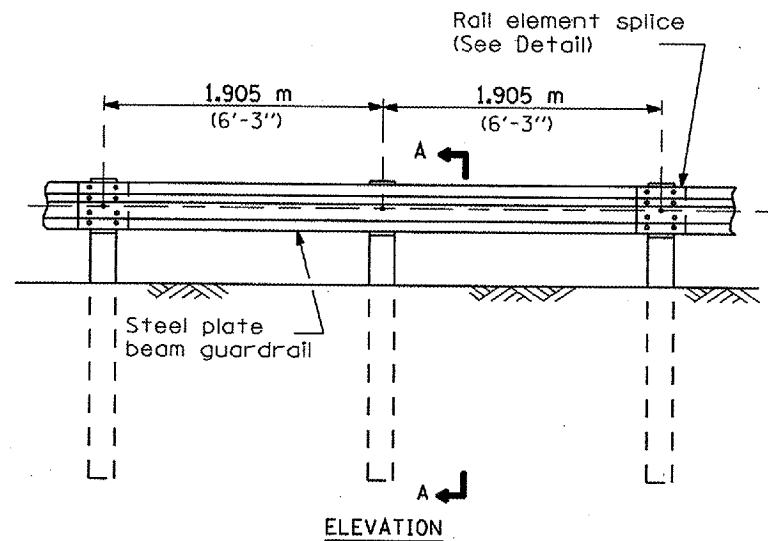


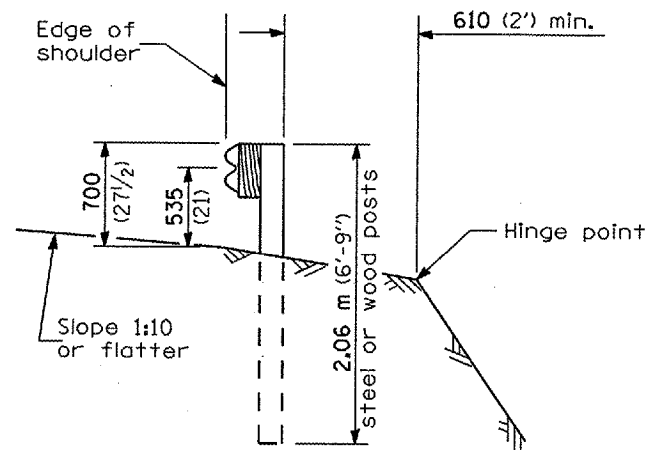
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			31	10D
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

90933

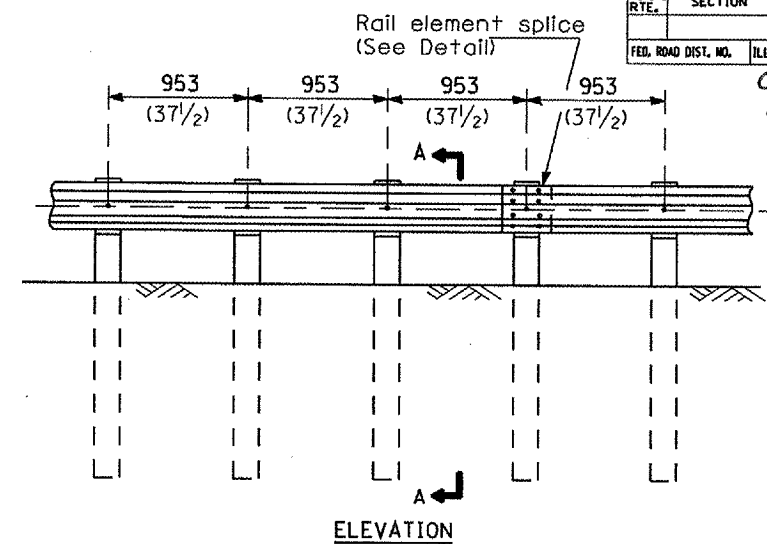


TYPE A

1.905 m (6'-3") Typical post spacing

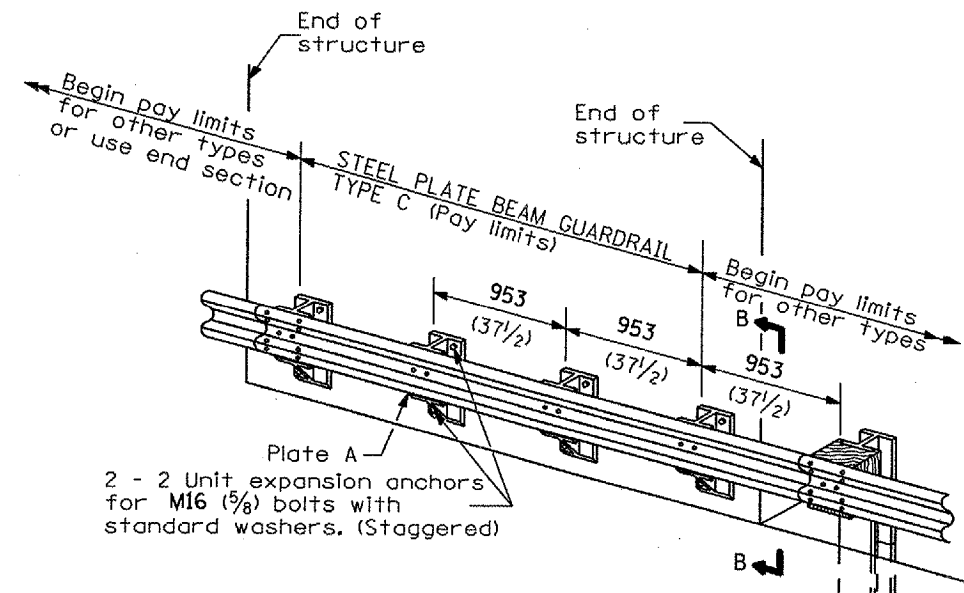


SECTION A-A



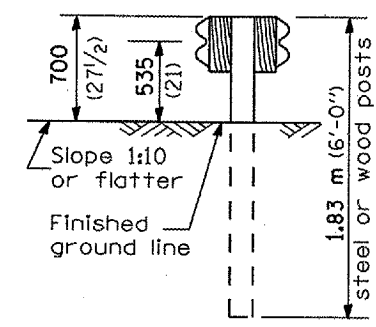
TYPE B

953 (37 1/2) Closed post spacing

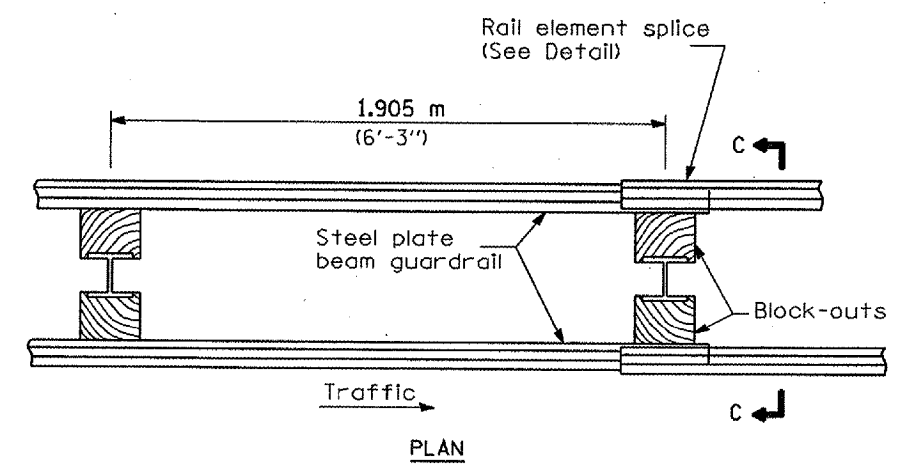


TYPE C

953 (37 1/2) Block-out spacing



SECTION C-C



TYPE D

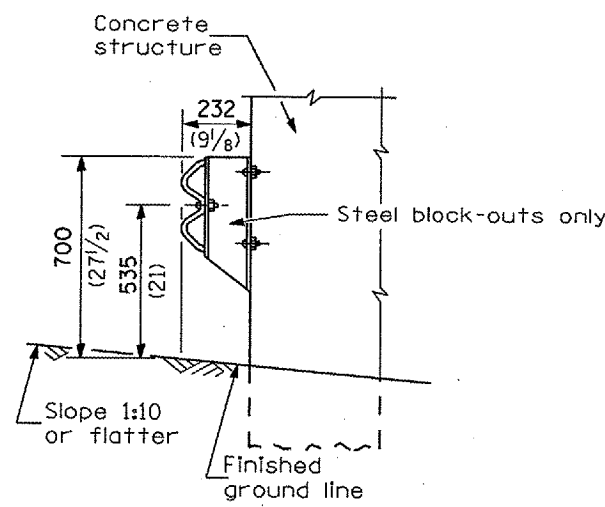
Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.



SECTION B-B

▲ ADDED 1/4/07

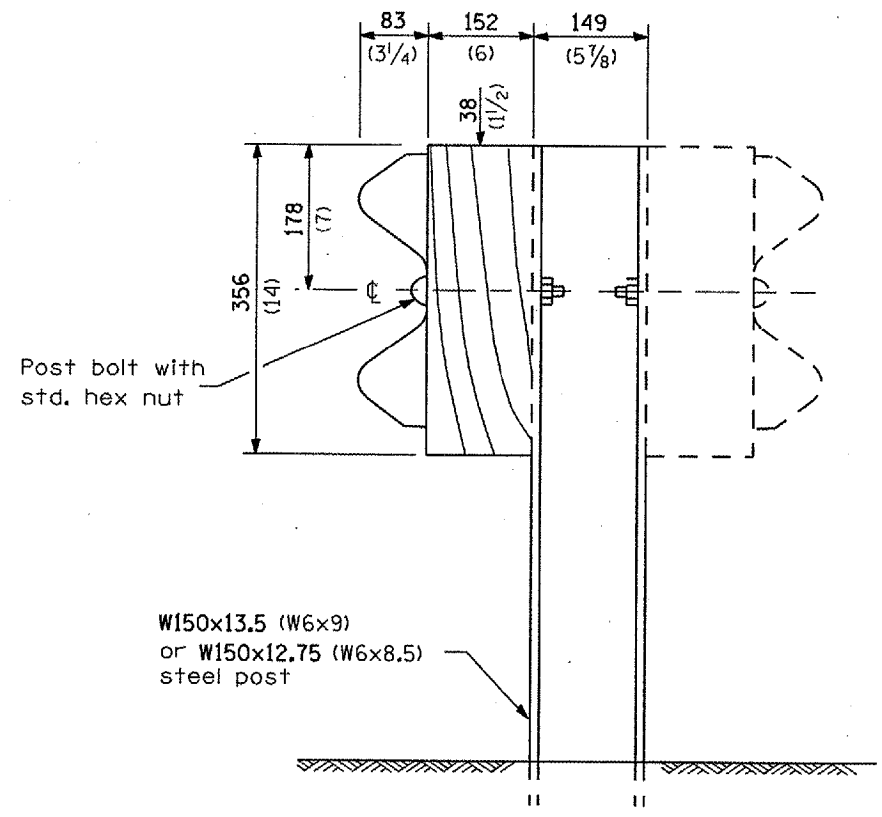
REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL

(Sheet 1 of 4)

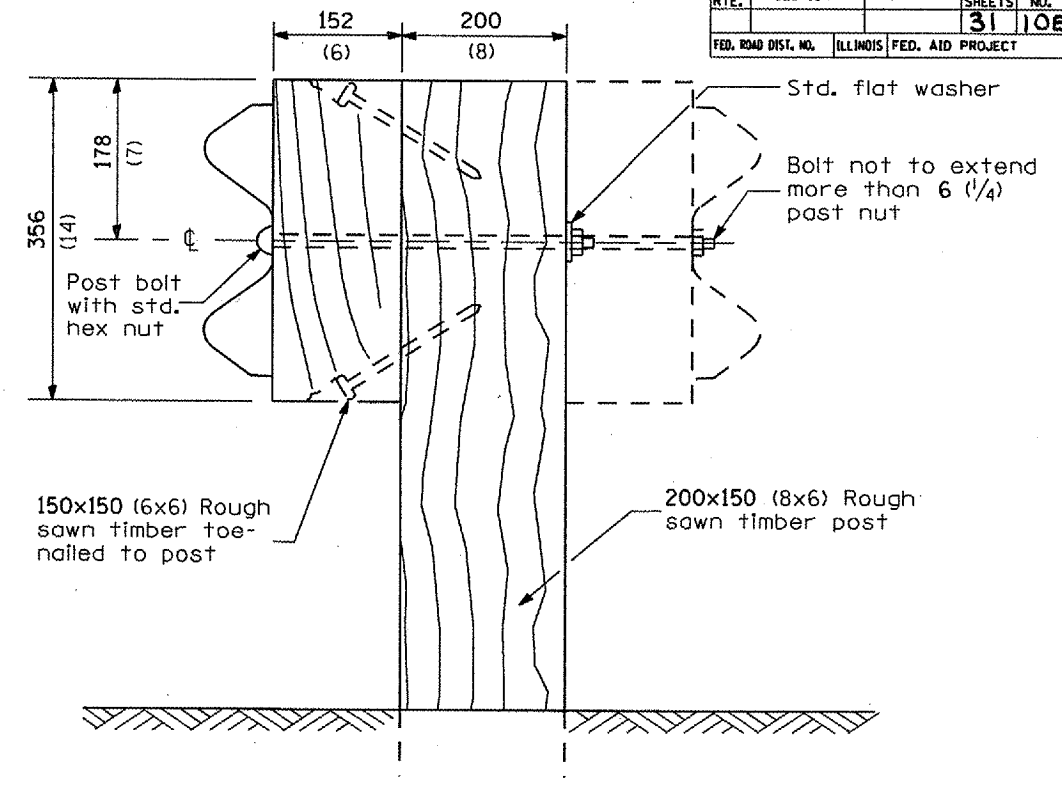
DETAIL

90933

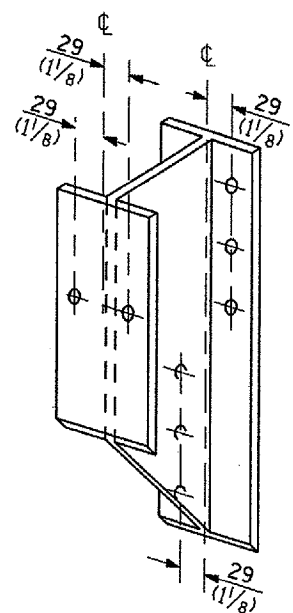
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			31	10E
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



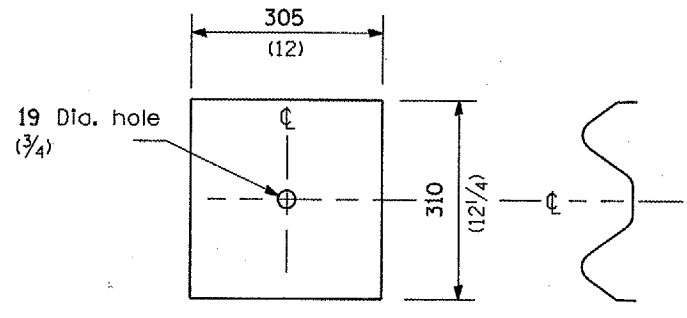
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION



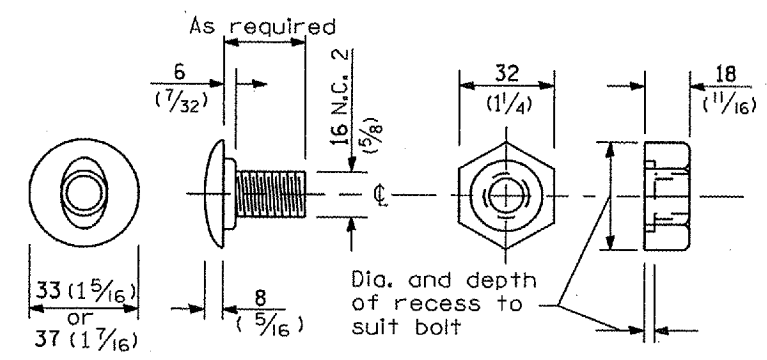
STEEL BLOCK-OUT DETAIL



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



POST OR SPLICE BOLT & NUT

**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

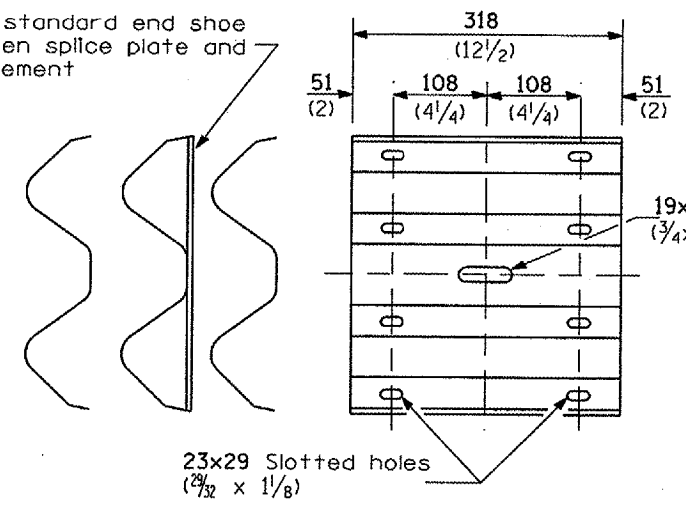
DETAIL

▲ ADDED 1/4/07

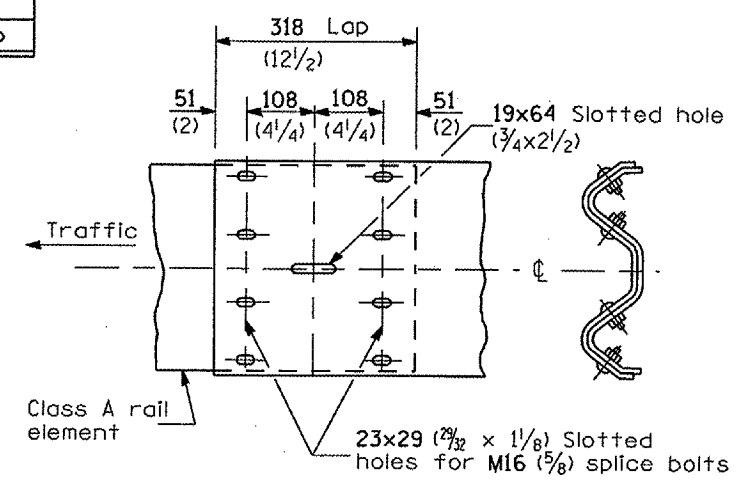
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			31	10F
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

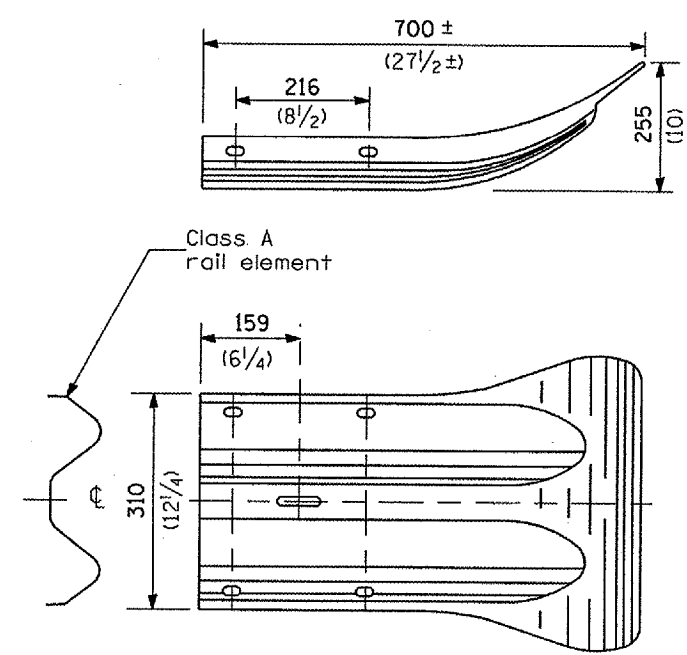
Place standard end shoe between splice plate and rail element



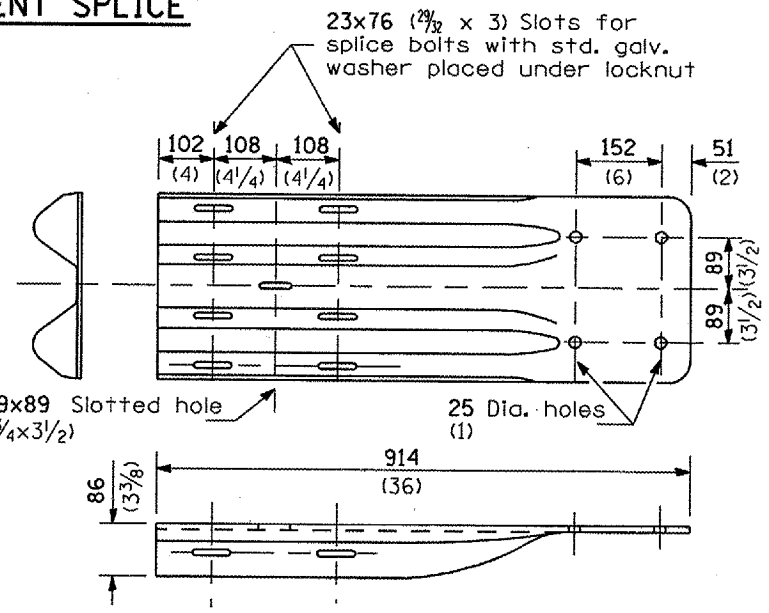
SPLICE PLATE



RAIL ELEMENT SPLICE



END SECTION



NOTE

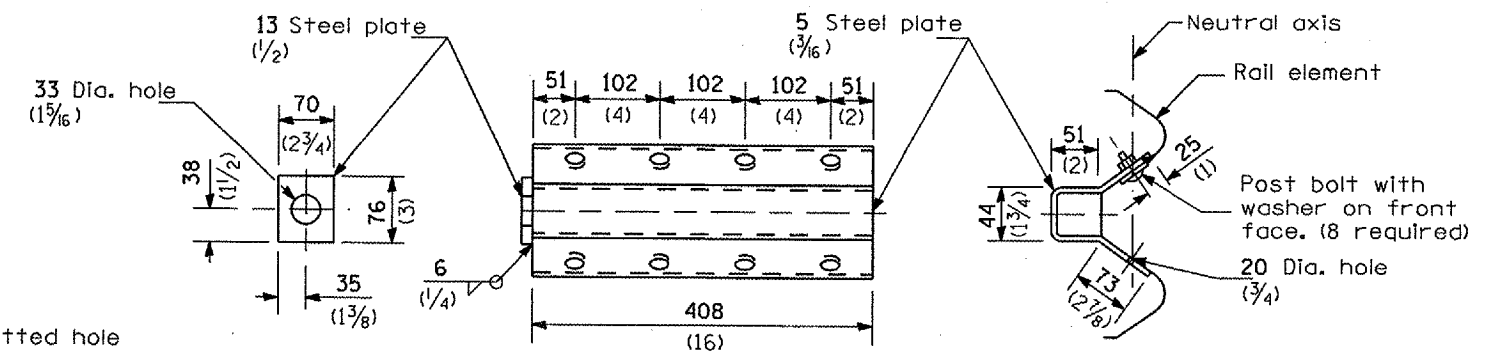
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE

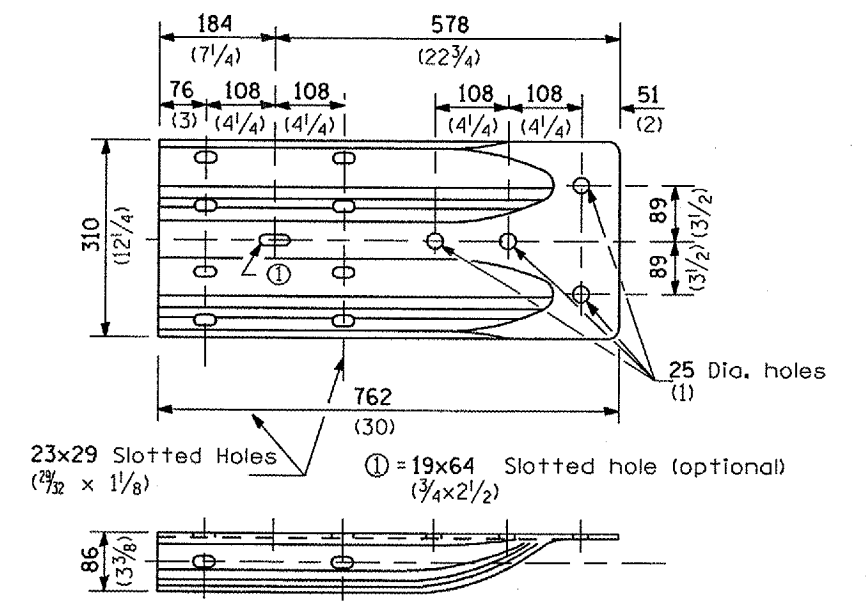
▲ ADDED 1/4/07



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



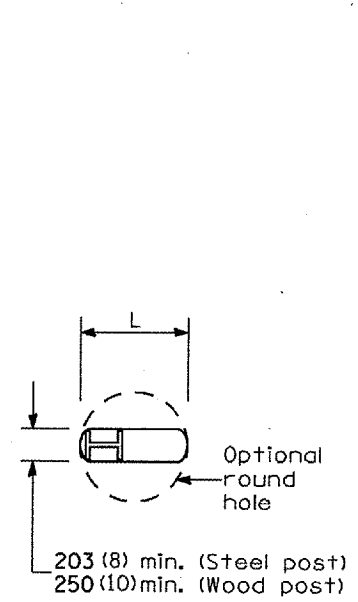
ALTERNATE END SHOE

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
(Sheet 3 of 4)

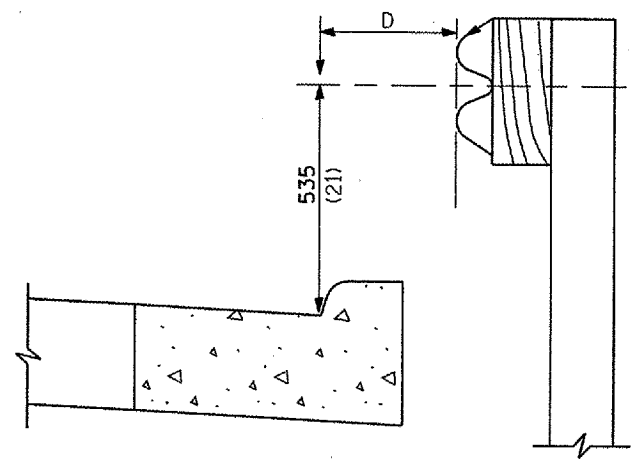
DETAIL

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			31	100
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



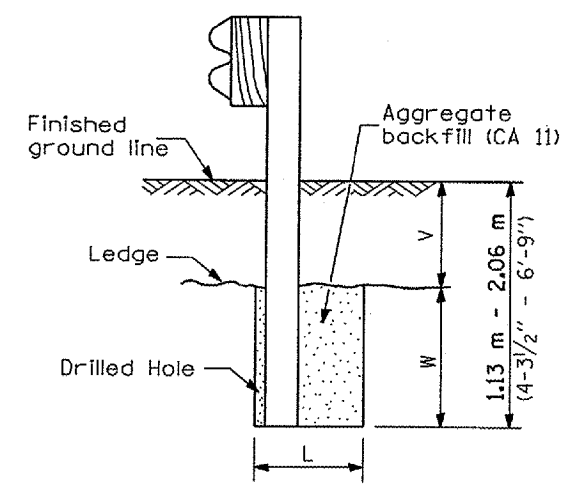
PLAN



Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)

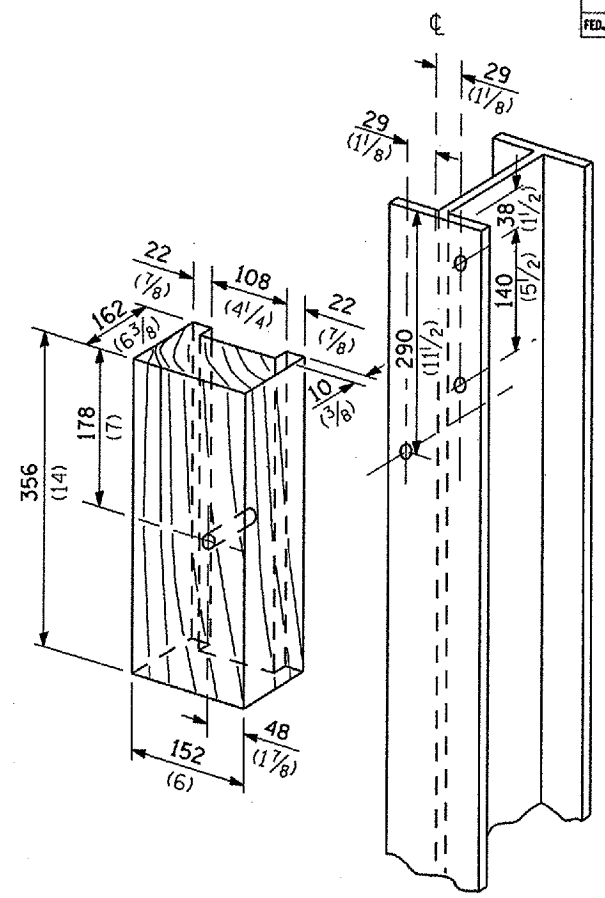


Note:
Ledge line is top of rock ledge or hard slag fill.

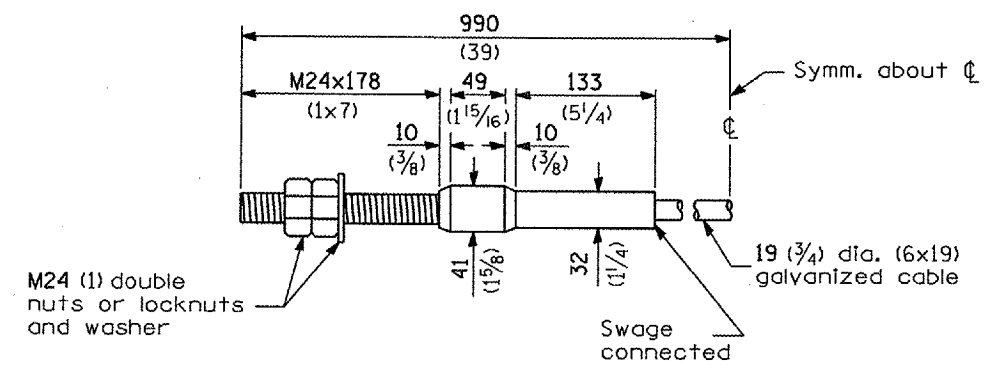
ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)



WOOD BLOCK-OUT AND STEEL POST DETAILS



CABLE ASSEMBLY
(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
(Sheet 4 of 4)

DETAIL

△ ADDED 1/4/07