

SECTION 10 14 00

EXTERIOR SIGNAGE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section specifies the Work required to furnish and install the indicated and specified exterior Cemetery site signage systems, including, but not limited to, posts.
- B. Signs shall be products of manufacturers regularly engaged in manufacturing signs of types specified.
- C. Signs included are as follows:
 - 1. Pylon Section Marker
 - 2. Faucet Post with Sign Panel

1.2 RELATED WORK

- A. Cast Stone Masonry Posts and Bases: Section 04 72 00 CAST STONE MASONRY.
- B. Post Setting Excavation, Material, Backfill, Section 31 20 00, EARTH MOVING.
- C. Flower Watering Station piping, appurtenances and mounting: Section 32 30 00 SITE FURNISHINGS.

1.3 MANUFACTURER'S QUALIFICATIONS

- A. Sign manufacturer shall regularly and presently manufacture signs similar to those specified as one of their principal products. Sign manufacturer shall submit qualifications demonstrating a minimum of three years of experience manufacturing the qualifying signs and shall, if possible, demonstrate the successful manufacturing of exterior site signs installed at one or more State or National Veteran Cemeteries.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: Submit three (3) sets. One set to the site for Contractor's reference, one set to the COR and one set to the A/E. The Contractor shall provide submittal documents that indicate each of the sign types, mounting types and materials to be used for the various combinations to be used for this project. Submittal materials shall indicate the location(s) for the various sign types including their mounting.
 - 1. Post and panel sign mock-up, not less than 8 inches by 10 inches and as otherwise indicated or specified in this and other Sections, shall be

constructed and submitted, showing typical color, texture and fonts shown on Contract Drawings. Mock-up shall show typical fabrication methods, including panel to post connection, signs, and concrete collar fit. Mock-ups of sign systems for post mounted signs shall be capable of demonstrating how the sign panels are to be removed and replaced from the posts, or mounting support system attached to the posts, without moving the posts. Top surface of the sign panel shall not contain screws or metal joints that could trap or allow water to enter the sign assembly.

2. Aluminum samples showing full range of finish colors available.
 3. Color samples of each color, 6 inches x 6 inches. Show anticipated range of color and texture.
 4. Sample of typeface, arrow and symbols in a typical full size layout.
- C. Shop Drawings: All signs showing material, finish, colors, size of members, details of construction, fonts, letter style, letter spacing, size and type, numbers, symbols or image details, mounting details, and posts and concrete collars. Identify materials, show joints, welds, anchorage, accessory items, mounting and finishes. The details of construction shall clearly show how the sign is to be disassembled to replace the entire sign or just one side panel, where applicable.
- D. Manufacturer's Literature and Data (Mark literature to indicate items proposed to be furnished): Signs, each type. Manufacturer's printed Specifications, anchorage details, installation and maintenance instructions. Manufacturer's recommendations for mounting the sign panels shall be provided.
- E. Manufacturer's Certificates: Provide certification from the coating installer, indicating exactly what they did to prepare the aluminum and apply the coating(s) to the specified thickness(es). The certification shall indicate that the coating has been installed according to specific and identified Contract Specifications and/or approved submittal materials so it is absolutely clear what was done.

1.5 DELIVERY AND STORAGE

- A. Package to prevent damage or deterioration during shipment, handling, storage and installation. Maintain protective covering in place and in good repair until removal is necessary.
- B. Deliver signs only when the site, mounting materials, and equipment are ready for installation Work to proceed.
- C. Store products in dry condition inside enclosed facilities.

1.6 WARRANTY

- A. Sign Manufacturer shall guarantee the text and symbols applied to the powder coated aluminum for an extended warranty period of five years following final acceptance of the Project. A warranty inspection shall be performed no later than one year following Project final acceptance and the Contractor shall be responsible for removing and replacing any text and/or symbols identified during the inspection that have started to fade, chip, peel or otherwise fail. The Contractor shall remove and replace any sign panel faces with new, where the

applied lettering, or the paint system itself, is causing damage to, or failure of, the paint system. All Work to produce replacement sign panels with new lettering and/or paint system shall be provided at no cost to the Government, as part of the Warranty Work for the signage system.

1.7 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.
- B. American Society for Testing and Materials (ASTM):
 - B209 Aluminum and Aluminum-Alloy Sheet and Plate
 - B449 Standard Specification for Chromates on Aluminum
- C. American Architectural Manufacturer's Association (AAMA):
 - AAMA 2605 Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum extrusions and Panels.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum, Sheet and Plate: ASTM B209
- B. Zinc Chromate Primer: Fed. Spec. TT-P-645.

2.2 SIGNAGE GENERAL

- A. Signs shall be of type, size and design shown on the Drawings and as specified.
- B. Signs shall be complete with lettering, framing, and related components for a complete sign installation.
- C. Provide graphics items as completed units produced by a single manufacturer, including necessary mounting accessories, fittings and fastenings.
- D. Do not scale Drawings for dimensions. Verify all dimensions and conditions shown by the Drawings. COR is to be notified of any discrepancy in Drawing(s), in field directions or conditions, and/or of any changes required for any such related construction details.
- E. The Sign Contractor, by commencing Work of this section, assumes overall responsibility, as part of his warranty of Work, to assure that assemblies, components and parts shown or required within the Work of the section, comply with the Contract Documents. Warrant: That all components, specified or required to satisfactorily complete the installation are compatible with each other and with conditions of installations.

2.3 SIGN STANDARDS

- A. Typography:
 - 1. Type Style: Optima Bold. Initial caps or and lower case as indicated in details, unless otherwise indicated.
 - 2. Letter spacing: See graphic standards on Drawings.
 - 3. All text, arrows, and symbols to be provided in size, colors, typefaces and letter spacing shown. Text shall be a true, clean, accurate reproduction of typeface(s) shown. Text shown in Drawings is for layout purposes only. Text to be installed on specific signs shall be as submitted, reviewed and finally approved in shop Drawings processed as submittal materials.
- B. Sign Colors and Finishes: As specified in this Specification Section and approved in the Shop Drawing and Submittal process.
 - 1. Aluminum sign system color scheme shall have the background color of sign panels matching "Victor Stanley" bronze/dark brown.

2.4 SIGNS TYPES

- A. General: The basic sign designations for this Project are indicated as follows:
 - 1. Type D – Section Marker, as shown on the Construction Document details shall be precast concrete post with aluminum sign panel.
 - 2. 'DO NOT DRINK' and 'NON-POTABLE WATER' sign panels shall be coated aluminum signs with lettering and/or graphic symbol as shown on the Construction Document details. The graphic (if applicable) shall be a universal symbol. The design A/E, upon request, will provide a copy of the electronic drawing image, from the Construction Documents, in PDF electronic file format. This file shall be modified as required by the sign manufacturer in his development of the final approved graphic for the sign.
- B. Location, layout, and construction details for the all of the Project exterior signs shall be found in the Construction Drawings. Refer to the signage details for the specific sign panel sizes, text and graphic sizes as well as the layout and content for the text and images for the respective individual signs.

2.5 TEXT AND GRAPHICS

- A. Types D and 'DO NOT DRINK' and 'NON-POTABLE WATER' sign:
 - 1. Surface applied letters, numbers and graphics shall be of a published quality and life expectancy equal to or exceeding that for reflective white opaque Engineering Grade 3M™ Scotchlite™ vinyl, unless otherwise noted. Color shall match existing. Color shall be selected from the manufacturer's standard color selection, during the submittal process. Font Type Style shall be as indicated in Paragraph "SIGN STANDARDS" as approved during the submittal process.
- B. All text and graphics for the exterior signage shall be provided in detailed submittal information. Each sign face shall be represented in scaled Drawings, with exact font, letter style, letter spacing, and graphics being shown. Only signs and/or sign faces approved in the submittal process shall be manufactured.

2.6 FABRICATION

- A. Design components to allow for expansion and contraction for a minimum material temperature range of 100 °F, without causing buckling, excessive opening of joints or over stressing of adhesives, welds and fasteners.
- B. Form Work to required shapes and sizes, with true curve lines and angles. Provide necessary rebates, lugs and brackets for assembly of units. Use concealed fasteners whenever and wherever possible.
- C. Shop fabricate so far as practicable. Joints fastened flush to conceal reinforcement, or welded where thickness or section permits.
- D. Contact surfaces of connected members shall be true. Assemble so joints will be tight and practically unnoticeable, without use of filling compound.
- E. Signs shall have fine, even texture and be flat and sound. Lines and miters sharp, arises unbroken, profiles accurate and ornament true to pattern. Plane surfaces shall be smooth flat and without oil-canning, free of rack and twist. Maximum variation from true plane of surface shall be plus or minus 1/64 inch. Restore texture to filed or cut areas.
- F. Level or straighten wrought Work. Members shall have sharp lines and angles and smooth surfaces.
- G. Extruded members to be free from extrusion marks. Members shall have square turns and corners sharp, and curves shall be true.
- H. Drill holes for bolts and screws. Conceal fastenings where possible. Exposed ends and edges mill smooth, with corners slightly rounded. Form joints exposed to weather to exclude water.
- I. All painted surfaces properly primed. Finish coating of paint to have complete coverage with no light or thin applications allowing substrate or primer to show. Finished surface smooth, free of scratches, gouges, drips, bubbles, thickness variations, peeling, foreign matter and other imperfections.
- J. Movable parts, including hardware, are to be cleaned and adjusted to operate as designed without binding or deformation of members. All contact surfaces fit tight and even without forcing or warping components.
- K. Pre-assemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for re-assembly and coordinated installation.
- L. Completed sign installations shall not have any exposed openings so insect nesting inside of signs will be prevented.
- M. No signs are to be manufactured until final sign message schedule and location review has been completed by the COR & forwarded to Contractor.

- N. Final sign fabrication shall not proceed until samples and shop Drawings detailing the sign system as it will be installed, have been submitted and approved during the submittal process.

2.7 PROTECTION OF ALUMINUM

- A. Isolate aluminum in contact with or fastened to dissimilar metals other than stainless steel, white bronze or other metals compatible with aluminum by one of the following:
1. Painting the dissimilar metal with a prime coat of zinc-chromate or other suitable primer, followed by two coats of aluminum paint.
 2. Placing an approved caulking compound, or a non-absorptive tape, or gasket between the aluminum and the dissimilar metal.
- B. Paint aluminum in contact with or built into mortar, concrete, or other masonry materials with bituminous paint or zinc chromate primer.
1. Concrete post signs:
 - a. The posts shall be precast concrete with the face for mounting the metal frame and panel(s) being smooth and flat. The precast concrete posts shall be of the required height to be imbedded in the ground and extending above finished grade as indicated on the Drawings, and shall be 7 ½ inch x 7 ½ inch with the concrete detailing as indicated on the Drawings. Concrete posts are to be manufactured according to the concrete Specifications for Cast Stone Masonry, detailed as indicated. The precast concrete posts shall be installed and the sign panels mounted as indicated in the Drawings, or as approved in the submittal materials; see paragraph below. The Concrete post signs shall be installed at the locations indicated on the Drawings.

2.8 PYLON SECTION MARKERS (TYPE D)

- A. Pylon section markers are non-illuminated type with messages directed specifically at vehicles and pedestrians. Markers can present a maximum of three characters on a side, as indicated on the Drawings. Position each marker to provide vehicles and pedestrians with a clear unobstructed view of the marker, or locate and orientate according to the Drawings, where so indicated. Unless indicated differently on the Drawings, the markers shall be as follows:
1. Concrete Markers
 - a. 7.5" x 7.5" x 1'-6" above finished grade, and depth as indicated on the Drawings (minimum depth of concrete holding the sign shall be 2 feet. Drawing details shall take precedence.
 - b. The style for the markers shall have round ends cast into the four sides of the marker. The text panels shall be indented with beveled transition to the text panel mounting surface. The mounting surface for the aluminum text panel for each indent shall be equal to the dimensions for the aluminum text panels +1/8", -0" as the gap between the aluminum panel and the flat mounting surface for the panel cast into the concrete.
 - c. The text panel shall be 1/8" thick powder coated aluminum with two mounting holes, one each at the top and bottom of the

aluminum panel, drilled and ground smooth before the powder coating. The color and finish shall be as approved in the submittal process and shall match the other aluminum signs.

- d. The dimensions for the aluminum text panels shall be 3.75" wide with the text being 2 1/4" in height. The height of the aluminum panel shall be coordinated to fit within the casting for the panel in the concrete markers, with a 1/8" gap all around between the aluminum and the concrete, as submitted and approved and meeting the standards established in the approved sample for the concrete pylon section markers with the aluminum text panel, as complete. The approximate height for the aluminum text panels is 7". Dimensions shown on detailed construction Drawings shall take precedence over the Specifications.
 - e. The aluminum text panels shall be mounted using stainless steel tamper-proof screws, with matching powder coating with approved concrete anchors.
 - f. Pylon Section Markers (Type D) shall be manufactured in accordance with Section 04 72 00, CAST STONE MASONRY using reinforced wet cast concrete with finish made to emulate stone by the use of acid etching process following casting. Finish, color and texture, as well as dimensional conformance shall be demonstrated by submitting samples of the marker, minimum of 12" in length, during the submittal process. Submit shop drawings indicating all dimensions and tolerances, as well as reinforcing. An acceptable sample must be obtained prior to manufacturing the units.
- B. The approved shop drawings and sample(s) of the complete Pylon Section Marker shall be the basis for manufacturing and assembly.

2.9 FAUCET POST WITH SIGN

- A. Faucet posts with signs are non-illuminated pylon style with attached message and graphic decals. The decals are mounted directly on the metal post on a separate metal panel attached to the concrete post.
- B. The posts contain and/or are used to mount the water pipe and the spigot at the flower Watering Stations. Details for the water pipe, appurtenances, and mounting are included in the related Section 32 30 00, SITE FURNISHINGS.
- C. The posts shall be concrete, with location, materials, color, messages and configuration as indicated on the Drawings. Position sign to provide pedestrians with a clear unobstructed view of the sign, or position according to the Drawings, if so indicated.
 - 1. Concrete Faucet Posts
 - a. 7 1/2" x 7 1/2" x 3'-5 3/4" above finished grade, and depth as indicated on the Drawings (minimum depth of concrete holding the sign shall be 3'). Drawing details shall take precedence.
 - b. The style for the markers shall have round ends cast into the four sides of the marker. The text panels shall be indented with beveled transition to the text panel mounting surface. The

- mounting surface for the aluminum text panel for each indent, shall be equal to the dimensions for the aluminum text panels +1/8", -0" as the gap between the aluminum panel and the flat mounting surface for the panel cast into the concrete.
- c. The text panel shall be 1/8" thick powder coated aluminum with two mounting holes, one each at the top and bottom of the aluminum panel, drilled and ground smooth before the powder coating. The color and finish shall be as approved in the submittal process and shall match the other aluminum signs.
 - d. The dimensions for the aluminum text panels shall be 3 3/4" wide with the symbol being 3" in height and 1 1/4" from top of text panel to the top of the symbol. The text height shall be 3/4". The height of the aluminum panel shall be coordinated to fit within the casting for the panel in the concrete markers, with a 1/8" gap all around between the aluminum and the concrete, as submitted and approved and meeting the standards established in the approved sample for the concrete Pylon Section Markers with the aluminum text panel, as complete. The approximate height for the aluminum text panels is 6 3/4" or 2'-8 3/4". Dimensions shown on Drawings shall take precedence over the Specifications.
 - e. The aluminum text panels shall be mounted using stainless steel tamper-proof screws, with matching powder coating with approved concrete anchors. The text panels shall be furnished without mounting holes and shall be attached to the concrete with a permanent exterior adhesive designed for securing metal to concrete, as submitted and approved.
 - f. Concrete Faucet Posts shall be manufactured in accordance with Section 04 72 00, CAST STONE MASONRY using reinforced wet cast concrete with finish made to emulate stone by the use of acid etching process following casting. Finish, color and texture, as well as dimensional conformance shall be demonstrated by submitting samples of the marker, minimum of 12" in length, during the submittal process. Submit shop Drawings indicating all dimensions and tolerances, as well as reinforcing. The shop drawings and sample shall include the details and space for the pipes, appurtenances, and spigot as well as room for assembly and attachment to produce the fully functional flower Watering Station spigot assembly as specified. An acceptable sample must be obtained prior to manufacturing the units.
- D. "Non-Potable Water" decal shall be as indicated on the Drawings, and as approved during the submittal process.
- E. "Do Not Drink" decal - The "Do Not Drink" decal shall be the universal symbol with a faucet above a glass with water, and a red circle and diagonal line through the symbol. Decal has black background with white text and black and red symbol. The text "Do Not Drink" shall be stacked vertically below the international symbol. Decal shall be aligned vertically to fit the metal or concrete post location, as submitted and approved.

2.10 CONCRETE MOW COLLARS

- A. Reinforced concrete mow collars shall be provided for all new single elements in this Specification Section, where they are to be located in lawn areas. The requirements for the collars are as follows:
 - 1. Reinforced and free floating, concrete not in contact with the element.
 - a. As detailed on the Drawings.
 - b. Submitted and approved during the submittal process.
 - c. Closed steel rebar, with overlap at joint, 2 inch minimum distance from surrounding earth.
 - d. Minimum No. 3 diameter rebar as enclosing the element or elements approximately 2 inches inside the perimeter of the concrete.
 - e. Construct the collars to be 1 inch above finished grade at the junction with the lawn, and with a slope up toward the element(s) and/or middle, for drainage, of ½ inch to ¾ inch.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set Work accurately, in alignment and where shown. Signs shall be plumb, level, free of rack and twist and set parallel or perpendicular as required to line and plane of the surface.
- B. Protect aluminum in contact with dissimilar metals or mortar as specified in Paragraph PROTECTION OF ALUMINUM.
- C. Provide anchoring devices and fasteners as shown and as necessary for securing signs to construction as specified.
- D. Verify that behind or beneath each sign location there are no utility lines, or other buried infrastructure elements, that will be affected by installation of signs. Any damage during installation of signs to utilities, or other buried infrastructure will be the sole responsibility of the Contractor to correct and repair.
- E. Place post collar prior to sign mounting.

3.2 CLEANING

- A. After installation, all items shall be cleaned as recommended by the manufacturer and protected from damage until completion of the Project.

3.3 PROTECTION

- A. Protect finished surfaces from damage during fabrication, erection and after completion of the Work.

END OF SECTION

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