

PART 1 - GENERAL

- | | |
|--|---|
| <u>1.1 RELATED SECTIONS</u> | <ul style="list-style-type: none">.1 Section 01 33 00 - Submittal Procedures.2 Section 31 05 16 - Aggregate Materials.3 Section 31 23 10 - Excavating, Trenching and Backfilling |
| <u>1.2 REFERENCES</u> | <ul style="list-style-type: none">.1 American Association of State Highway and Transportation Officials (AASHTO)<ul style="list-style-type: none">.1 AASHTO M180-2000, Corrugated Sheet Steel Beams for Highway Guardrails..2 American Society for Testing and Materials (ASTM International)<ul style="list-style-type: none">.1 ASTM A307-2012, Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength ..2 ASTM A123-2012, Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products..3 Canadian General Standards Board (CGSB)<ul style="list-style-type: none">.1 CAN/CGSB-1.59-97, Alkyd Exterior Gloss Enamel..2 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating..4 Canadian Standards Association (CSA International)<ul style="list-style-type: none">.1 CAN/CSA-O80 Series-2008(R2012), Wood Preservation..5 Nova Scotia Department of Transportation and Infrastructure Renewal Standard Specification. |
| <u>1.3 SAMPLES</u> | <ul style="list-style-type: none">.1 Submit samples in accordance with Section 01 33 00..2 Inform Departmental Representative at least four (4) weeks prior to beginning Work, of proposed sources of guide rail and components. |
| <u>1.4 WASTE MANAGEMENT AND DISPOSAL</u> | <ul style="list-style-type: none">.1 Separate and recycle waste materials..2 Do not dispose of unused paint material into sewer system, into waterways, onto ground or in any other location where it will pose a health or environmental hazard. |
-

1.4 WASTE
MANAGEMENT AND
DISPOSAL
(Cont'd)

- .3 Do not dispose of preservative treated wood through incineration.
- .4 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
- .5 Dispose of treated wood, end pieces, wood scraps and sawdust at a sanitary landfill.
- .6 Dispose of unused preservative material at an official hazardous material collections site. Do not dispose of unused preservative material into the sewer system, streams, lakes, on ground or in any other location where they will pose a health or environmental hazard.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Steel W-beam guide rail as indicated and to following requirements:
 - .1 Steel rail and terminal sections: to AASHTO M180, class A Type 1 zinc coated.
 - .2 Bolts, nuts and washers: to ASTM A307, hot dip galvanized to ASTM A123.
- .2 Organic zinc-rich coating: to CAN/CGSB-1.181.
- .3 Sawn timber posts and offset blocks:
 - .1 Well seasoned, straight and sound, free from knots or other defects of size indicated. Acceptable species for posts shall be Eastern hemlock, red pine or mixed hardwood (birch, maple, oak or ash).
 - .2 Treatment (Pressure):
 - .1 Alkaline Copper Quaternary (ACQ) or ammoniacal copper arsenate (ACA) to CAN/CSA 080 minimum retention of preservative: 4.0 kg/m³.

PART 3 - EXECUTION

3.1 ERECTION

- .1 Set posts by instrument for alignment, and locations as indicated and as directed by Departmental Representative.
 - .2 Auger post holes to depths as indicated and to diameter of 360 mm plus or minus 20 mm. Compact bottom to provide firm foundation. Set post plumb and square in hole.
-

3.1 ERECTION
(Cont'd)

- .3 Backfill around posts using excavated material and compact in uniform layers not exceeding 150 mm compacted thickness.
- .4 Leave or make depression approximately 150 mm deep around posts until painting is completed, then fill and compact to ground elevation.
- .5 No field cutting of posts permitted.
- .6 Worker protection: workers must wear protective clothing and equipment when handling, drilling, sawing, cutting or sanding preservative treated wood and applying preservative materials.
- .7 Construct anchorages to details as indicated. Place and compact backfill for anchors as directed by Departmental Representative.
- .8 Erect steel W-beam components to details as indicated. Lap joints in direction of traffic. Tighten nuts to 100 N.m torque. Maximum protrusion of bolt 12mm beyond nut.

3.2 PAINTING
TOUCH UP

- .1 Galvanized steel-touch up:
 - .1 Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two (2) coats of organic zinc-rich paint to damaged areas. Pre-treat damaged surfaces according to manufacturer's instructions for zinc-rich paint.