

Addendum #1

INVITATION FOR BIDS



**FIRE STATION #3
IFB # 2010-3946-1905**

January 7, 2010
City of Newport News
Office of the Purchasing Director
2400 Washington Avenue
Newport News, VA 23607
Phone: (757) 926-8035/ Fax: (757) 926-8038
<http://www.nngov.com/purchasing>

Please note the following changes:

Clarifications, Q&A, and changes are on the following pages and shall be considered part of the specifications.

Due date: **January 21, 2010, 3:30 PM**

Acknowledge and return with bid.

Company Name: _____

Signature: _____ Date: _____

Fire Station No. 3
Addendum 1

Question 1:

There are no specifications for the markerboards and tackboards or stainless steel corner guards as shown in the drawings.

Answer 1:

See Note 4, Sheet A15 for Markerboard / Tackboard requirements.

Corner guards shall be 3-1/2" x 16 ga. by the height of exposed wall and mechanically fastened at 15" oc. maximum in countersunk holes with stainless steel fasteners. The guards specified at cased door openings shall be fabricated for the thickness of the wall with 3 1/2" returns x 16 ga. mechanically fastened at 15" oc. maximum. All finishes shall be satin finished type 304 stainless steel.

Question 2:

Can we get the AISC certification waived on this Project:

Answer 2:

No, certification and proof of will be required.

Question 3:

Could you also send me a wage scale on this project?

Answer 3:

Is included in this addendum.

Question 4:

1. Is low-voltage cabling for the voice/data network at the fire station a part of the scope?
 - a. If so, is there a preferred manufacturer used for this type of cabling (Belden, CommScope, or Corning)?
 - b. Are you looking at Cat5/Cat6?
 - c. Based on the manufacturer will you be purchasing materials through a Graybar, Annixter type or will that be bid out as well?

2. Will key-card access or security cameras be a part of the scope?
 - a. If so, is there a preferred manufacturer used for this type of physical security (Pelco, Bosch, or Sony)?
 - b. Will they be IP or Analog based and about how many?

Answer 4:

The low voltage data / voice cabling is by the City, the boxes and conduits are by the contractor.

Rough-in for a future City supplied door access system is included. Cabling and hardware will be by the City.

Question 5:

1. Please reference drawing C2, at handicap signs:
 - a. Please confirm that sign type R7-8b should be R7-8P.
 - b. Please also confirm that both of the two locations should receive a type R7-8 handicap sign as well as an R7-8P van accessible plaque.

Answer 5:

Please see the sign detail on sheet C7. Both spaces are van accessible.

Question 6:

Please reference drawing C2, at Emergency Vehicles Only sign:
Please verify if sign type R5-11 "Authorized Vehicles Only" should be used.

Answer 6:

Provide language as specified "Emergency Vehicles Only".

Question 7:

Are the floor new or is it a renovation of an existing space?

Answer 7:

This is a new fire station.

Question 8:

Is Epoxy type grout used throughout all ceramic floor and wall tile, or is Epoxy grout limited to the Quarry Tile Areas only?

Answer 8:

Epoxy type grout is only used for the Quarry Tile areas.

Question 9:

Please note that the QT specified is available in a 6x6 size, not the 8x8 size specified.

Answer 9:

Use 6x6 tile in the colors specified. See revised kitchen layout dimensions on the attached .pdf document.

Question 10:

Please note that the CT-6 wall tile base (color 171 City Line Kohl) is a Color Group #3 product. No color Group #3 products are available as ceramic cove base. For bidding purposes we are using ceramic cove base out of color group one to match the wall field tile.

Answer 10:

Provide CT-5 Cove Base in lieu of the specified CT-6 color. Substitute CT-6 color for accent band (CT-5) above the cove base.

Question 11:

On sheet C4 on the right of the apparatus bay there is a temporary sediment trap area with a temporary chain link fence 8' off of the building.

This restricted area is going to have an impact on accessing the back and side of the building during construction. What is the time limit for keeping this sediment pond in place?

Is there a chance the temporary sediment pond could be relocated to the end of the parking lot, in the upper left hand area of the property, since this is the low end of the property, grade wise. Not sure why the temporary pond is on the high side, isn't the site drainage supposed to go to the pond during construction? If so, the temporary stockpile area could be switched with the pond area.

Answer 11:

“The sediment trap is a required sediment control structure that shall be in place until such time as the site achieves final stabilization, or the need for the temporary measure is removed. This trap shall be required until such time that it is approved to be removed by the City E&S inspectors, which will directly relate to the contractors sequence of operations in the field.

As for the location of the structure, the contractor has the option to submit an alternate location for such trap provided that this new location complies with all federal, state and local laws and codes. Any relocation of the structure shall be the contractor's responsibility to submit and receive approval from all authorities including the state and local city departments.

Please review the contract documents, the area of the soil stock pile area is in fact the high side of the site, with drainage falling towards the east and south. The volume indicated on Sheet C4 is the approved volume of the sediment trap. A minimal access has been provided (8' as you indicated) between the south wall of the apparatus bay and the trap location to facilitate the construction of this wall. Notes clearly require the paving and curb placement not occur until after the removal of this trap.”

Question 12:

1. Section 08520 Aluminum Windows

Spec section 08520.2.1 calls out an outdated blast spec section. This specification has been replaced by The Department of Defense Minimum Anti-terrorism Standard for Buildings UFC 4-010-01 issued October 2003 and updated January 2007. Is it the intent of the architect for Fire Station #3 to have a blast spec OR is the intent for windows to be hurricane or impact resistant.

2. Section Aluminum Entrances & Storefronts

There is no mention in the specifications calling for the aluminum entrances and storefronts to be blast or impact resistant as required in the specs for the aluminum windows. Please clarify.

Answer 12:

1. Window Elevation E on Sheet A12 is required to be impact resistant glazing in a fixed aluminum frame. There is not any blast resistant requirements for the windows.
2. The storefront systems require safety glazing per the requirements identified on Sheet A12 and specification section 08800.

Question 13:

Please verify material fittings and piping allowed for above ground interior storm piping. Table 1 in Specification Section 15400, page 27, lists threaded cast iron fittings used with **seamless** galvanized piping for interior rainwater conductors aboveground only. Can PVC Schedule 40 or C/I No Hub be used?

Answer 13:

CISPI 301 No-Hub Cast Iron pipe and fittings with CISPI 310 No-Hub couplings can be used for rainwater conductors.

Question 14:

Request provide specifications/schedules for Grease Interceptor and Oil Interceptor shown on Drawings P4 and P9.

Answer 14:

Provide Oil Interceptor similar to Jay R. Smith 8599 Series with 500 gallon capacity. Interceptor shall be fabricated steel with diamond-plate cover. Internally coated with coating similar to Duco and coal tar coated outside. Provide with flow control fitting. Provide 6-inch precast 3000 psi concrete pit with H-20 traffic-rated watertight access cover. Refer to Oil Interceptor Concrete Pit Detail on Sheet P9 for additional details.

Delete Grease Interceptor Detail on Sheet P9.

Provide Grease Interceptor similar to Jay R. Smith 8000 Series with 50 gpm rated flow and 100 lb grease capacity. Interceptor shall be coated steel with coating similar to Duco applied to inside and outside. Provide with flow control fitting. Provide 6-inch precast 3000 psi concrete pit with H-20 traffic-rated watertight access cover.

Question 15:

1. How many & what type of vehicles are intended to be housed?
2. How many hose drops are required?
3. Will the vehicles drive through bays or back in?
4. Are all vehicles equipped with undercarriage exhaust pipes discharging on the passenger side?
5. Are any vehicles equipped with vertical exhaust stacks?

Answer 15:

1. One Engine, one ladder truck, one medic unit, one staff vehicle (Battalion Chief), one reserve engine, one spare bay.
2. Design for six drops total. (Six vehicles)
3. Designed for drive through bays.
4. Designed for drivers side discharge on the Ambulance(sw) and passenger side discharge for all other apparatus.
5. Not specified for any vertical stacks.

Question 16:

By way of this facsimile/email we are requesting the opportunity to provide a quotation for the above referenced job based on manufacturers our company represents. Material shall be equal in construction & performance as material specified.

<u>Description</u>	<u>Spec. Section</u>	<u>Manufacturer</u>
Overhead Vehicle Tailpipe Exhaust Removal System	15890	National System of Garage Ventilation, Inc (NSGV)

Answer 16:

Any manufacturer that meets the performance requirements for the job will be acceptable. If the manufacturer submits the required project submittal to demonstrate their product is equal in performance and materials to the specified system, there is no reason why the manufacturer would be excluded from providing the system for the job.

Add the following Specification Sections and Sketch to the Contract Document:

Section 104413 – Fire Extinguisher Cabinets

Section 107500 – Flagpoles

Add – Sketch (Kitchen Ceramic Floor Tile)

1Davis-Bacon Wage Decision - VA20080003

GENERAL DECISION: VA20080003 08/14/2009 VA3

Date: August 14, 2009

General Decision Number: VA20080003 08/14/2009

Superseded General Decision Number: VA20070003

State: Virginia

Construction Type: Building

County: Newport News* County in Virginia.

*INDEPENDENT CITY OF NEWPORT NEWS (INCLUDING FORT EUSTIS)

BUILDING CONSTRUCTION PROJECTS (Does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	02/08/2008
1	05/02/2008
2	05/16/2008
3	03/06/2009
4	03/20/2009
5	04/24/2009
6	05/01/2009
7	08/14/2009

ELEC1340-001 04/01/2009

	Rates	Fringes
Electricians.....	\$ 22.72	7.83

ENGI0147-007 05/01/2008

	Rates	Fringes
Power equipment operators:		
Cranes, Under 90 tons.....	\$ 23.84	8.69%+6.60
Oilers.....	\$ 16.80	8.69%+5.10

IRON0079-002 05/01/2009

	Rates	Fringes
Ironworkers:		
Structural and Rigging.....	\$ 23.40	6.5%+9.72

LAB00388-001 03/01/2006

	Rates	Fringes
Mason tender, brick.....	\$ 13.20	3.30

* PLUM0540-005 05/01/2009

	Rates	Fringes
Pipefitters (Including HVAC Pipe work).....	\$ 25.25	12.57

1Davis-Bacon Wage Decision - VA20080003
SUVA1999-005 06/11/1999

	Rates	Fringes
Carpenters (Including Form Work and Excluding Drywall Hanging and Acoustical Ceiling work).....	\$ 12.75	
Cement Finisher/Mason.....	\$ 12.11	
Drywall Finishers.....	\$ 12.50	
Drywall Hanger.....	\$ 12.50	
HVAC MECHANIC (Installation and Repair ONLY).....	\$ 15.00	
Laborer, Unskilled.....	\$ 7.34	
PLASTERER.....	\$ 11.40	
Plumbers.....	\$ 15.65	3.19
Power equipment operators:		
Backhoes.....	\$ 10.23	
Bulldozers.....	\$ 11.30	
Forklifts.....	\$ 8.58	
Loaders.....	\$ 10.30	
Sheet Metal Worker (HVAC Duct Work ONLY).....	\$ 15.00	
Truck Driver, Dump.....	\$ 9.00	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
 - * a survey underlying a wage determination
 - * a Wage and Hour Division letter setting forth a position on

1Davis-Bacon Wage Decision - VA20080003

- a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

with regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SECTION 104413 - FIRE EXTINGUISHER CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Fire protection cabinets for the following:
 - a. Portable fire extinguishers.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire protection cabinets.
 - 1. Fire Protection Cabinets: Include roughing-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style.
 - 2. Show location of knockouts for hose valves.
- B. Shop Drawings: For fire protection cabinets. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples for Initial Selection: For each type of fire protection cabinet indicated.
- D. Product Schedule: For fire protection cabinets. Coordinate final fire protection cabinet schedule with fire extinguisher schedule to ensure proper fit and function.

1.4 QUALITY ASSURANCE

- A. Fire-Rated, Fire Protection Cabinets: Listed and labeled to comply with requirements in ASTM E 814 for fire-resistance rating of walls where they are installed.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.5 COORDINATION

- A. Coordinate size of fire protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.
- B. Coordinate size of fire protection cabinets to ensure that type and capacity of fire hoses, hose valves, and hose racks indicated are accommodated.
- C. Coordinate sizes and locations of fire protection cabinets with wall depths.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.
- B. Aluminum: Alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated, and as follows:
 - 1. Sheet: ASTM B 209.
 - 2. Extruded Shapes: ASTM B 221.
- C. Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1 (clear).

2.2 FIRE PROTECTION CABINET (See Sheet TS2 for schedule and location)

- A. Provide Fire Extinguishers with cabinets.
- B. Cabinet Type: Suitable for fire extinguisher.
- C. Cabinet Construction: Rating as required.
 - 1. Fire-Rated Cabinets: Construct fire-rated cabinets with double walls fabricated from 0.0428-inch- thick, cold-rolled steel sheet lined with minimum 5/8-inch- thick, fire-barrier material. Provide factory-drilled mounting holes.
- D. Cabinet Material: Aluminum sheet.
 - 1. Shelf: Same metal and finish as cabinet.
- E. Semirecessed Cabinet: Cabinet box partially recessed in walls of sufficient depth to suit style of trim indicated; with one-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend). Provide where walls are of insufficient depth for recessed cabinets but are of sufficient depth to accommodate semirecessed cabinet installation.
 - 1. Square-Edge Trim: 1-1/4- to 1-1/2-inch backbend depth.

- F. **Surface-Mounted Cabinet:** Cabinet box fully exposed and mounted directly on wall with no trim. Provide where walls are of insufficient depth for semirecessed cabinet installation.
- G. **Cabinet Trim Material:** Aluminum sheet.
- H. **Door Material:** Aluminum sheet.
- I. **Door Style:** Vertical duo panel with frame.
- J. **Door Glazing:** Tempered float glass (clear).
- K. **Door Hardware:** Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - 1. Provide recessed door pull and friction latch.
 - 2. Provide continuous hinge, of same material and finish as trim, permitting door to open 180 degrees.
- L. **Accessories:**
 - 1. **Mounting Bracket:** Manufacturer's standard steel, designed to secure fire extinguisher to fire protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
 - 2. **Break-Glass Strike:** Manufacturer's standard metal strike, complete with chain and mounting clip, secured to cabinet.
 - 3. **Lettered Door Handle:** One-piece, cast-iron door handle with the word "FIRE" embossed into face.
 - 4. **Identification:** Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as directed by Architect.
 - a. Identify fire extinguisher in fire protection cabinet with the words "FIRE EXTINGUISHER."
 - 1) **Location:** Applied to cabinet glazing.
 - 2) **Lettering Color:** Red.
 - 3) **Orientation:** Vertical.
- M. **Finishes:**
 - 1. **Aluminum:** Color anodic.

2.3 FABRICATION

- A. **Fire Protection Cabinets:** Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.
 - 1. Weld joints and grind smooth.
 - 2. Provide factory-drilled mounting holes.
 - 3. Prepare doors and frames to receive locks.
 - 4. Install door locks at factory.

- B. **Cabinet Doors:** Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles selected.
 - 1. Fabricate door frames with tubular stiles and rails and hollow-metal design, minimum 1/2 inch thick.
 - 2. Fabricate door frames of one-piece construction with edges flanged.
 - 3. Miter and weld perimeter door frames.
- C. **Cabinet Trim:** Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

2.4 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces of fire protection cabinets from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire protection cabinets after assembly.
- D. **Appearance of Finished Work:** Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.5 ALUMINUM FINISHES

- A. **Color Anodic Finish:** AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
 - 1. **Color:** As selected by Architect from full range of industry colors and color densities.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where semirecessed cabinets will be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare recesses for semirecessed fire protection cabinets as required by type and size of cabinet and trim style.

3.3 INSTALLATION

- A. **General: Install fire protection cabinets in locations and at mounting heights indicated acceptable to authorities having jurisdiction.**

3.4 ADJUSTING AND CLEANING

- A. **Remove temporary protective coverings and strippable films, if any, as fire protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.**
- B. **Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.**
- C. **On completion of fire protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.**
- D. **Touch up marred finishes, or replace fire protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire protection cabinet and mounting bracket manufacturers.**
- E. **Replace fire protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.**

END OF SECTION 104413

SECTION 107500 - FLAGPOLES**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes ground-mounted flagpoles made from aluminum.
- B. Owner-Furnished Material: Flags. (up to 2 per pole)
- C. Related Sections:
 - 1. "Exterior Lighting" for site lighting fixtures.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Flagpole assemblies, including anchorages and supports, shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to the following design criteria:
 - 1. Seismic Loads: Loads indicated on Sheet S1 according to SEI/ASCE 7.
 - 2. Wind Loads: 100 MPH and exposure B according to SEI/ASCE 7.
 - 3. Base flagpole design on polyester flags of maximum standard size suitable for use with flagpole or flag size indicated, whichever is more stringent.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, operating characteristics, fittings, accessories, and finishes for flagpoles.
- B. Shop Drawings: For flagpoles. Include plans, elevations, details, and attachments to other work. Show general arrangement, jointing, fittings, accessories, grounding, anchoring, and support.
 - 1. Include section, and details of foundation system for ground-mounted flagpoles.
- C. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.

D. **Delegated-Design Submittal:** For flagpole assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Include loads, point reactions, and locations for attachment of flagpoles to building's structure.

E. **Qualification Data:** For qualified professional engineer.

F. **Operation and Maintenance Data:** For flagpoles to include in operation and maintenance manuals.

1.5 QUALITY ASSURANCE

A. **Source Limitations:** Obtain flagpole as complete unit, including fittings, accessories, bases, and anchorage devices, from single source from single manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. **General:** Spiral wrap flagpoles with heavy paper and enclose in a hard fiber tube or other protective container.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. **Manufacturers:** Subject to compliance with requirements, provide product by one manufacturer:

2.2 FLAGPOLES (See sheet C2 and C7)

A. **Flagpole Construction, General:** Construct flagpoles in one piece if possible. If more than one piece is necessary, comply with the following:

1. Fabricate shop and field joints without using fasteners, screw collars, or lead caulking.
2. Provide flush hairline joints using self-aligning, snug-fitting, internal sleeves.
3. Provide self-aligning, snug-fitting joints.

B. **Exposed Height:** 30 feet and 35 feet.

C. **Aluminum Flagpoles:** Provide cone-tapered flagpoles fabricated from seamless extruded tubing complying with ASTM B 241/B 241M, Alloy 6063, with a minimum wall thickness of 3/16 inch.

D. **Metal Foundation Tube:** Manufacturer's standard corrugated-steel foundation tube, not less than 0.064-inch- nominal wall thickness. Provide with 3/16-inch steel bottom plate and support plate; 3/4-inch- diameter, steel ground spike; and steel centering wedges welded together.

Galvanize steel after assembly. Provide loose hardwood wedges at top of foundation tube for plumbing pole.

1. Provide flashing collar of same material and finish as flagpole.
2. Provide steel ground protectors extending 12 inches aboveground and 6 inches belowground for steel flagpoles where flashing collars are not provided.

2.3 FITTINGS

- A. **Finial Ball:** Manufacturer's standard flush-seam ball, sized as indicated or, if not indicated, to match flagpole-butt diameter.
 1. 0.063-inch spun aluminum with gold anodic finish.
- B. **Internal Halyard, Winch System:** Manually operated winch with control stop device and removable handle, stainless-steel cable halyard, and concealed revolving truck assembly with plastic-coated counterweight and sling. Provide flush access door secured with cylinder lock. Finish truck assembly to match flagpole.
 1. **Halyard Flag Snaps:** Provide four stainless-steel swivel snap hooks per halyard.
 - a. Provide with neoprene or vinyl covers.

2.4 MISCELLANEOUS MATERIALS

- A. **Nonshrink, Nonmetallic Grout:** Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107.
- B. **Drainage Material:** Crushed stone, or crushed or uncrushed gravel; coarse aggregate.
- C. **Sand:** ASTM C 33, fine aggregate.
- D. **Elastomeric Joint Sealant:** Single-component nonsag urethane joint sealant complying with requirements in Division 07 Section "Joint Sealants" for Use NT (nontraffic) and for Use M, G, A, and, as applicable to joint substrates indicated, for Use O.
- E. **Bituminous Paint:** Cold-applied asphalt emulsion complying with ASTM D 1187.

2.5 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. **Appearance of Finished Work:** Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 ALUMINUM FINISHES

- A. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
 - 1. Color: Dark bronze.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, including foundation; accurate placement, pattern, orientation of anchor bolts, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare uncoated metal flagpoles that are set in foundation tubes by painting below-grade portions with a heavy coat of bituminous paint.
- B. Foundation Excavation: Excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete. Place and compact drainage material at excavation bottom.
- C. Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure and brace forms to prevent displacement during concreting.
- D. Place concrete, as specified in Division 03 Section "Cast-in-Place Concrete." Compact concrete in place by using vibrators. Moist-cure exposed concrete for not less than seven days or use nonstaining curing compound.
- E. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks, and uniform in texture and appearance. Provide positive slope for water runoff to perimeter of concrete base.

3.3 FLAGPOLE INSTALLATION

- A. General: Install flagpoles where shown and according to Shop Drawings and manufacturer's written instructions.
- B. Ground Set: Place foundation tube, center, and brace to prevent displacement during concreting. Place concrete. Plumb and level foundation tube and allow concrete to cure. Install flagpole, plumb, in foundation tube.
 - 1. Foundation Tube: Place tube seated on bottom plate between steel centering wedges and install hardwood wedges to secure flagpole in place. Place and compact sand in

foundation tube and remove hardwood wedges. Seal top of foundation tube with a 2-inch layer of elastomeric joint sealant and cover with flashing collar.

- C. Mounting Brackets and Bases: Anchor brackets and bases securely through to structural support with fasteners as indicated on Shop Drawings.

END OF SECTION 107500