

SECTION 05720

PVC RAILING

1 PART 1 GENERAL

1.1 Related Documents

- A. Drawings and general provisions of the contract apply to this section.

1.2 Summary

- A. This section includes the following:
 - 1. Polyvinyl chloride (PVC) guardrail components.

1.3 Definitions

- A. Posts are the vertical structure support members of the guardrail system.
- B. Rails are the horizontal structural support members of the guardrail system.
- C. Aluminum Channel - Structural supports inside rails.
- D. Pickets are the vertical members between bottom and top rails.
- E. Post Support Kits are the non-PVC steel structure supports inside the vinyl posts.

1.4 Submittals

- A. General: Submit the following according to the conditions of the contract.
- B. Product Data: In the form of manufacturer's technical data, specifications, and installations for guardrail, posts, post caps, and accessories.
- C. Samples for verification of PVC color in the form of 3-inch lengths of actual product to be used in color selection.
- D. Shop Drawings showing guardrail design.

1.5 Quality Assurance

- A. Installer Qualifications: Engage an experienced installer who has at least three years experience and has completed at least five PVC fence projects with same material and of similar scope to that indicated for this project with a successful construction record of in-service performance.
- B. Single-Source Responsibility: Obtain PVC guardrail accessories, fittings and fastenings, from a single source.

1.6 Project Conditions

- A. Field Measurements: Verify layout information for guardrail shown on the drawings in relation to the property survey and existing structures. Verify dimensions by field measurements.

1.7 Warranty

- A. Manufacturer's Warranty: Lifetime non-prorated limited warranty applies to original homeowner/consumer, or 30 year non-prorated limited warranty applies to commercial applications.

2 PART 2 PRODUCTS

2.1 Guard Rail Materials

- A. General: Provide PVC guardrail materials recognized to be of type indicated and tested to show compliance with indicated performances, and local building codes.
- B. Available Manufacturer: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include:
 - 1. EverNew, 2525 Walden Avenue, Buffalo, NY 14225 (800)-872-7727 Contact - Ralph Palmieri
 - a. Style Name: Oxford
 - b. Height: 42" minimum.
 - c. Color Match: EverNew "Tan"

2.2 Polyvinyl Chloride (PVC) Guardrail Components

- A. General: Posts, rails, pickets, post caps, and accessories shall be of high impact, Ultra Violet (U.V.) resistant, rigid PVC, and shall comply with ASTM D 1784, Class 14344B.
- B. Posts: One piece extruded, of lengths indicated and pre-routed to receive rails at spacing indicated.
 - 1. Cross Section: 4"x4" minimum
 - 2. Wall Thickness: 0.140" minimum
 - 3. Corner Radius: 11/32" minimum
- C. Rails: One piece extruded, of lengths indicated pre-routed to receive pickets at spacing indicated.
 - 1. Cross Section: 3"x3 1/2" minimum "T" rail
 - 2. Wall Thickness: 0.095" minimum

3. Corner Radius: 13/32" minimum
- D. Pickets: One piece extruded, or reformed extrusion of lengths indicated.
1. Cross Section: 1 ¼" x 1 ¼" minimum "Stair Step" style
 2. Wall Thickness: 0.105" minimum
 3. Corner Radius: 5/32" minimum
- E. Post Caps: Molded, one piece. "New England" style
1. Cross Section: Match post or gate upright cross section.
 2. Thickness: 0.095" minimum
 3. Configuration: Flat or four-sided as required for installation to top of posts.
- F. Accessories: Manufacturers' standard, screw caps, rail and post trim pieces, and other accessories as required.

2.3 Miscellaneous Materials

- A. Post Support Kits: Galvanized steel post 1-5/8" SS40 type extending from attachment surface for concrete or substructure of wood deck to above top rail of guardrail. Aluminum post brackets and stainless steel rail lock plates to fit over pipe. Includes all necessary hardware to attach to wood deck sub structure or concrete surface.
- B. Stiffener Channels: Extruded aluminum structural channel. Configure channels for concealed installation within PVC rails.
1. Cross Section: 3.00" x 3.00" x 1.500" profile shape to grip picket.
 2. Thickness: 0.060 (minimum).
- C. Fasteners: Stainless steel. All fasteners to be concealed or colored heads to match. Provide sizes as recommended by manufacturer.

3 PART 3 EXECUTION

3.1 Installation, General

- A. Install guardrail in locations shown in compliance with manufacturer's written instructions. During installation, PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by fence manufacturer.
1. Install guardrail as indicated on the drawings provided.
 2. Variations from the installation indicated must be approved.

3. Variations from the guardrail installation indicated and all costs for removal and replacement will be the responsibility of the contractor.

3.2 Guardrail Installation

- A. Post Support Kits: To be attached to concrete surface or wood deck using hardware supplied by the manufacturer and following all recommended manufacturer installation instructions at positions indicated on drawings.
- B. Posts Brackets: Install one set at position below each routed hole to act as spacer between steel pipe and vinyl post as per manufacturer recommendations.
- C. Posts: Install over steel post in one piece, plumb and in line. Space a maximum of 6'-0" feet o.c. unless otherwise indicated.
- D. Top and Bottom Rails: Install rails in one piece into routed hole fabricated into posts to receive top and bottom rails. Except on stairs and ramps, install rails level.
 1. Prior to installation of rails into posts, insert concealed aluminum channel stiffeners in top and bottom rails.
- E. Pickets: Install pickets in one piece as per manufacturer recommendations. Install pickets plumb.
- F. Rail Lock Plate: After top rail is installed, place rail lock plate over post support pipe and rest on top of rail. Secure with screw to lock top rail in place.
- G. Post Caps: Install either internal fit caps by pressing in place or use #8 screws, snap cap & washers to attach external caps.
- H. Guardrail Installation on Stairs and Ramps: Standard stair sections to be supplied by manufacturer. For excessive situations, rail and post holes may be enlarged to accommodate additional angles per manufacturer's recommendations.

3.3 Adjusting and Cleaning

- A. Remove all traces of dirt and soiled areas.

3.4 Demonstration

- A. Instruct the owner's personnel on proper maintenance of guardrail components.

END OF SECTION