

SECTION 02645

FIRE HYDRANTS

PART 1 GENERAL

1.01 RELATED WORK

- A. SECTION 2660 – Water Distribution System

1.02 REFERENCES

- A. AWWA, Section C502 - Dry-Barrel Fire Hydrants (Latest Edition)

PART 2 PRODUCTS

2.01 MATERIALS

- A. Hydrants shall be manufactured in full compliance with American Water Works Association Standard for Dry-Barrel Fire Hydrants, 250 psi working pressure, C502, and as herein amended.
- B. Hydrants shall be Mueller Super Centurion 250; M&H Style 129; U. S. Pipe M-94-250psi; or American Flow Control B84-250psi; see Fire Hydrant Assembly Detail W-7.
- C. Hydrants shall be three-way, post type, dry top traffic model with compression main valve opening against and closing in the direction of normal water flow.
- D. Internal main valve diameter shall be minimum of 5-1/4”.
- E. Hydrants shall have name of manufacturer, year manufactured, and nominal valve size in legible, raised letters cast on barrel of bonnet.
- F. Dry Top Bonnet
 - 1. Shall be constructed with moisture-proof lubrication chamber, which provides automatic lubrication of threads and bearing surfaces each time hydrant is operated.
 - 2. Assembly shall be comprised of top "O" ring serving as dirt and moisture barrier and a lower "O" ring, which shall serve as a pressure seal.
- G. Operating Nut
 - 1. Shall be of regular pentagon shape measuring 1-1/2" point to flat; i.e. National Standard, and shall open by turning counter-clockwise (left).
 - 2. Nozzle caps shall have same cross-section as operating nut and shall come with heavy duty, non-kinking chains.

3. Chains shall be securely affixed to hydrant upper barrel and permit free turning of caps.

H. Traffic Design

1. Hydrant barrel sections shall be connected at groundline in a manner that will prevent damage to hydrant when struck by vehicle.
2. Main valve rod sections shall be connected at groundline by frangible coupling.
3. Standpipe and groundline safety construction shall be such that the hydrant nozzles can be rotated to any desired position without disassembling or removing top operating components and top section of hydrant standpipe.

- I. Main valve shall be made of synthetic rubber and formed to fit the valve seat accurately.

J. Main Valve Seat

1. Shall be of bronze and assembly into hydrant shall involve bronze to bronze thread engagement.
2. Two (2) "O" ring seals shall be provided as positive pressure seal between the bronze seat ring and shoe.
3. Valve assembly pressure seals shall be obtained without employment of torque compressed gaskets.
4. Hydrants shall be designed to allow removal of all operating parts through hydrant barrel by means of single, lightweight disassembly wrench without excavation.

K. Drain

1. Mechanism shall be designed to operate automatically with the operation of main valve and shall allow a momentary flushing of drain ports.
2. Minimum of two (2) internal and two (2) external bronze lined drain ports shall be required in main valve assembly to drain hydrant barrel.
3. Inlet connection shall be cast iron inlet elbow and shall have 6" mechanical joint connection.
4. Barrel extension sections shall be available in 6" increments complete with rod, extension coupling and necessary flanges, gaskets and bolts so that extending hydrant can be accomplished without excavating.
5. No lead will be allowed in nozzle installation.
6. Hydrants shall be tested in strict accordance with AWWA C502 at supplier's expense. Certificate of compliance shall be furnished to OWNER upon request.

- L. Fire hydrants shall have two 2-1/2" diameter hose connections and one 4-1/2" pumper connection. Standard hose threads shall be provided.

2.02 SPARE PARTS

- A. DEVELOPER/CONTRACTOR shall provide the TOWN OF BRASELTON with one (1) set of maintenance wrenches and three (3) breakaway repair kits for every fifteen (15) of each type of hydrant provided or to be determined by the Town at end of construction.

PART 3 EXECUTION

3.01 SETTING HYDRANTS

- A. Hydrants to be installed so the finish grade is at the hydrant bury line.
- B. Extension required to bring hydrant to proper grade shall be furnished and installed by DEVELOPER/CONTRACTOR at his expense.
- C. Fire hydrant assembly shall consist of the ductile iron hydrant tee, gate valve, ductile iron lead pipe, and hydrant. Pipe restrainers must be used to restrain assembly. Pipe restrainers to be anchor coupling type or Grip Ring Pipe Restrainers as manufactured by Romac Industries, Inc. or approved equivalent. **PVC IS NOT ALLOWED FOR HYDRANT ASSEMBLY.**
- D. Hydrants shall be installed with a maximum distance between the hydrants of 500 feet, and at intersections.
- E. Hydrants shall be installed with a minimum supply line of 6" in diameter.

3.02 PAINTING, COATING AND LUBRICATING

- A. Iron parts of hydrant shall be thoroughly cleaned inside and outside.
- B. Unless otherwise stipulated or directed, surface shall be coated or painted with, or dipped in, an asphalt or bituminous base paint or coating, except for the exterior portion above the groundline.
- C. Hydrants shall be covered with two (2) coats of paint, the first being allowed to dry thoroughly before applying second coat.
- D. Exterior of hydrant valve above finished groundline shall be thoroughly cleaned and painted in shop with two (2) coats of Koppers Primer 621, or approved equivalent.
- F. Following installation, hydrants shall be painted with two (2) field coats of enamel paint.
- G. Final hydrant color shall be metallic silver.

END OF SECTION