current revision) or equal.
 9. Timer (electromechanical time switch with 24 hour dial) shall be Catalog No. 1101 (1100 Series) as manufactured by: Tork Electromechanical Controls, a division of NSI Industries, Telephone 877.268.3700 or equal. The timer shall be located in the building in an area indicated on the Drawings. A lock shall be provided by the contractor for the Timer.
 10. Y-Strainer: The Y-Strainer shall be Stay Flow strainer model YBT Bronze Y Strainer as manufactured by Flexi Craft Industries, 2323 West Hubbard Street, Chicago, IL 60612 phone 312.4284750 or equal. Y Strainer shall be for water with stainless steel screen. Strainer shall be sized for piping.
 11. Pipe Fittings and Joints: The main line pipe and fittings shall be "K" copper. Contractor shall insure that proper slope is consistently applied to all piping to ensure positive gravity assisted drainage of the entire system. All piping and fittings shall be brazed and meet all applicable codes. The Contractor shall install all necessary piping in general accordance with the plan, however the Authority reserves the right to change the routing, or depth of pipe. Foreign materials shall be prevented from entering the system during installation. Immediately prior to assembling, all pipes, valves and fittings shall be cleaned. All unattached ends of pipe, fittings, and valves shall be plugged and capped pending attachment of additional pipe or fittings. All lines shall be thoroughly flushed prior to attachment of terminal fittings. All piping shall be laid with a sufficient slope, minimum one half percent (.5%) to drain for winterization. Special care shall be taken to ensure that all backfill material is free of damaging debris and piping is well supported while back filling occurs. All interior pipes in unheated spaces shall be insulated with 1 inch thick foam insulation material properly installed. All exterior piping shall be installed min. four (4) feet below grade at the façade of the building and then pitching upward to the water feature (unless this is not possible), surrounded by a six-inch (6") envelope of sand to ensure protection.
 - 1) Copper Pipe: Copper pipe shall be rigid hard temper type "K" copper tubing in straight lengths meetings ASTM specification B88-09. Copper tubing and fittings are to be supplied from gate valves on the water supply lines to the hose bibb.
 - 2) Fittings: Fittings shall be approved red brass class "A" thread less type, containing no less than 85% copper adaptable for copper tubing. Brazing joint fillings shall be wrought copper or bronze in accordance with ANSI B16.22.

- 3) Joints: Joints between copper tubing and threaded pipe shall be made of brass adapter fittings properly brazed to tubing. Joints shall be made by brazing.
- 4) All valves, unless otherwise specified, shall be of 125 psi working steam pressure class.
- 5) If the building that is the source of the water supply line is 6 stories tall or less, a booster pump shall be provided and installed by the Contractor or sub-contractor. The booster pump shall be installed on the new interior water supply line, between the water hammer arrestor and the RPZ. The booster pump shall be the Scala 2 3-45 A, multistage centrifugal booster, product number 98562818 manufactured by Grundfos. The ports on this pump are 1", so a step-down from the required 1 1/2" pipe will be necessary and a step-up back to the 1 1/2" pipe will also be required. The local distributor for this booster pump is Hayes Pump, Inc. Fairfield NJ, phone 973.808.0606, attn: Bryan Williams, bwilliams@hayespump.com phone 973.808.0606 ext. 263, cell 908.472.7316, direct line 973.852.6663

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions. The Contractor shall furnish and install all components necessary for the hose bibb to be fully operational. The Contractor shall furnish all labor, materials, equipment, and perform all necessary operations relative to installing the hose bibbs and related equipment, including all excavation, backfilling, concrete footings, sand, hardware, fasteners, fittings, drainage pipes and fittings, nozzles, piping, valves, accessories and finishes in accordance with the drawings and specifications. The installation shall be in accordance with the manufacturer's instructions. The installation shall be accomplished by skilled work personnel and all work shall be monitored by the Housing Authority Inspector. All electrical installations (as needed) for this work shall be performed under the supervision of a Licensed Electrician. All plumbing installations for this work shall be performed under the supervision of a Licensed Plumber. The Contractor, Plumbing Subcontractor and Electrical Subcontractor shall follow and file all required permits and procedures for their respective construction, water supply and electrical hook ups. All work shall be performed in accordance with the most current applicable New York City Codes and must be appropriately inspected. The Contractor shall be held completely responsible that all work is in compliance. All spray structural units shall fully conform to National Plumbing Code and Americans with Disabilities Act. All material and welds shall be cadmium and lead free.
 1. Subgrade for the concrete footing shall be prepared in accordance with the Concrete Specifications in this contract.
 2. Where water lines are laid under the locations of walkways, driveways, hard surface areas or street improvements, backfill shall be thoroughly compacted – tamping in layers not more than 4" in thickness. Water lines under walkways of width 6 feet or less shall be installed by tunneling under and without breaking the walkway concrete surface.
 3. Prior to any excavation the Contractor shall ascertain the exact location of any water line to be connected within the Development building or grounds. The line shall be pressure tested (in the presence of the Authority Inspector) and the Contractor shall verify that the line can supply the needed pressure for the new hose bibb.
 4. All horizontal runs for water pipe shall be installed a minimum uniform pitch of one (1) foot in 200 feet to the low point where the line drain is to be installed. All pipes shall be laid on a firm foundation.
 5. The entire water supply system for the hose bibb shall be tested before the trench is back filled. If any part of the system is defective, it shall be replaced with new material; no caulking of leaks will be accepted. Water lines shall be pitched away from the hose bibb, unless shown otherwise. Pockets that cannot be drained by gravity will not be allowed.
 6. Sidewalks, walls/curbs and pavement shall be restored with material equal to that of the adjacent sidewalks, walls/curbs and pavement. This work shall be restored as soon as

practicable. Should the walkway to be restored be of cement, concrete composition or other type, made up in flag or slab fashion, the Contractor shall be required to restore said flag or slab in whole.

7. Openings in foundation walls shall be grouted and/or filled with concrete to the full depth of the wall. All openings shall be made watertight by parging on both sides of the wall with waterproof mastic. A sleeve of suitable material shall be installed, with proper sealant placed between the wall and the sleeve as well as between the water pipe and the sleeve.
8. The Contractor shall maintain piping within the site in serviceable condition throughout the life of this Contract.

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