

SECTION 15330**FIRE HYDRANTS****PART 1 - GENERAL**

1.01 SCOPE OF WORK

- A. The Contractor shall furnish and install approved fire hydrants and accessories in accordance with the requirements of this Section.
- B. Where a new larger main or mains are installed as a part of the work, existing fire hydrants fed by smaller mains shall be connected to the larger main to provide maximum fire flow capability. Such re-connection shall automatically be designed by the Engineer of Record and become part of the plans and project work unless otherwise permitted by the Department in writing.

1.02 QUALITY ASSURANCE

- A. Codes: Fire hydrants shall conform with the requirements of ANSI/AWWA Standard C502, "Dry Barrel Fire Hydrants" (latest edition), as modified herein; the Miami-Dade County Fire Flow Ordinance and the Miami-Dade County Fire Department. Hydrants installed within the limits of the City of Miami shall conform to that fire department's standards.
- B. Manufacturer: The hydrants shall be the standard product of a manufacturing firm which has been engaged in the production of fire hydrants for a period of at least five years.

1.03 INFORMATION TO BE FURNISHED BY BIDDER

The Contractor shall furnish four (4) sets of shop drawings for approval showing all the essential features including arrangement and descriptions of parts of the equipment offered.

PART 2 - PRODUCTS

2.01 APPROVED HYDRANTS

The fire hydrants shall be one (1) of the following models approved by the Miami-Dade County Fire Department:

	<u>Model</u>	<u>Manufacturer</u>
1.	A 423 Centurion	Mueller Company
2.	K81-MD (per Kennedy Drawing No. 80783 MD, Rev. 05)	Kennedy Valve
3.	Medallion #F2545	Clow Valve
4.	5-¼" B-84-B	American-Darling Co.

2.02 HYDRANT CHARACTERISTICS

The hydrants shall have the following features:

- A. All hydrants shall meet the flow requirements of Section 2-103.21(B), Metropolitan Dade County Code. A certification for compliance with this standard must be available if requested.
- B. Type of shutoff shall be compression type closing, with the line pressure, and a minimum 5-1/4-inch valve opening.
- C. Barrels - Upper barrel with breakaway-from-lower-barrel feature shall be designed with a breakable safety connection of the flange and collar bolt-connected type joining the two barrels together. Lower barrel shall be of the same material as the hydrant shoe (inlet connection), and shall be designed so that the barrel can be removed from the hydrant shoe when the shoe (and valve) are under pressure. The drain outlets normally provided shall be omitted.
- D. Main valve stem - Upper stem shall have breakaway-from-lower-stem feature. Top of the lower stem shall be below the top of the lower barrel to prevent a vehicle tire from depressing the stem and opening the valve, or damaging both lower stem and lower barrel. Stem and seat removal shall be easily accomplished from the upper part of the lower barrel or the upper barrel.
- E. Main valve seat ring shall be bronze threaded into a fixed bronze bushing and shall be equipped with upper and lower O-ring seals, the lower of which shall seal against the hydrant elbow.
- F. Sealed lubricant reservoir shall provide lubrication to all threaded and bearing surfaces automatically, and shall be located in the bonnet. All hydrants shall be supplied with factory pre-lubrication.
- G. Inlet connection - Side inlet, 6-inch mechanical joint.
- H. Delivery classification - Two (2) hose and one (1) pump nozzle 18 inches above ground (bury line).
- I. Hose and pumper nozzles - Threaded, with O-ring seal, and the nozzle retained by stainless steel screws, or a left hand thread lug, slot and pipe plug lock system.

Hose nozzle diameter shall be 2-1/2 inches, and threads shall be in accordance with American National Standard.

Pumper nozzle (City of Miami Standard) shall be 4-inch inside diameter, 4 and 47/64-inch outside diameter of threads, 7 threads per inch, 0.143-inch pitch, right hand, V-form threads.

Pumper nozzle (Dade County Standard) shall have 4 and 1/2-inch diameter threads conforming to American National Standard.
- J. Bury length shall be as shown on the Plans or specified elsewhere herein.

- K. Operating and cap nuts (City of Miami Standard) shall be bronze to bronze, pentagonal, National Standard 1-1/8 inch point to flat, with operating nut weather cap.
- Operating and cap nuts (Dade County Standard) shall be bronze to bronze, pentagonal, National Standard 1-1/2 inch point to flat, with operating nut weather cap.
- L. Stuffing box - O-ring pressure seal.
- M. Direction to open shall be counterclockwise.
- N. Markings - Hydrants shall be cast marked or outside design shall be such that visible identification can be made as to manufacturer model (type). In addition, all hydrants approved as a "special" or "modified" hydrant shall be cast marked "Dade County, Florida".
- O. Color shall be chrome yellow.
- P. Harnessing lugs and nozzle cap gaskets will not be required.
- Q. Nozzle cap chains will not be required on the "Dade County Standard" hydrants; however, they will be required on the "City of Miami Standard" hydrants.

2.03 GUARD POST: See Section 15060, under "Pipe and Fittings: Galvanized Steel"

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Six-inch branch runs to the fire hydrant shall be constructed in accordance with all applicable portions of Section 15060 "Piping and Fittings", including making thrust resistant joints, installing 6-inch gate valve, tie-rods, riser pipe and valve boxes. Where the distance of any branch run from the main shall be fifty feet or greater, it shall be constructed with 8-inch diameter piping.
- B. New fire hydrants and branch runs shall be installed by the Contractor where shown on the Plans and in accordance with the Standard Details herein. Installation of a new fire hydrant shall include excavation, installation of the branch run, installation of the hydrant on the branch run, the concrete anchor at the hydrant elbow, protective concrete slab in non-sidewalk areas, replacing concrete sidewalk when in sidewalk area; steel posts filled with concrete, where required; plastic warning posts where required in FDOT right of way; backfilling and compaction. Fire hydrants shall be touched up or repainted with yellow paint, as specified, where necessary, and the same type of paint shall be used to paint the guard posts after treating the galvanized surface with a neutralizer.
- C. Some fire hydrants are factory lubricated, while others require lubrication after installation. The Contractor shall verify which type of hydrant has been furnished hereunder with the Engineer, and if required, shall lubricate each hydrant after its installation and prior to its operation.

- D. Lubricating hydrants will be considered as incidental to the hydrant installation, and no extra compensation will be provided for this work. Where existing fire hydrants are removed they shall be cleaned and returned to the Water and Sewer Department storage yard(s), as directed by the Department.
- E. Fire hydrants being retired shall be salvaged by excavating the entire hydrant assembly including the bottom shoe. Using caution so as not to damage any component of the hydrant assembly, remove the entire hydrant assembly including the shoe, carefully clean of any thrust block concrete, clean, load, transport, unload and store in a Department storage yard as directed by the Engineer. Fire hydrant feed mains shall be cut, plugged and thrust blocked if they are to remain connected to an active main line. Lines which are deactivated (ie not connected to an active main) shall be abandoned or removed as called for on the Plans.
- E. Unless otherwise objected by the local municipality or governing agency having jurisdiction over the work, the Contractor shall furnish and install concrete-filled steel guard post in accordance with the Standard Details.

END OF SECTION