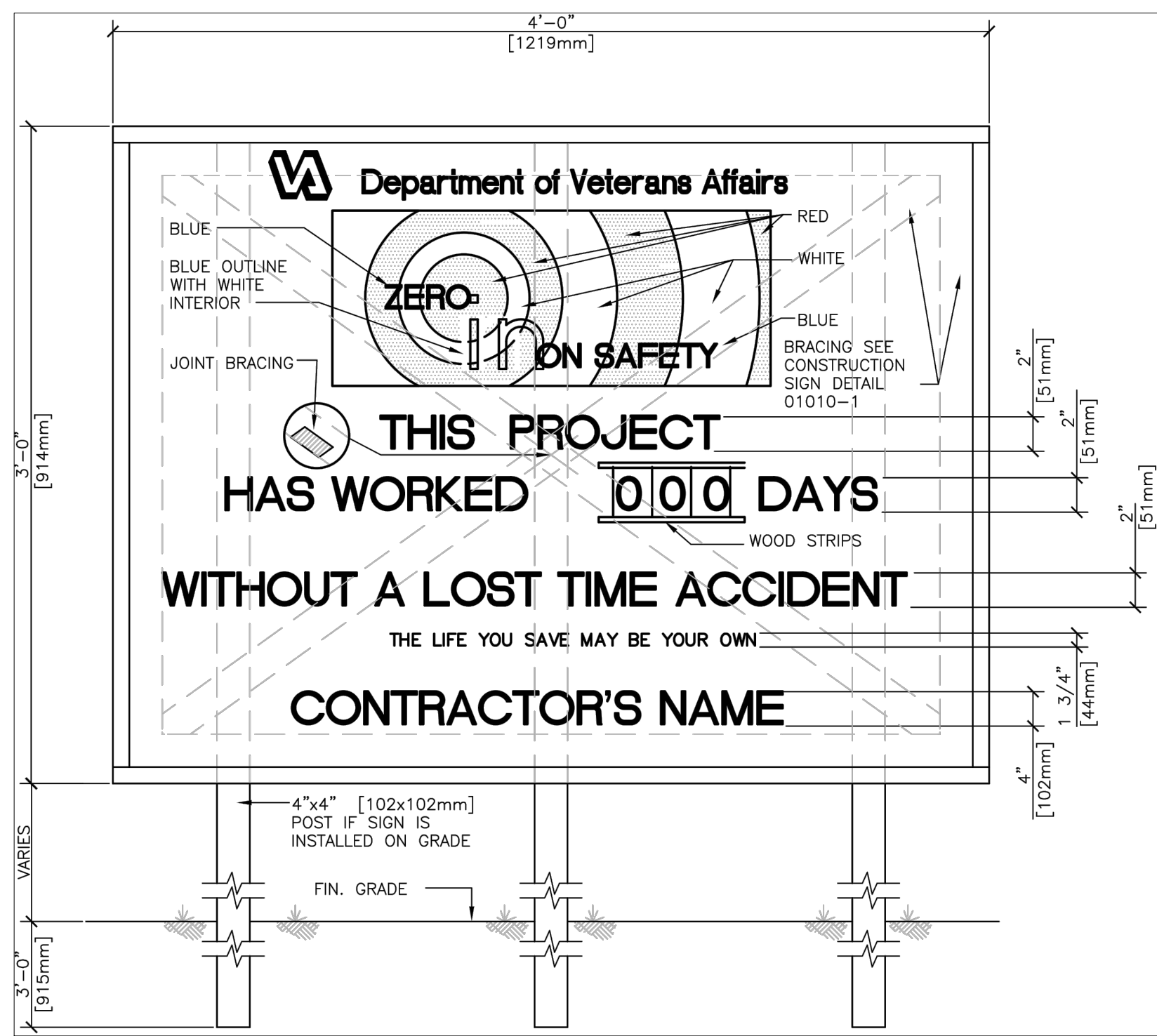
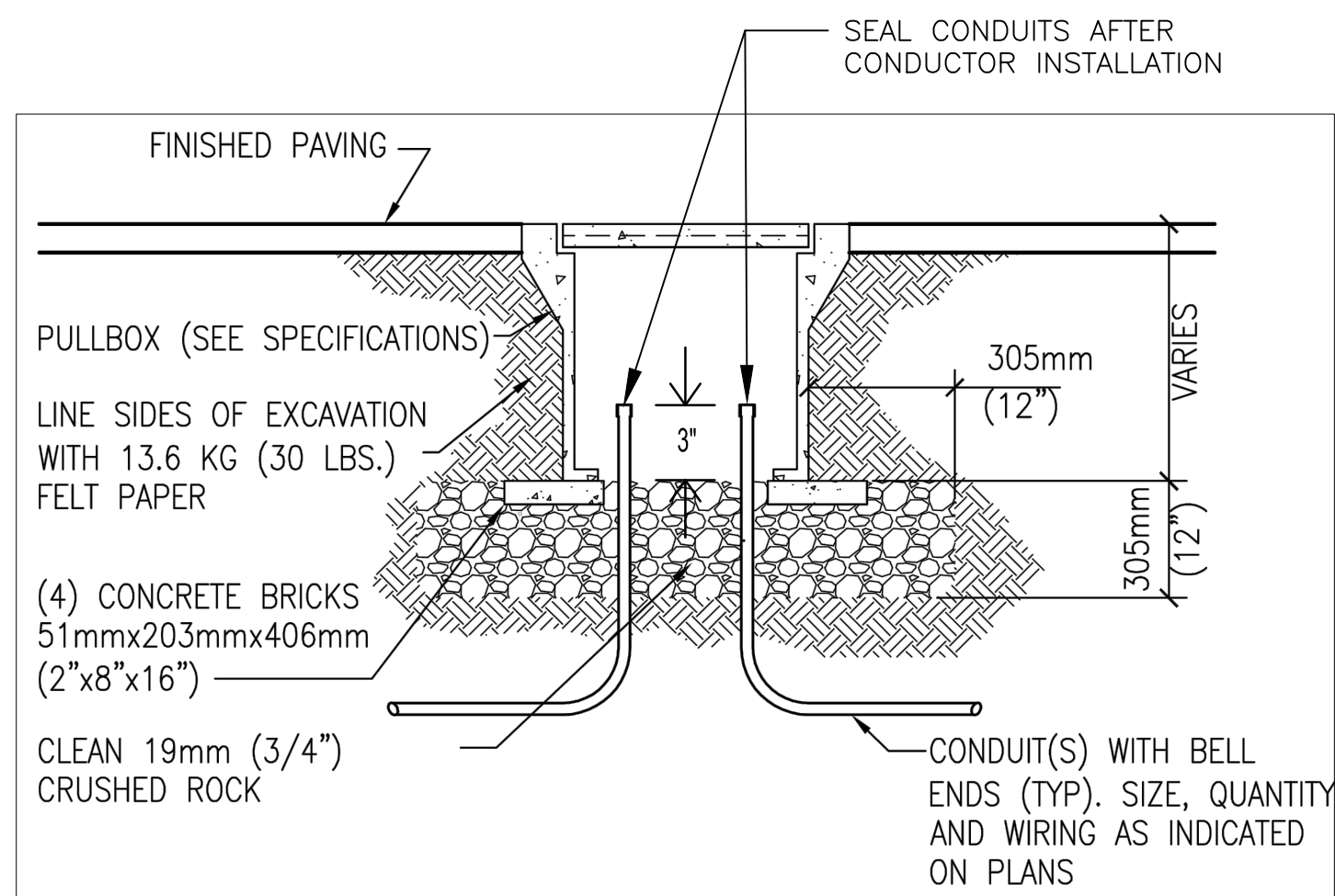


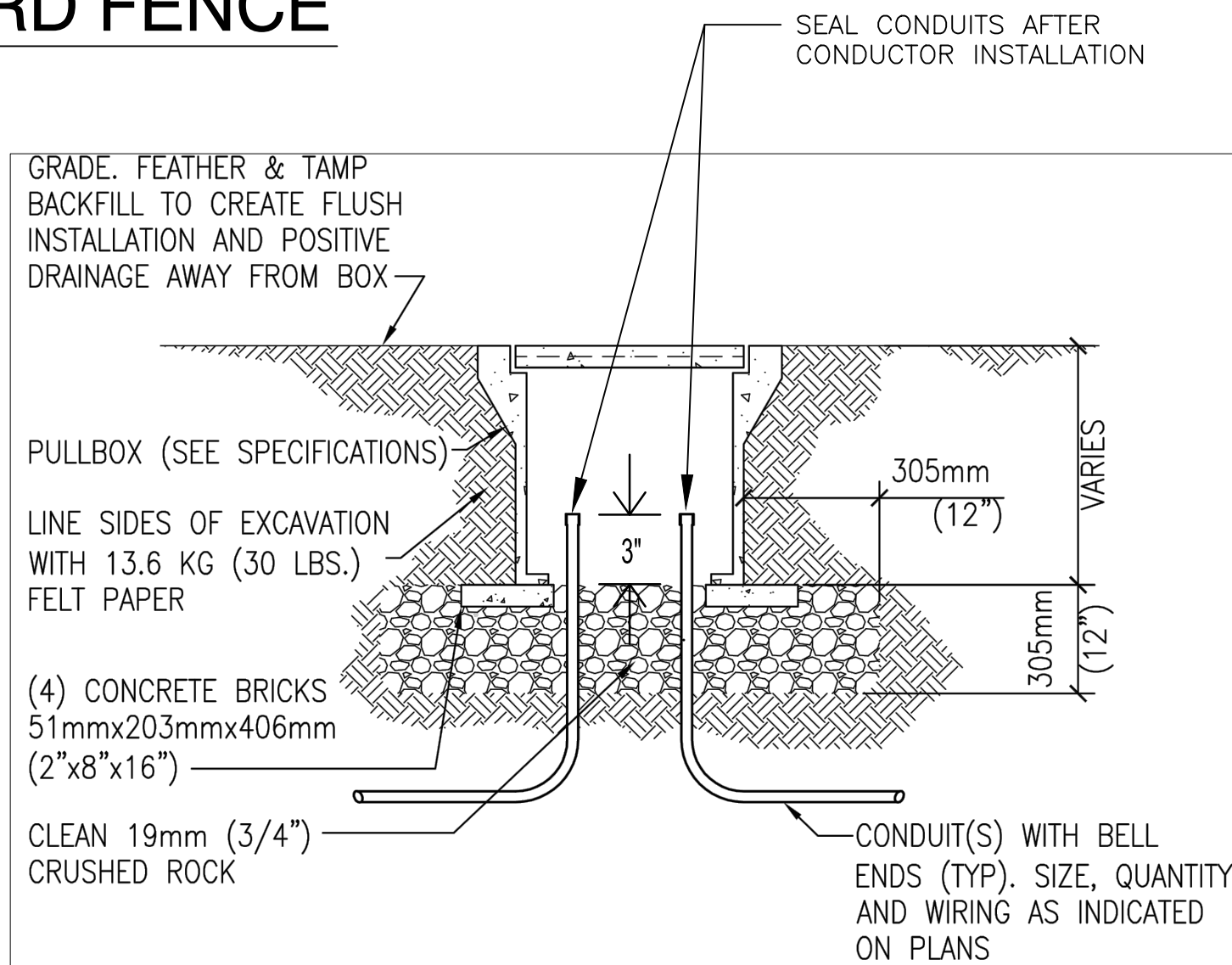
1 CONSTRUCTION SIGN  
SCALE: NOT TO SCALE



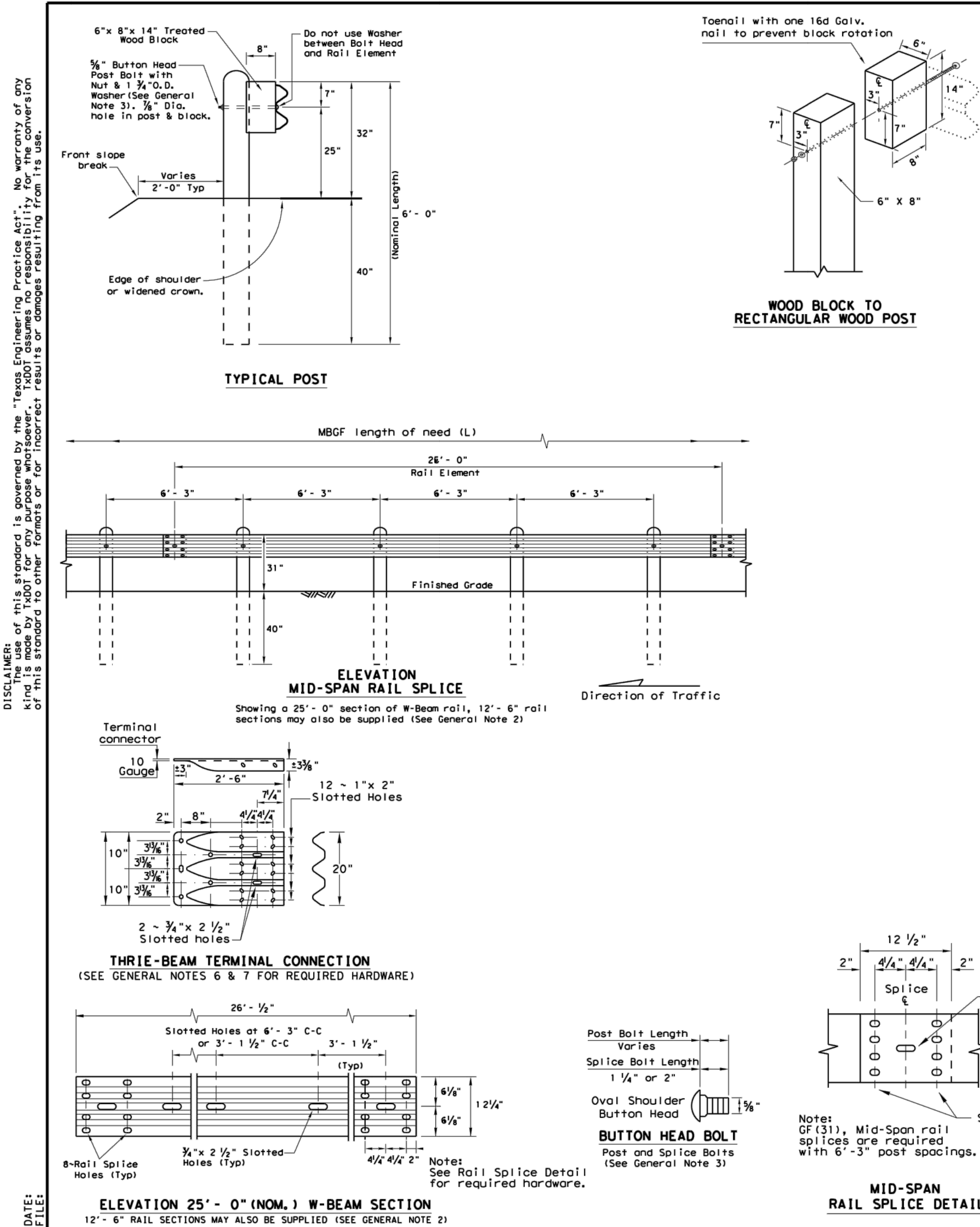
2 SAFETY SIGN  
SCALE: NOT TO SCALE



4 UNDERGROUND CONCRETE PULLBOX - PAVED AREAS  
SCALE: NOT TO SCALE



5 UNDERGROUND CONCRETE PULLBOX - TURF AREAS  
SCALE: NOT TO SCALE



3 METAL BEAM GUARD FENCE  
SCALE: NOT TO SCALE

- ### GENERAL NOTES
- The type of post (round wood post, rectangular wood post, or steel post) will be as shown in the plans. The exact position of MBGF shall be shown in the plans or as directed by the Engineer. Steel posts to be galvanized in accordance with Item 446, "Galvanizing."
  - Rail element shall meet the requirements of Item 440, "Metal Beam Guard Fence" except as modified in the plans. The Contractor may furnish rail elements of 26'-0", or 12'-6" (nom.) lengths. Rail elements may have slotted holes at 3'-1/2" C-C or 6'-3" C-C. A special length of rail may be manufactured to accommodate the downstream anchor terminal (DAT) and the transition sections of guardrail.
  - Button head "post" bolts (ASTM A307) shall be of sufficient length to extend through the full thickness of the nut (ASTM A663) and Type A (1 3/4" O.D.) washer and not more than 1" beyond it. Button head "splice" bolts (ASTM A307) are 3/4" x 1 1/4" (or 2" long at triple rail splices) with a 3/4" double recessed nut (ASTM A663). Triple beam "connection" 3/8" dia. (ASTM A326) hex bolts shall be of sufficient length to extend through the full thickness of the rail, washers, and nuts.
  - Fittings (bolts, nuts, and washers) shall be galvanized in accordance with Item 446, "Galvanizing." Fittings shall be subsidiary to the bid item.
  - Crown shall be widened to accommodate the Metal Beam Guard Fence.
  - The lateral approach to the guard fence, shall have a maximum slope of 1V:10H.
  - If shown elsewhere in the plans or as directed by the Engineer, the guard fence may be flared at a rate of 2&11 or flatter.
  - Unless otherwise shown in the plans, guard fence placed in the vicinity of curbs shall be positioned so that the face of curb is located directly below or behind the face of the rail. Rail placed over curbs shall be installed so that the post bolt is located approximately 26 inches above the gutter pan or edge of shoulder.
  - If solid rock is encountered within 0 to 18" of the finished grade, drill a 22" dia. hole, or drill two 12" dia. front to back overlapping holes, 24" into the rock. If solid rock is encountered below 18", drill a 12" dia. hole, 12" into the rock or to the standard embedment depth, whichever may be less. Any excess post length, after meeting these depths, may be field cut to ensure proper guardrail mounting height. Backfill with a cohesionless material.
  - Posts shall not be set in concrete, of any depth.
  - Special fabrication will be required at installations having a curvature of less than 160 ft. radius.
  - Unless otherwise shown in the plans, a composite material post and/or block that meets the requirements of DMS-7210, "Composite Material Posts and Blocks for Metal Beam Guard Fence" may be substituted for posts and/or blocks of similar dimensions. The Construction Division, TxDOT maintains a Material Producer List (MPL) for producers of materials conforming to DMS-7210. Only producers on the MPL may furnish composite material posts and/or blocks.
  - For posts located partially or wholly between precast box culvert units, the use of a cast-in-place concrete closure between boxes is required. See Detail "A" on Bridge Standard SCP-MD.

Texas Department of Transportation		Design Division Standard
METAL BEAM GUARD FENCE		
GF (31) - 14		
FILE: GF3114.dgn	OWN TxDOT	CHK AM
15 TxDOT, December 2011	CONT	SECT
REVISIONS:	DIST	COUNTY
		SHEET NO.

ARCHITECT/ ENGINEERS

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Drawing Title:  
DETAILS

Approved Project Director:  
OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT  
WESTERN REGION

Project Title:  
UPGRADE EMERGENCY  
POWER  
TASK ORDER NO. VA257-15-R-0634

Location:  
3600 MEMORIAL BLVD., KERRVILLE, TX 78028

Date:  
MAY 26, 2017

Project Number:  
671A4-15-123

Building Numbers  
11, 90, 96

Drawing Number  
E12

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Office of  
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and Facilities  
Management

Department of  
Veterans Affairs