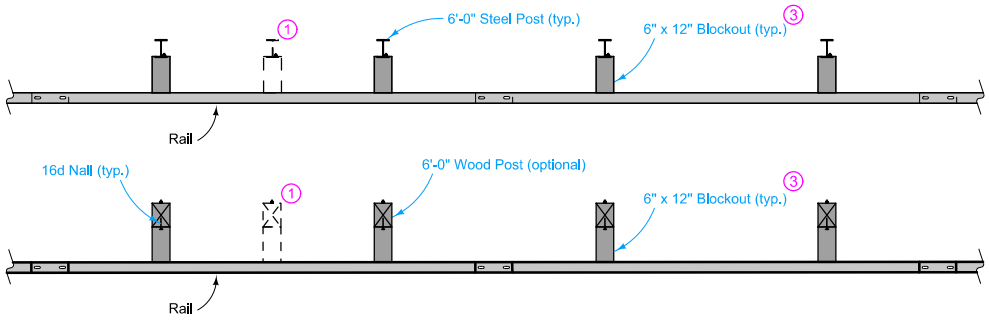
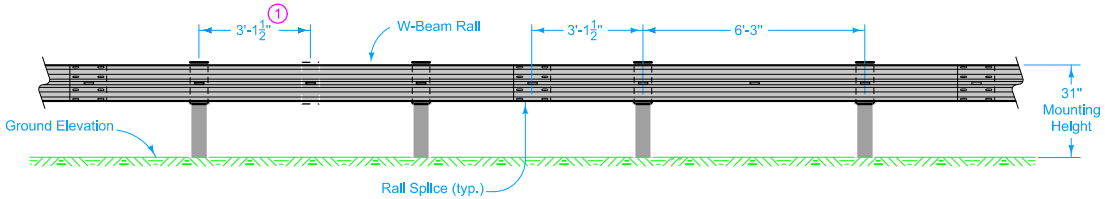
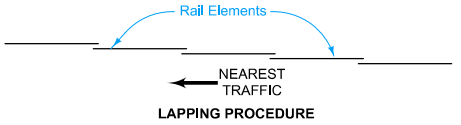
DESIGNER INFO



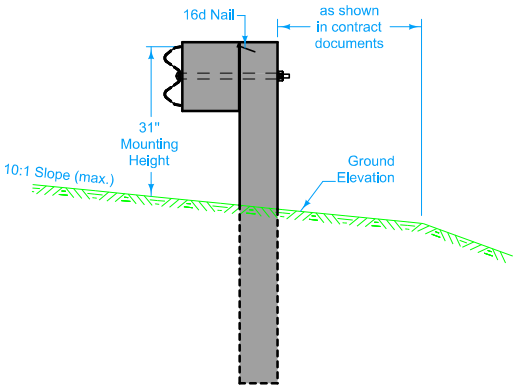
PLAN



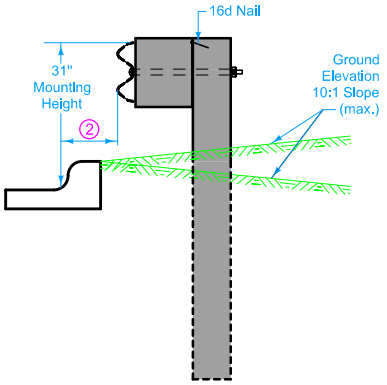
ELEVATION



LAPPING PROCEDURE



SECTION



SECTION WITH CURB

W-BEAM INSTALLATION

At Bridge End Drains, cut Scour Protection (Transition Mat and Turf Reinforcement Mat) or remove rock as required to place post(s) such that Bridge End Drains abut post(s).

(1) When specified by the contract documents, install posts at 3'-1½" spacing.

(2) 6" maximum for 6" Standard or 6" Sloped curbs and for non-standard curbs.

(3) Wood or composite only. Steel blockouts will not be allowed.

Possible Contract Item:
Steel Beam Guardrail

IOWA DOT

REVISION
3 | 04-19-16

STANDARD ROAD PLAN

BA-200

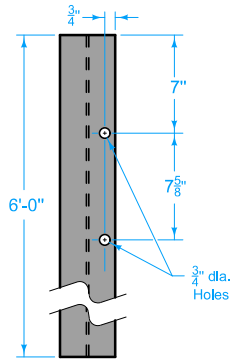
SHEET 1 of 4

REVISIONS: Added steel post and blockout details. Added new details for installing posts in bedrock or pavement. Changed top bolt hole location for wood posts.

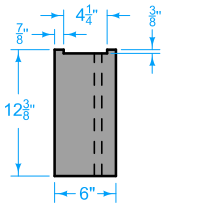
Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

STEEL BEAM GUARDRAIL COMPONENTS

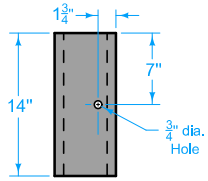
STEEL POST AND BLOCKOUT DETAILS



6'-0" STEEL POST
W6x9 or W6x8.5

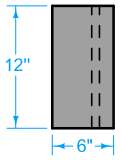


PLAN

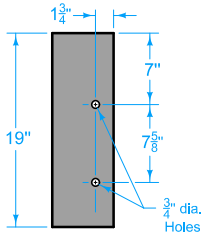


ELEVATION

W-BEAM BLOCKOUT ③

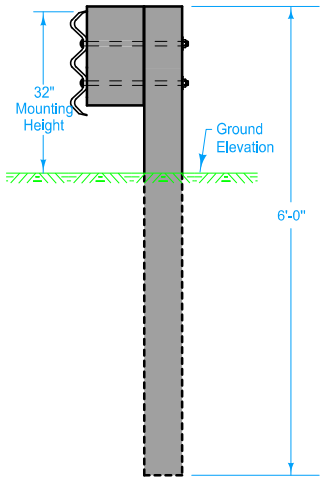


PLAN



ELEVATION

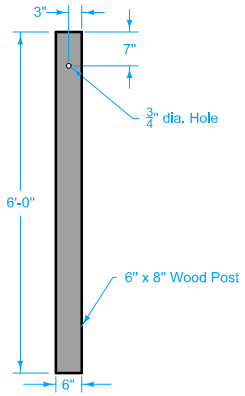
THRIE-BEAM BLOCKOUT ③



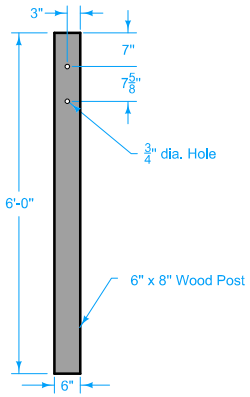
THRIE-BEAM INSTALLATION

③ Wood or composite only. Steel blockouts will not be allowed.

WOOD POST AND BLOCKOUT DETAILS

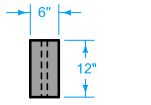


W-BEAM

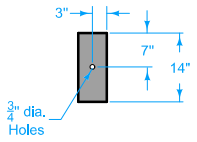


THRIE-BEAM

POSTS

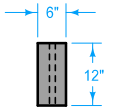


PLAN

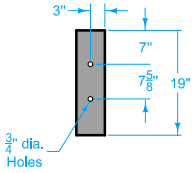


ELEVATION

W-BEAM BLOCKOUT ③



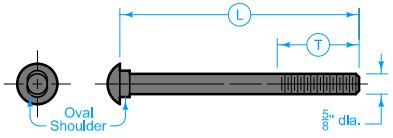
PLAN



ELEVATION

THRIE-BEAM BLOCKOUT ③

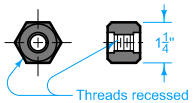
BOLT DETAILS



BOLT

APPLICATION	Ⓣ	Ⓛ
Splice Bolt	1 1/16"	1 1/4"
Bolt for Steel Post with 8" Blockout	2 1/2"	10"
Bolt for Steel Post with 12" Blockout	2 1/2"	14"
Bolt for Wood Post with 8" Blockout	2 1/2"	18"
Bolt for Wood Post with 12" Blockout	2 1/2"	22"

Ⓣ = Min. Thread Length Ⓛ = Bolt Length



NUT

HARDWARE

IOWA DOT

STANDARD ROAD PLAN

BA-200

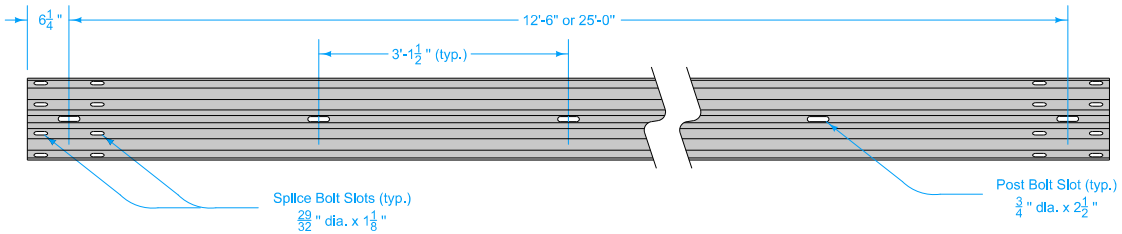
SHEET 2 of 4

REVISION	
3	04-19-16

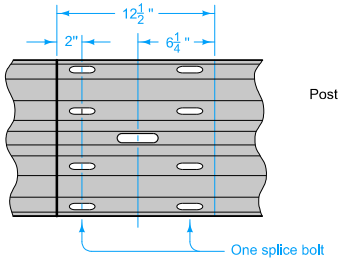
REVISIONS: Added steel post and blockout details. Added new details for Installing posts in bedrock or pavement. Changed top bolt hole location for wood posts.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

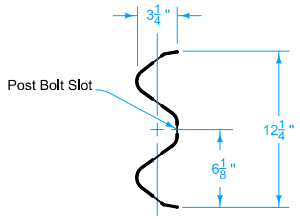
STEEL BEAM GUARDRAIL COMPONENTS



ELEVATION

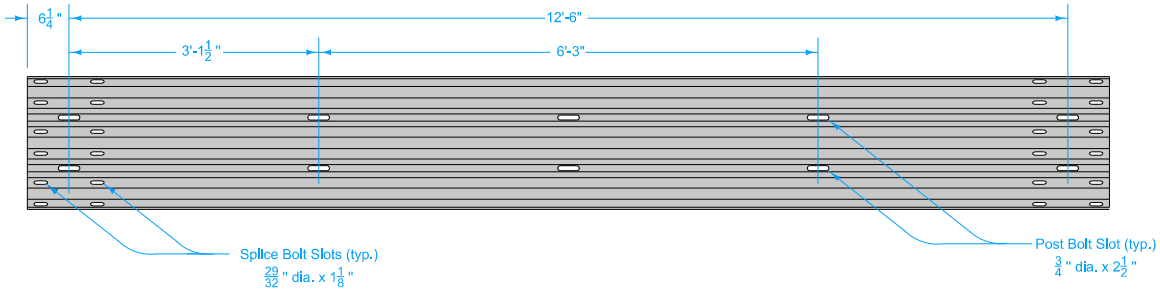


RAIL SPLICE

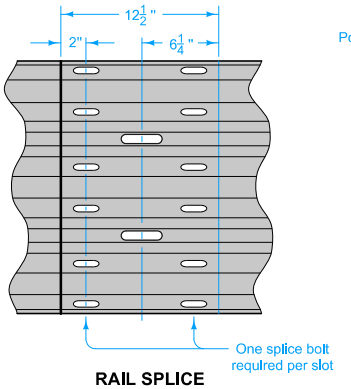


SECTION

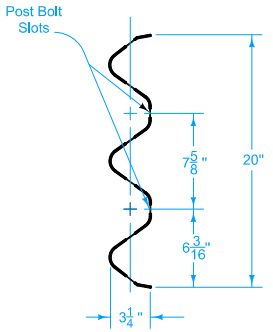
W-BEAM RAIL



ELEVATION

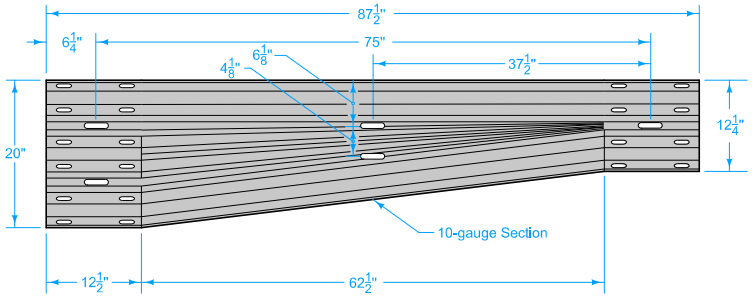


RAIL SPLICE



SECTION

THRIE-BEAM RAIL



ASYMMETRICAL TRANSITION SECTION

IOWA DOT

STANDARD ROAD PLAN

REVISION
3 | 04-19-16

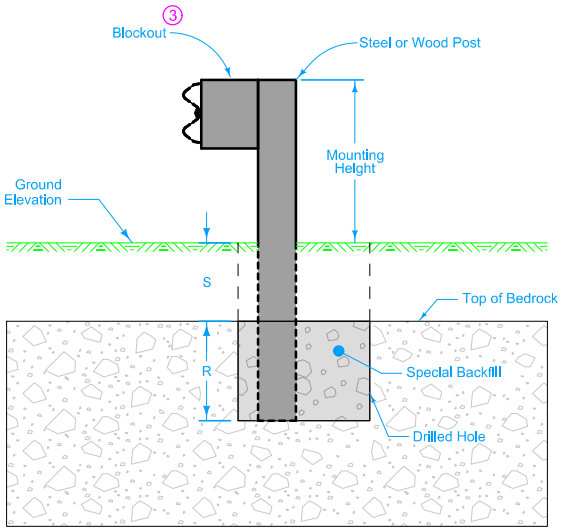
BA-200

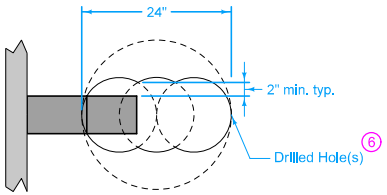
SHEET 3 of 4

REVISIONS: Added steel post and blockout details. Added new details for Installing posts In bedrock or pavement. Changed top bolt hole location for wood posts.

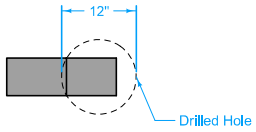
Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

STEEL BEAM GUARDRAIL COMPONENTS





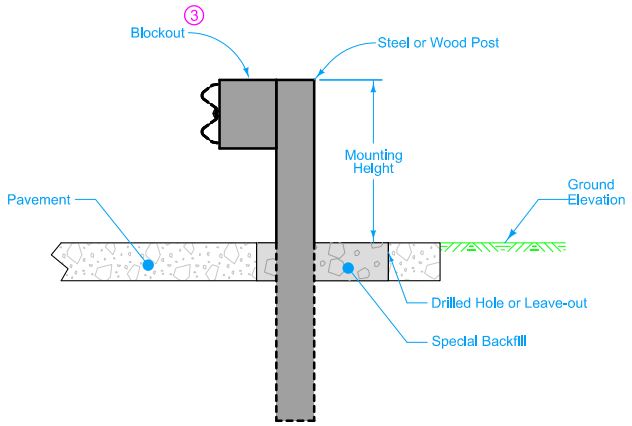
PLAN - CASE A

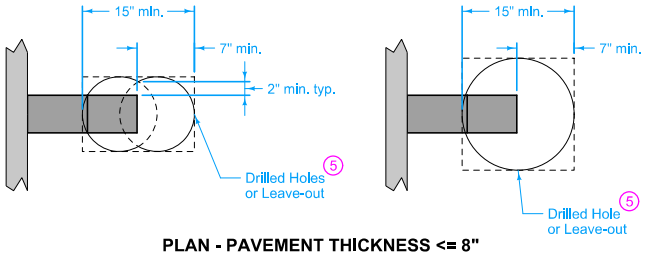


PLAN - CASE B

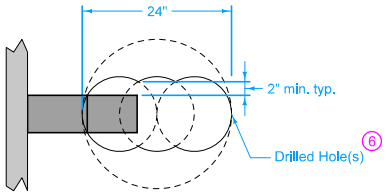
Post Embedment (4)		
Case	Depth to Bedrock	Minimum Depth to Drill into Bedrock
A	S = 0" to 16"	R = 24"
B	S = 16" to 52"	R = Post Length - Mounting Height - S

POST INSTALLED IN BEDROCK





PLAN - PAVEMENT THICKNESS <= 8"
Either approach is acceptable.



PLAN - PAVEMENT THICKNESS > 8"

POST INSTALLED IN PAVEMENT

Installation information applies to both wood and steel posts.

(3) Wood or composite only. Steel blockouts will not be allowed.

(4) Post extends to bottom of hole in all cases. Trim top of post as required and treat with preservative according to Section 4161 of the Standard Specifications.

(5) Use a 12 inch bit with two drills or a 15 inch bit with one drill. If placing post before paving, provide required leave-out area. If placing post after paving, drill or cut required area. Leave-out may be round or square.

(6) Use a 12 inch bit with three drills or a 24 inch bit with one drill.

IOWA DOT

REVISION
3 | 04-19-16

STANDARD ROAD PLAN

BA-200

SHEET 4 of 4

REVISIONS: Added steel post and blockout details. Added new details for installing posts in bedrock or pavement. Changed top bolt hole location for wood posts.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

STEEL BEAM GUARDRAIL COMPONENTS