

**ITEM 606.3402 15 - End Terminal for HPBO Corrugated Beam Guide Railing**  
**ITEM 606.3452 15 - End Terminal for HPBO Corrugated Beam Guide Railing (Coated)**

**DESCRIPTION.**

This work shall consist of furnishing and installing End Terminals for Heavy Post Blocked-Out Corrugated Beam Guide Railing in accordance with the Contract Documents, and the manufacturer's directions and drawings.

**MATERIALS.**

Standard Paint Colors	708-05
Wood and Timber Posts and Timber Blockouts	710-13
Plastic and Synthetic Block-Outs for Heavy Post Guide rail Systems	710-26
Corrugated Beam Guide Railing and Median Barrier	710-20
Galvanized Coatings and Repair Methods	719-01
Reflective Sheeting, Class B	730-05

The posts shall be steel and of the type and dimensions indicated on the manufacturer's drawings, or where applicable the Standard Sheets.

Posts, soil plates, struts, bearing plates, impact heads, and other miscellaneous steel parts shall meet the requirements of ASTM A36M unless specified otherwise. Fasteners shall be as indicated on the manufacturer's drawings. All metal components shall be hot dip galvanized.

Reflective sheeting shall be provided by the manufacturer for the free end of the terminal. The reflectorization shall consist of alternating reflectorized 100 mm yellow and non-reflectorized 115 mm black stripes oriented at a 45 degree angle, with the lower edge of the stripes near the traveled way.

**Coated.** Unless specified otherwise in the Contract Documents the paint color shall be "Weathered Brown".

**Basis of Acceptance.** The barrier system shall be obtained from one of the manufacturers listed on the table below, or an approved equal, as approved by the Director, Office of Design.

**Basis of Approval.** End terminals shall be NCHRP 350 Test Level 3 approved. End terminals which can only be installed in a flared configuration will not be approved.

<b>Product</b>	<b>Manufacturer</b>	<b>Contact Information</b>
ET 2000+ w/ Steel Yielding Terminal Post (SYT)	Trinity Industries	Girard, Ohio (800-321-2755) <a href="http://www.highwayguardrail.com">www.highwayguardrail.com</a>
ET 2000+ w/ Hinged Steel Breakaway Posts (HBA)		
SKT - SP	Road Systems, Inc.	Big Spring, Tx (432) 263-2435 <a href="http://www.roadsystems.com">www.roadsystems.com</a>
X-Tension	Barrier Systems, Inc.	Rio Vista, Ca (707) 374-6800 <a href="http://www.barriersystemsinc.com">www.barriersystemsinc.com</a>

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**CONSTRUCTION DETAILS.**

The requirements of §606-3.01 and §606-3.014 of the Standard Specifications shall apply, except as listed below.

The end terminals shall be installed after grading is completed at the locations indicated in the Plans, or where directed by the Engineer. Grading work, shall be coordinated with the installation of the guide rail or removal of existing anchorage units to minimize the time the traveling public is exposed to unanchored runs of guide rail.

During periods when the public is exposed to unanchored guide rail, there shall be plastic drums, or other devices approved by the Engineer, placed in advance of the unanchored run and in advance of the ends of the rail. In addition, the ends of the rail shall be brought to the ground level, twisted over to lay flat, and shall be pinned to the ground.

In the event the end terminals become damaged, the units shall be promptly repaired. Unless another period is indicated in the contract documents, "promptly repaired" shall mean repaired within fourteen (14) calendar days.

**Coated.** The Heavy Post Blocked-out Corrugated Beam Guide Railing (Coated) shall comply with the above requirements except metal parts exposed to view shall be painted in accordance with Section 657 *Painting Galvanized and Aluminum Surfaces* and the terminal manufacturer's instructions.

**METHOD OF MEASUREMENT.**

The work will be measured as the number of End Terminals for Heavy Post Blocked-Out Corrugated Beam Guide Railing of the indicated type satisfactorily furnished and installed in accordance with these specifications. The payment limits for these units shall extend from the free end of the end terminal to the center of the ninth guide rail post, which is located approximately 15.8 m distant from the end.

**BASIS OF PAYMENT.**

The unit bid price per End Terminal for Heavy Post Blocked-Out Corrugated Beam Guide Railing of the indicated type shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work.

The cost of earthwork, grading, top soiling, seeding, and vegetation control strips shall be paid for separately.