

# CITY OF HOUSTON

Department of Public Works and Engineering

**Annise D. Parker**

Mayor

Dale A. Rudick, P.E.  
Director  
P.O. Box 1562  
Houston, Texas 77251-1562

T. 832.395.2500  
F. 832.395.2480  
[www.houstontx.gov](http://www.houstontx.gov)

October 14, 2015

Subject: Letter of Clarification No. 3  
Notice of Request for Qualification Revised  
City of Houston Standard Specification Revised

Reference: Invitation to Bid (ITB) No.: Q25429

To All Prospective Bidders:

This Letter of Clarification is issued for the following reasons:

- To revise the above referenced solicitation as follows:

In Part D: Engineering Standards: Page 6 of 14, Add sentence to end of Paragraph 2.

**1. PART D: ENGINEERING STANDARDS**

Copper alloys that contain more than 16% zinc shall not be used unless specimens of the alloy tested in accordance with ISO 6509 exhibit dezincification depth of less than 25µm.

**2. City of Houston Standard Specification**

Replace City of Houston Fire Hydrants Standard Specification Section 02520 09/18/2015 with "Revised City of Houston Fire Hydrants Standard Specification Section 02520 10/08/2015".

This Letter of Clarification will be considered part of the solicitation referenced above. All revisions, responses, and answers incorporated into the Letter(s) of Clarification are collaboratively from both the Strategic Procurement Division and the applicable City Department(s).

Furthermore, it is the responsibility of each BIDDER to obtain any previous Letter(s) of Clarification associated with this solicitation.

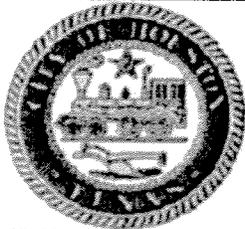
*Ted Hockless*

Ted Hockless  
Procurement Specialist  
PW&E  
2805 McKinney  
Houston, Tx 77003  
832.395.3644

DM:TH:th  
C: file

*Partnering to better serve Houston*

**Council Members:** Helena Brown Jerry Davis Ellen Cohen Wanda Adams Mike Sullivan Ai Hoang Oliver Pennington Edward Gonzalez  
James G. Rodriguez Mike Laster Larry Green Stephen C. Costello Andrew Burks Melissa Noriega C.O. "Brad" Bradford  
Jack Christie **Controller:** Ronald C. Green



**CITY OF HOUSTON  
PUBLIC WORKS & ENGINEERING  
DEPARTMENT**  
2015 Fire Hydrant Certification  
NOTICE OF REQUEST FOR QUALIFICATIONS

**Material Management  
Contracts Conference Room  
2<sup>nd</sup> Floor 2805 McKinney  
Houston Texas 77003**

APPLICANT'S NAME: \_\_\_\_\_

Engineering Control Drawings:

- Two (2) copies of detailed engineering drawings including parts list and material specifications for each hydrant offered shall be provided. The engineering drawings shall bear the seal or identification number of a registered professional engineer in responsible charge for the preparation of the engineering drawings and "in the employment of the manufacturer" under the engineering drawings. The engineering drawings shall include a unique drawing number and a descriptive legend identifying the fire hydrant as "Per City of Houston Specifications".
- Provide by separate attachment, the names and telephone numbers of key representatives of at least three (3) cities with population greater than 100,000 currently using the manufacturer's hydrant of substantially the same design with a minimum total usage of 1,000 in the last ten years. Failure to provide at least three (3) references may be cause for disqualification.

Test Reports:

- Submit and Affidavit of Compliance from the fire hydrant manufacturer, certifying that the proposed hydrant and an material used in the construction will conform to the applicable requirements of American Water Works Association (AWWA C502-05) and the City of Houston Specifications and that all tests specified therein (i.e. AWWA C502-05) will be performed and all test requirements will be met on each hydrant provided under this certificate.

**PART D: ENGINEERING STANDARDS**

[Note: Compliance with each requirement under this part (Part D) is to be clearly identified on the Engineering Control Drawings submitted under Part C.6 of the application.]

Certificated fire hydrants shall conform to the requirements and tests of AWWA Standard C502-05, or latest revision thereof, entitled, "AWWA Standard for Dry-Barrel Fire Hydrants" as to their design, component materials, construction, manufacture and testing except as modified or supplemented hereinafter. Note that the maximum lead content of any material exposed to potable water (under either closed or open hydrant conditions) is to be 8%; maximum zinc content shall be less than 15%; "Natural" rubbers are to be formulated to be resistant to microbiological attack. Copper alloys that contain more than 16% zinc shall not be used unless specimens of the alloy tested in accordance with ISO 6509 exhibit dezincification depth of less than 25µm.

1. Outlet Nozzles

Each hydrant shall be equipped with two (2), two and one-half inch (2-1/2") nominal inside diameter hose nozzles and one (1) four inch (4") nominal inside diameter pumper nozzle conforming to National (American) Standard Fire Hose Coupling Screw Threads (per NFPA No. 194 and ANSI B26-192S latest revision). Nozzles shall be securely fastened into the upper barrel by mechanical means, and shall be locked in place with a security device. Nozzle caps shall be furnished complete with "Natural" rubber or neoprene gasket and shall be securely attached to the hydrant barrel with chains of not less than one-eighth inch (1/8") diameter. The pumper nozzle shall be so situated as to allow an unobstructed radius of eighteen inches (18") from the threaded surface of the nozzle throughout the path of travel of a wrench or other device used to fasten a hose to the nozzle.

Section 02520

FIRE HYDRANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire hydrants.
- B. Adjustment of fire hydrants and gate valves.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
  - 1. Payment is on a unit price basis for each fire hydrant assembly, including 6-inch gate valve and box, installed regardless of barrel depth.
  - 2. Payment for fire hydrant branches (leads) is on linear foot basis for each branch installed. Separate pay items are used for open-cut and augured branches.
  - 3. Payment for salvaged fire hydrants is on unit price basis for each fire hydrant removed and returned to City's Maintenance Quadrant Stock yard.
  - 4. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. AWWA C 502 – Standard for Dry Barrel fire Hydrants (Latest Edition).
- B. AWWA C 550 - Standard for Protective Epoxy Interior Coatings for Valves and Hydrants
- C. SSPC SP2 - Hand Tool Cleaning
- D. SSPC SP3 - Power Tool Cleaning
- E. SSPC SP10 - Near-White Blast Cleaning
- F. SSPC SP11 - Power Tool Cleaning to Bare Metal

- G. SSPC 42 – Epoxy Polyamide/Polyamidoamine Primer, performance based
- H. SSPC 36 – Two-Component Weatherable Aliphatic Polyurethane Topcoat, performance based

#### 1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit name of hydrant manufacturer, type of bonnet paint, and engineering control drawing number for hydrant proposed for use.

### PART 2 PRODUCTS

#### 2.01 HYDRANTS

- A. Provide fire hydrants in conformance with AWWA C 502, Standard for Dry Barrel Fire Hydrants (Latest Edition). Hydrants are approved by the City for issuance of a Certificate of Responsibility. Only hydrants with current Certification of Responsibility will be allowed in City of Houston projects. Approved fire hydrants are listed under City's Approved Water Product List.  
<http://documents.publicworks.houstontx.gov/document-center/approved-water-products/index.htm>
- B. The Project Manager may, at any time prior to or during installation of hydrants, randomly select furnished hydrant for disassembly and laboratory inspection, at City expense, to verify compliance with Specifications. When hydrant is found to be non-compliant, replace, at Contractor's expense, hydrants, with hydrants that comply with Specifications.
- C. Provide lower hydrant barrel fabricated from Ductile Iron Pipe as single piece, connected to upper hydrant barrel by means of joint coupling that will provide three hundred sixty degree (360) rotation of upper barrel.

#### 2.02 LEADS

- A. Branches (Leads): Conform to requirements of Section 02501 - Ductile Iron Pipe and Fittings, Section 02502 - Steel Pipe and Fittings, and Section 02506 - Polyvinyl Chloride Pipe.

#### 2.03 HYDRANT PAINTING

- A. New hydrants and refurbished hydrants shall be shop coated as specified herein.

- B. Exterior Above Traffic Flange (Including Bolts & Nuts). Bolts and nuts (both above and below ground) shall conform to AWWA C-502 Section 4.11 and shall be stainless steel, cadmium plated, or zinc coated.
1. Surface preparation to be in accordance with SSPC-SP 10 (NACE 2) near white blast cleaned surface.
  2. Coat with a liquid or powder epoxy primer and two part polyurethane or TGIC polyester top coat system with total dry film thickness (DFT) of 2-10 mils as follows:
    - a. Prime Coat - Liquid or powder epoxy primer with a total dry film thickness (DFT) of 4-6 mils, OR cathodic epoxy electro-coat (e-coat) with a (DFT) of 0.5-1.0 mils.
    - b. Intermediate Coat – Intermediate coat not required.
    - c. Finish Coat - Two part polyurethane enamel to be in general conformance with SSPC Paint Specification No. 36 or TGIC polyester system, with a total dry film thickness (DFT) 1.5-3.0 mils. Install color coded finish coating of bonnet in field.
    - d. Bonnet Paint - Field apply finish coat of Silicone Alkyd Resin Enamel to be in general conformance with SSPC Paint Specification No. 21. Dry film thickness of 2 - 3 mils. Bonnet colors are to be as specified in Paragraph 3.01 to designate the appropriate size of water supply line.
  3. Colors - Primer: Manufacturer's standard color. Finish coat of hydrant body: Federal Standard Color #15187 (Blue) or equivalent. Bonnet and Connection caps: Finished coated white. Paint white band of finish coat two (2) inches in width on hydrant body approximately six inches (6") above and parallel to traffic flange.
- C. Field Maintenance Painting (Exterior Above Traffic Flange)
1. Surface Preparation to be in accordance with SSPC - SP2, Hand Tool Cleaning, or SSPC - SP3, Power Tool Cleaning, depending on condition of existing paint and extent of corrosion. It is not necessary to remove tightly adhered mill scale, rust, and paint. Mill scale, rust and paint are considered tightly adherent when they cannot be removed with dull putty knife. In some severe cases where it is necessary to remove majority of existing paint, surface should be cleaned in accordance with SSPC -SP11, Power Tool Cleaning to Bare Metal.
  2. When surface is cleaned to bare metal (SSPC - SP11), coat hydrant with three coat Alkyd/Silicone Alkyd system in accordance with Paragraph 2.03.B.2 as for new hydrants. When surface is cleaned to SSPC - SP2 or SSPC - SP3, coat hydrant with

Silicone Alkyd Resin Enamel in general conformance with SSPC Paint Specification No. 21. Total dry film thickness of 3-6 mils.

Field coating should be conducted in accordance to the individual coatings manufacturer's recommendations.

- D. Exterior Below Traffic Flange (including lower barrel extensions).
  - 1. Surface preparation in accordance with SSPC- SP10 (NACE 2) Near White Blast Cleaned Surface.
  - 2. Primer: Two coats of modified polyamide epoxy primer, to be in general conformance with SSPC Paint Specification No. 42 or approved equal with a total dry film thickness (DFT) of 8-12 mils. Color of finish coat to be same as finish coat for exterior above traffic flange, i.e., blue. (Federal Standard Color #15187 (Blue) or equivalent.)
  
- E. Interior Surfaces Above and Below Water Line Valve (including lower barrel extensions)
  - 1. Material used for internal coating of hydrant interior ferrous surfaces must be NSF certified as suitable for contact with potable water as required by Chapter 290, Rules and Regulations for Public Water Systems, Texas Commission on Environmental Quality.
  - 2. Coating shall be liquid or powder epoxy system in accordance with AWWA Standard C - 550 (latest revision). Coating may be applied in two or three coats, according to manufacturer's recommendations, for total dry film thickness of 4-12 mils.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

- A. Set fire hydrant plumb and brace at locations and grades as shown on Drawings. When barrel of hydrant passes through concrete slab, place 1-inch-thick piece of standard sidewalk expansion joint material around section of barrel passing through concrete.
- B. Locate nozzle center line minimum 18 inches above finish grade.
- C. Place 12-inch by 12-inch yellow indicators (plastic, sheet metal, plywood, or other material approved by Project Manager) on pumper nozzles of new or relocated fire hydrants installed on new water lines not in service. Remove indicators after new water line is tested and approved by Project Manager.
  
- D. Do not cover drain ports when placing concrete thrust block.

- E. Obtain Project Manager's approval in writing prior to installation of hydrants which require changes in bury depth due to obstructions not shown on Drawings. Unit price adjustments will not be allowed for changes in water line flow line or fire hydrant barrel length caused by obstructions.
- F. Plug branch lines to valves and fire hydrants shown on Drawings to be removed. Deliver fire hydrants designated for salvage to nearest Utility Maintenance Quadrant Facility.
- G. Install branches (leads) in accordance with Section 02511 - Water Lines.
- H. Coating Requirements:
  - 1. Apply coatings in strict accordance with manufacturer's recommendations. No requirements of this specification shall cancel or supersede written directions and recommendations of specific manufacturer so as to jeopardize integrity of applied system.
  - 2. Furnish affidavit of compliance that coatings furnished complies with requirements of this specification and referenced standards, as applicable.
- I. Use following color code for field coating of hydrant bonnet to indicate size of water line supplying hydrant:

<b>Supply Water Line Diameter (inches)</b>	<b>Bonnet Color</b>
6	Yellow
8	White
12-20	Green
24 and larger	Orange

- J. Remove and dispose of unsuitable materials and debris in accordance with requirements of Section 01576 - Waste Material Disposal.

END OF SECTION