

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. #	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	**	VARIOUS	15	1
		ILLINOIS	CONTRACT NO. 72N22	

** D6 CABLE/GUARDRAIL 2022 -1

FOR INDEX OF SHEETS, SEE SHEET NO. 2

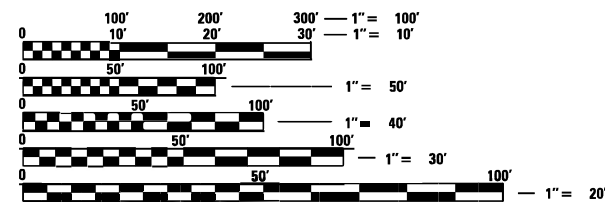
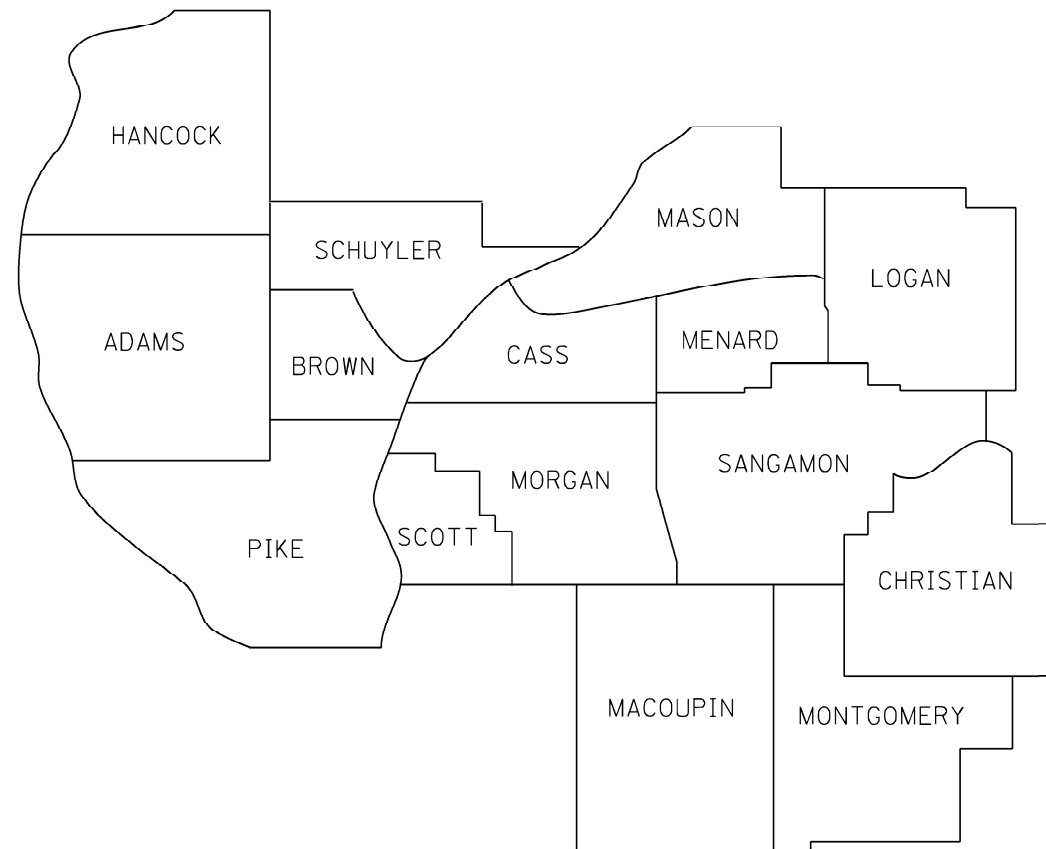
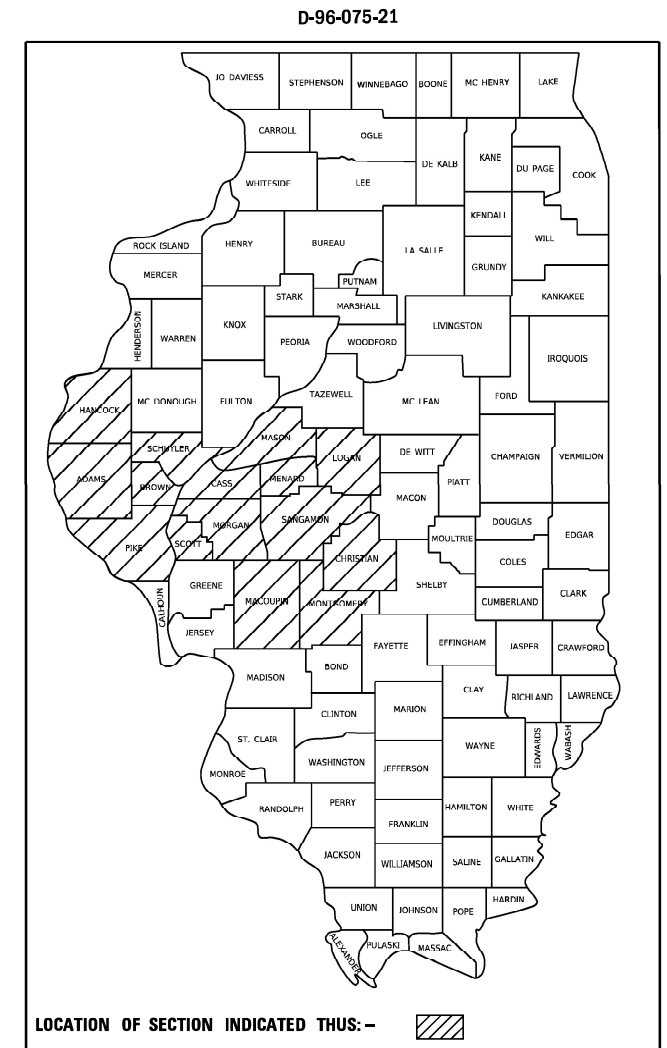
PROPOSED HIGHWAY PLANS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
- 3-4 SUMMARY OF QUANTITIES
- 5-15 PRE - MGS HIGHWAY STANDARDS

FOR LIST OF STANDARDS, SEE SHEET 2

VARIOUS ROUTES
SECTION D6 CABLE/GUARDRAIL 2022-1
PROJECT COVD-MJIQ(899)
GUARDRAIL REPAIR
VARIOUS COUNTIES IN D6
C-96-148-21



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER : JAY EDWARDS (217)-785-0597
PROJECT MANAGER : JONATHAN COX (217)-782-1378

CONTRACT NO. 72N22

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 13, 2021

Jay P. Myers
REGIONAL ENGINEER

December 10, 2021
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

December 10, 2021
Stephen M. Lewis
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS

STANDARD NO.	TITLE
000001-08	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
630101-10	STRONG POST GUARDRAIL ATTACHED TO CULVERT
630111-01	WEAK POST GUARDRAIL ATTACHED TO CULVERT
643001-02	SAND MODULE IMPACT ATTENUATORS
664001-02	CHAIN LINK FENCE
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-11	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-13	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
701422-10	LANE CLOSURE, MULTILANE, FOR SPEEDS > 45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS < 40 MPH
701428-01	TRAFFIC CONTROL SET UP AND REMOVAL FREEWAY/EXPRESSWAY
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-08	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
001006	DECIMAL OF AN INCH AND OF A FOOT
630001-12	STEEL PLATE BEAM GUARDRAIL
630006	NON-BLOCKED STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6

GENERAL NOTES

ALL DISTURBED AREAS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED AND SEEDED WITH CLASS 2 ROADSIDE MIXTURE AND FERTILIZED AS STATED IN SECTION 250 OF THE STANDARD SPECIFICATIONS. COST SHALL BE CONSIDERED INCLUDED IN THE UNIT COST OF THE WORK BEING PERFORMED.

REMOVAL OF DAMAGED IMPACT ATTENUATORS SHALL BE INCLUDED IN THE COST OF THE IMPACT ATTENUATOR BEING INSTALLED.

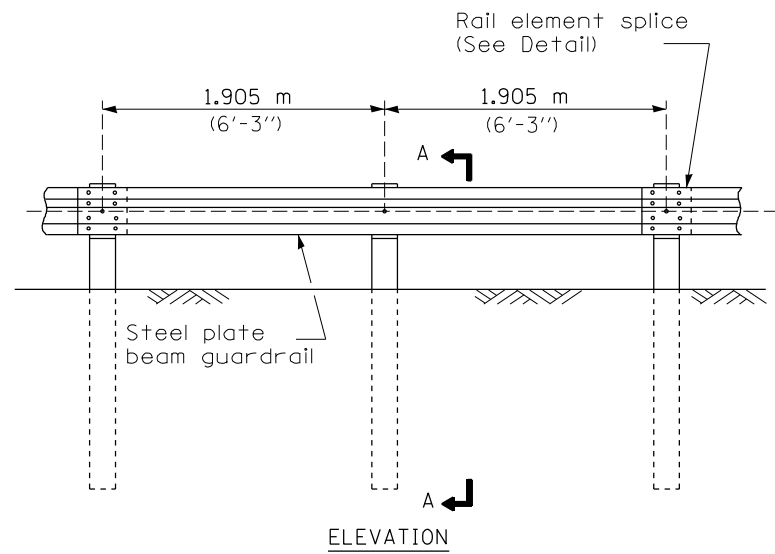
REMOVAL AND DISPOSAL OF DAMAGED FENCE SHALL BE INCLUDED IN THE COST OF THE FENCE BEING INSTALLED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED	October 4 20 21 <i>[Signature]</i> ENGINEER OF OPERATIONS
EXAMINED	October 1 20 21 <i>[Signature]</i> ENGINEER OF PROJECT IMPLEMENTATION
EXAMINED	October 1 20 21 <i>[Signature]</i> ENGINEER OF PROGRAM DEVELOPMENT

MODEL: Default
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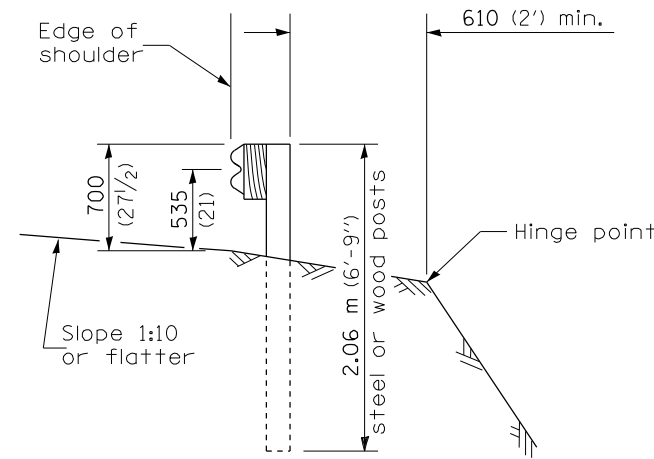
REV. - MS

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	DATE -	REVISED -									

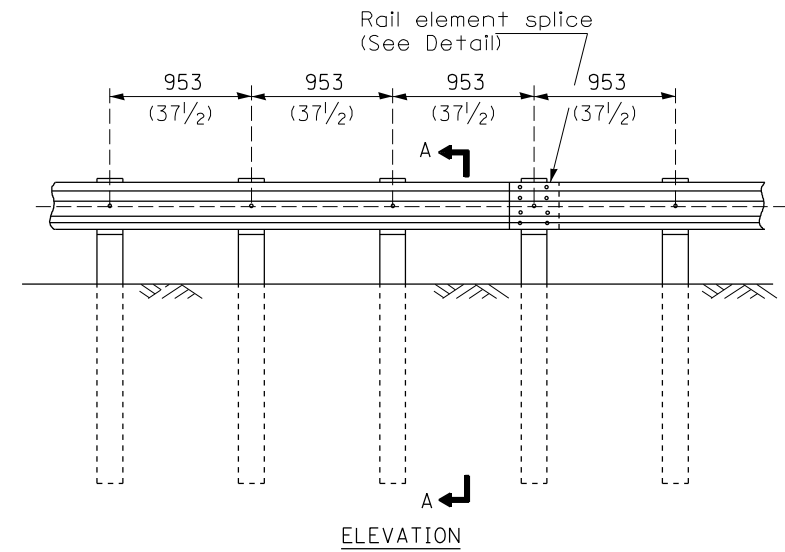


TYPE A

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

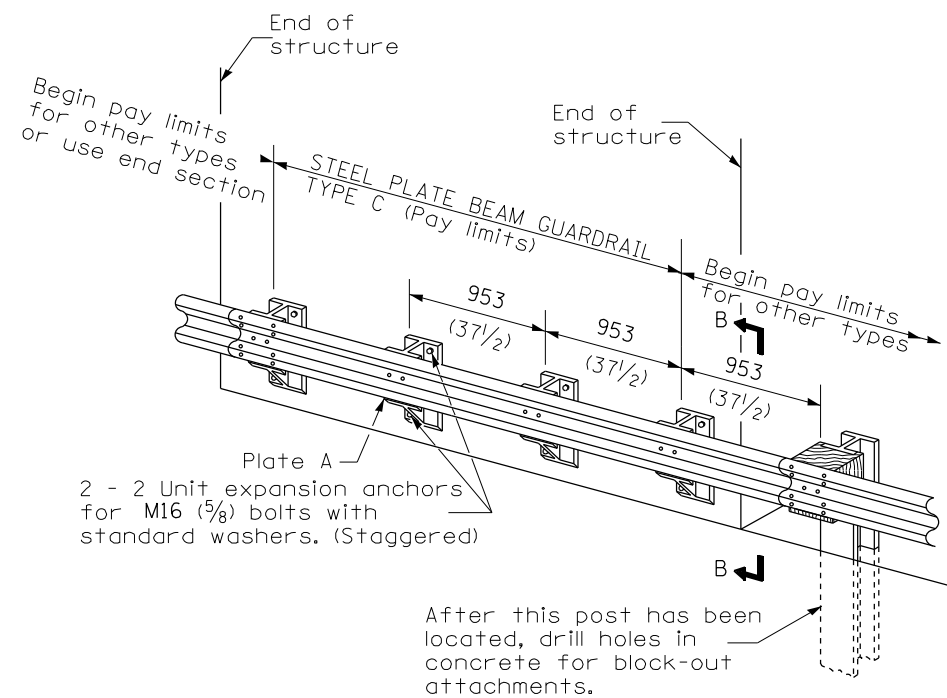


SECTION A-A



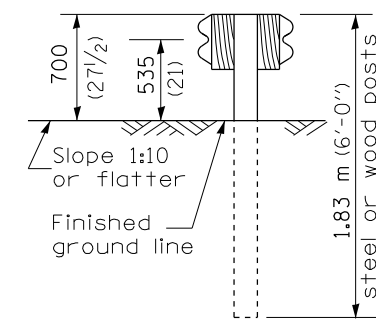
TYPE B

953 (37 1/2'') Closed post spacing

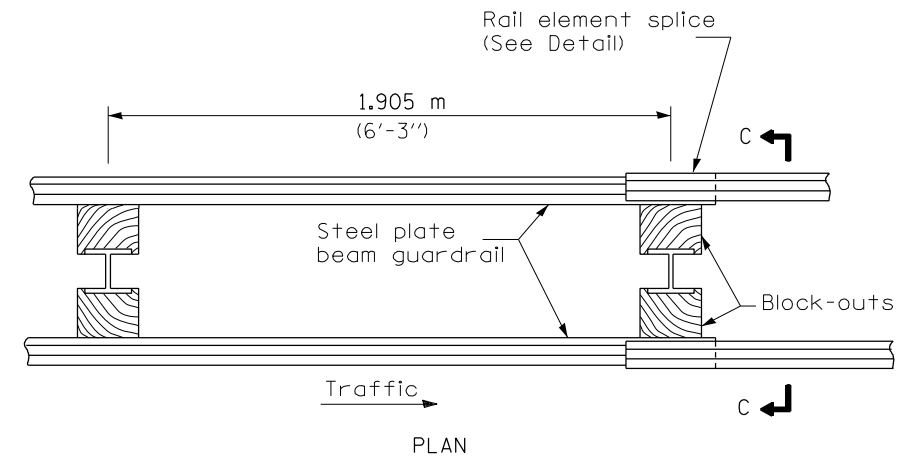


TYPE C

953 (37 1/2'') Block-out spacing

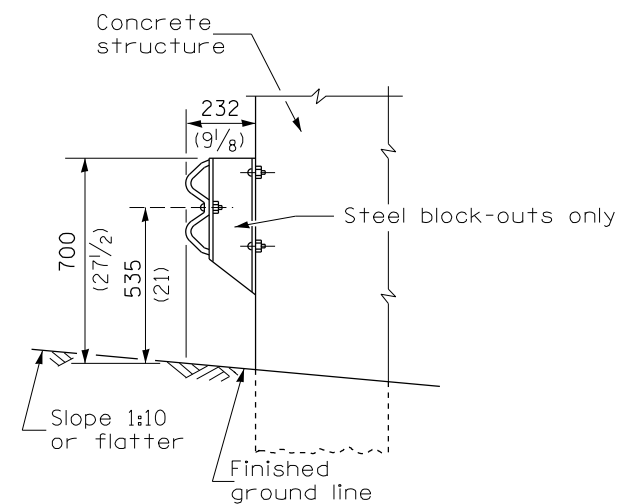


SECTION C-C



TYPE D

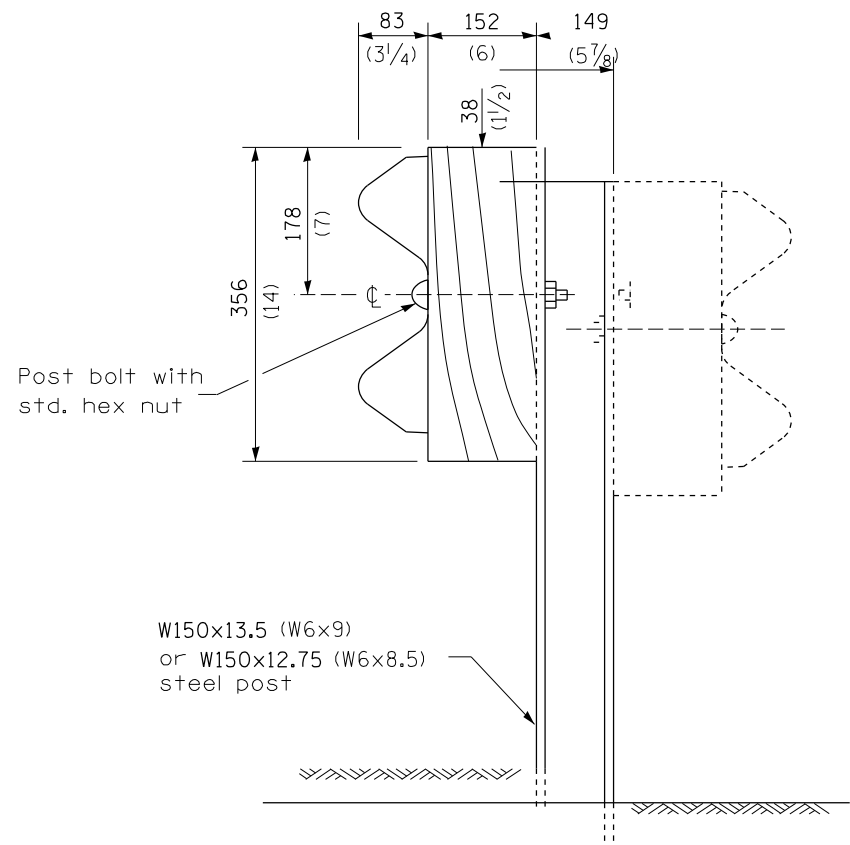
Double steel plate beam guardrail
1.905 m (6'-3'') typical post spacing



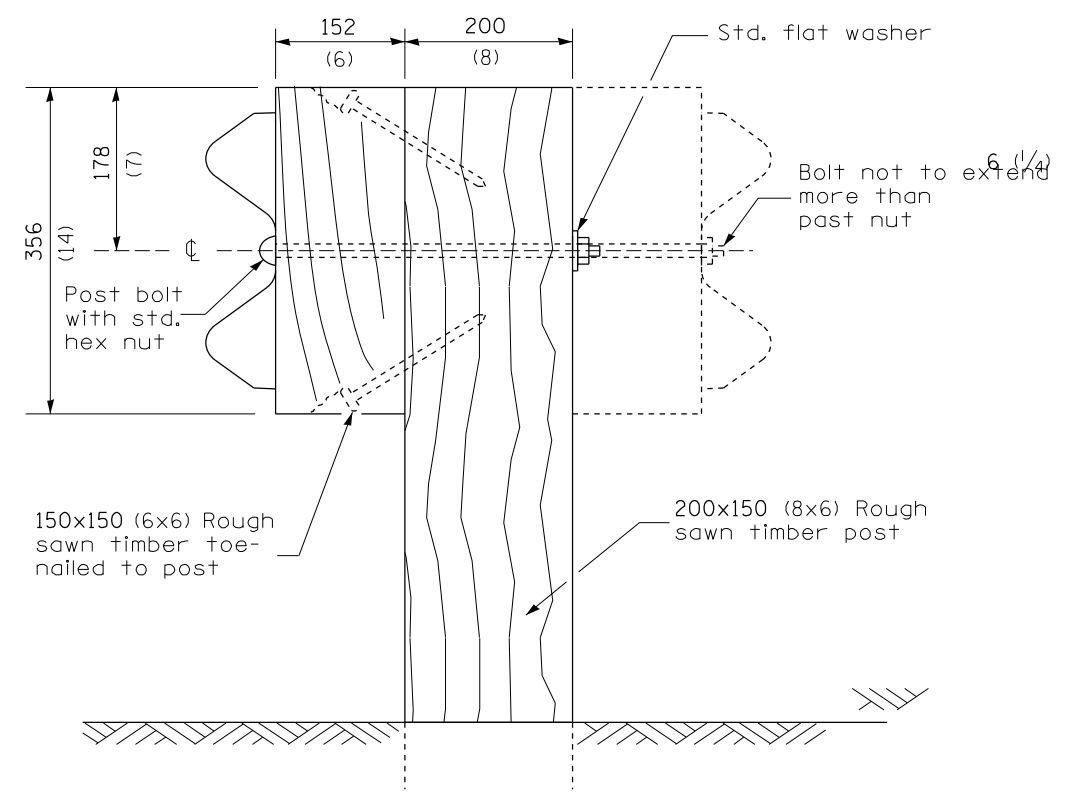
SECTION B-B

GENERAL NOTES

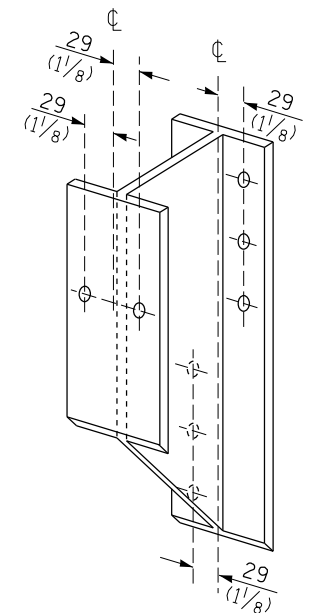
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Default	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 72N22					
	PLOT DATE = 7/3/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



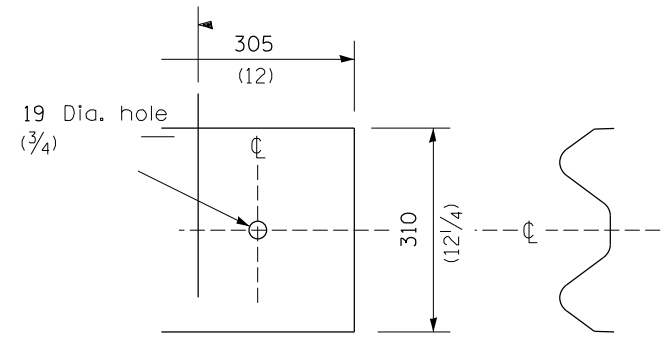
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION

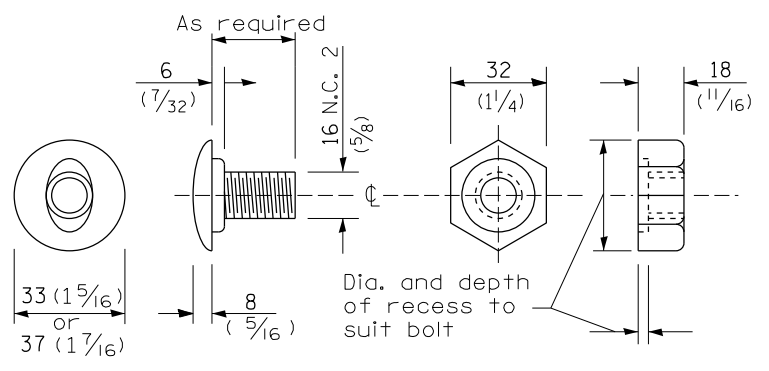


STEEL BLOCK-OUT DETAIL



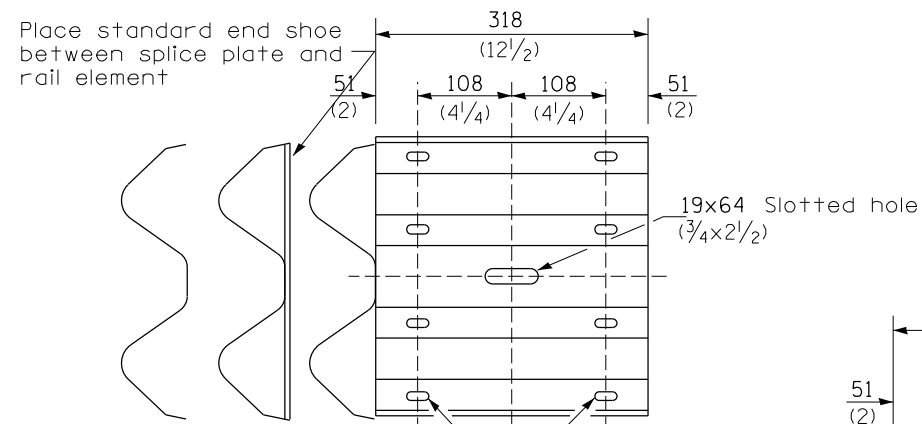
NOTE
 Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A

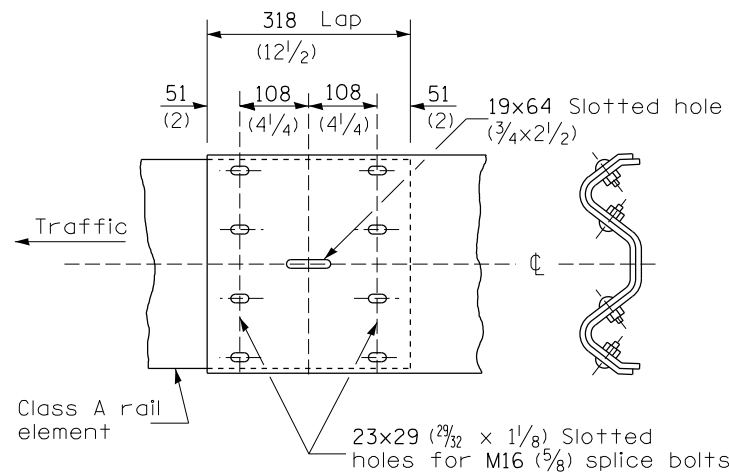


POST OR SPLICE BOLT & NUT

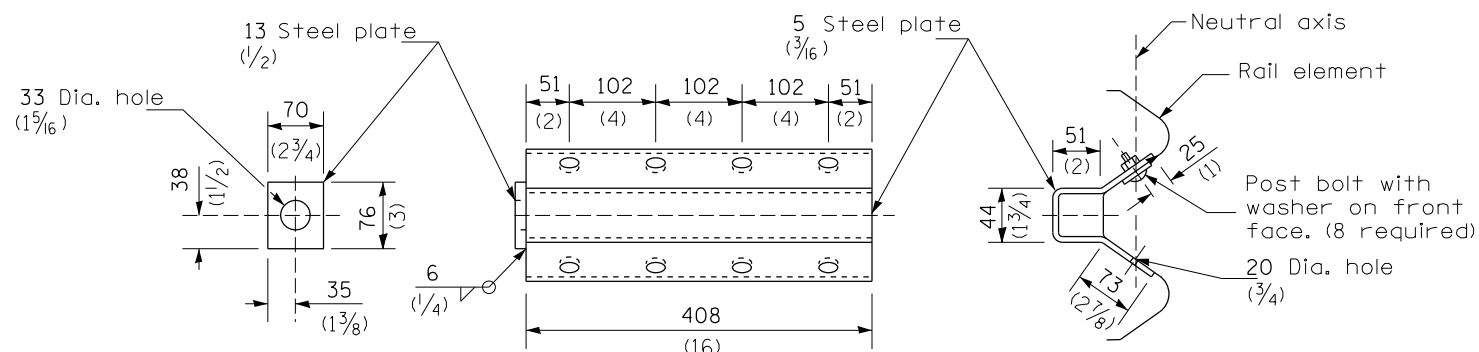
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	PLOT DATE = 7/3/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



SPLICE PLATE

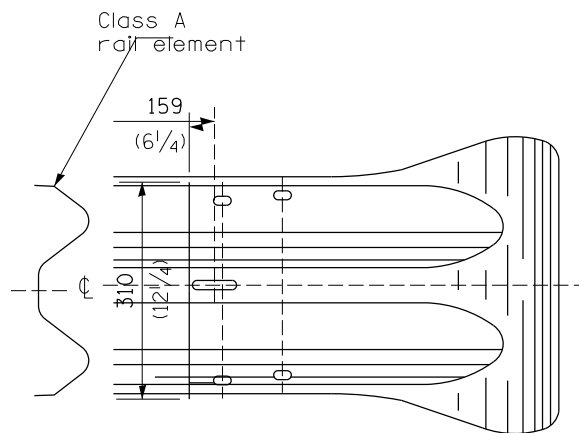
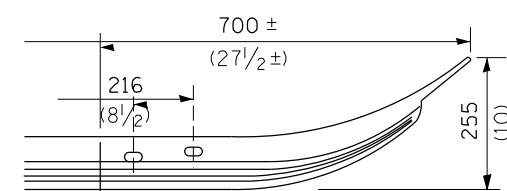


RAIL ELEMENT SPLICE

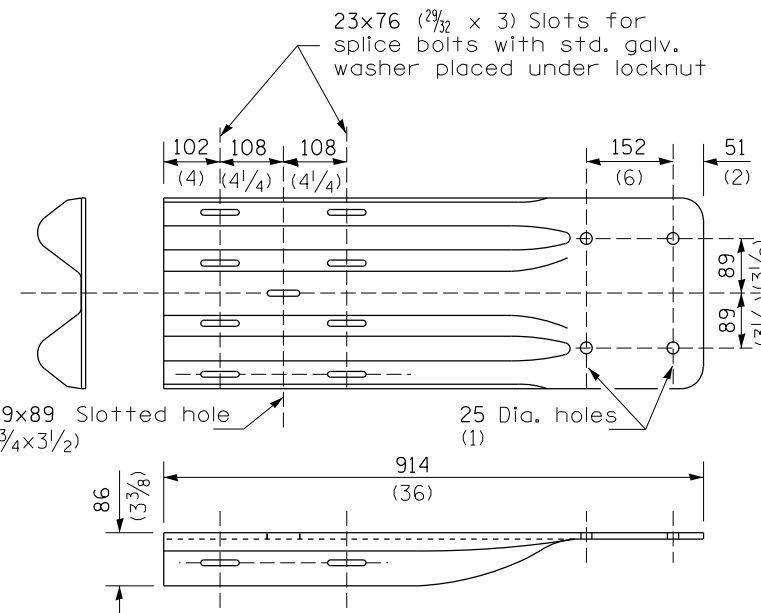


NOTE
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



END SECTION

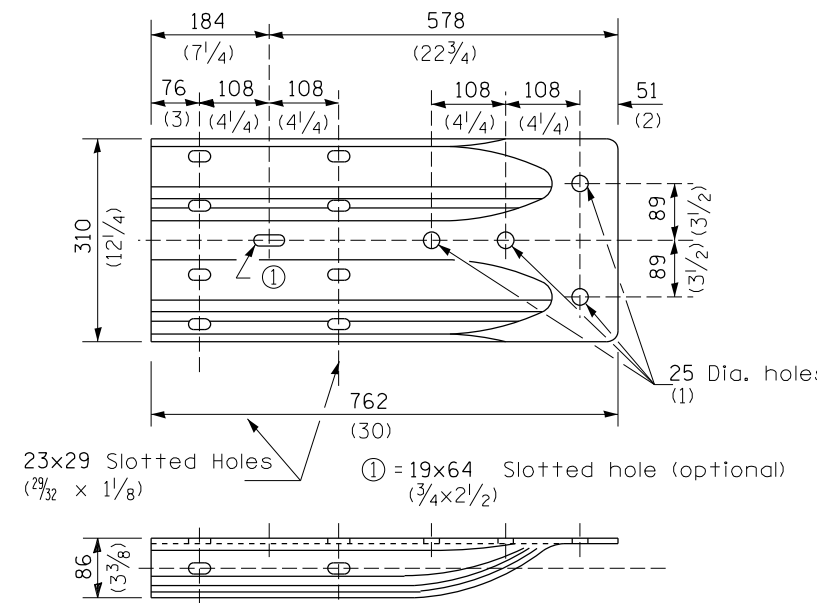


NOTE
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

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.

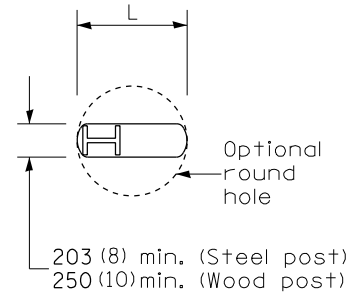
Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE

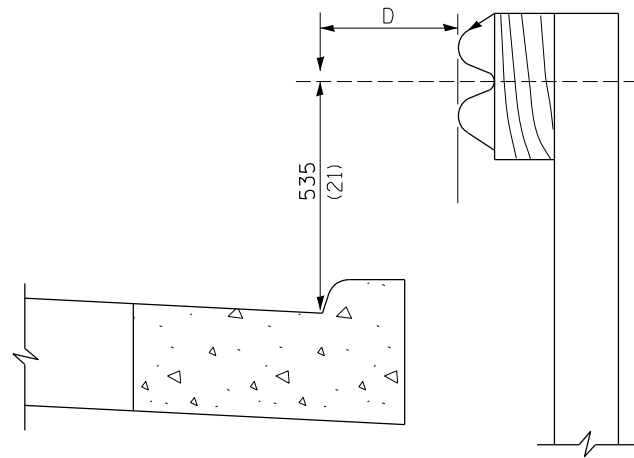


ALTERNATE END SHOE

FILE NAME =	USER NAME = specht	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRE-MGS HIGHWAY STANDARD 630001-06 STEEL PLATE BEAM EFFECTIVE 4-1-06	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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Default	PLOT DATE = 7/3/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					



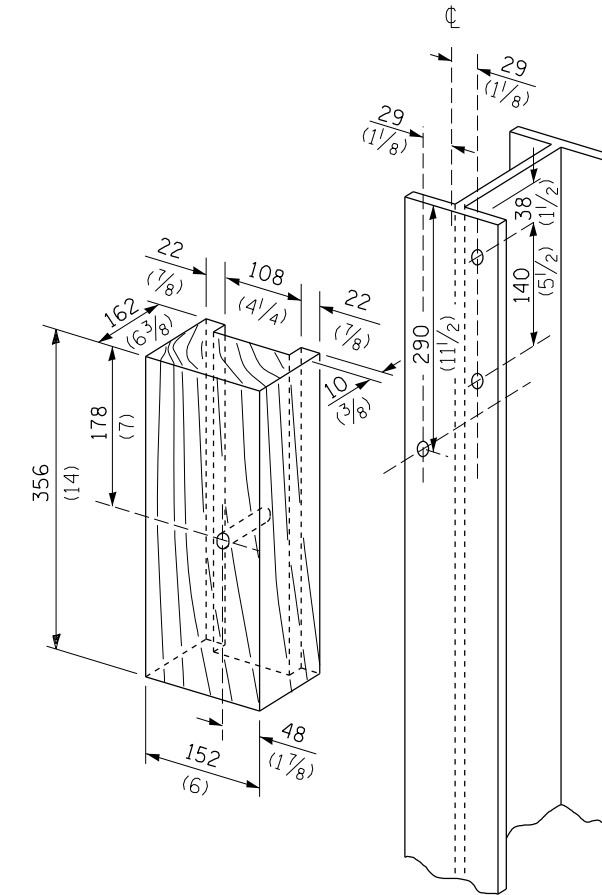
PLAN



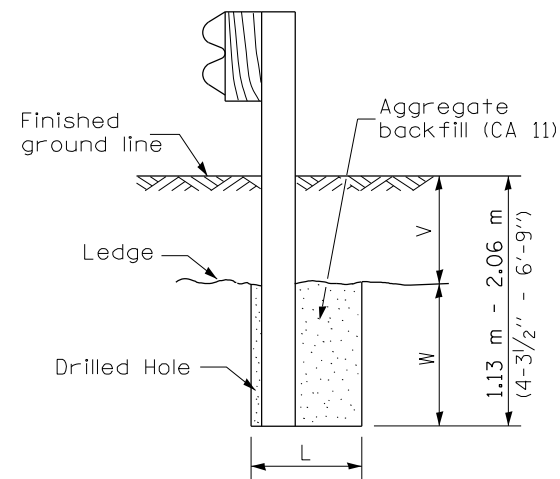
Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

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



WOOD BLOCK-OUT AND STEEL POST DETAILS

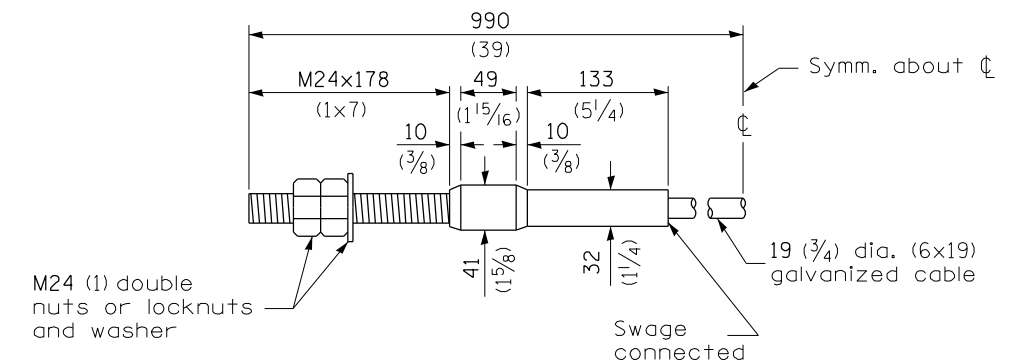


Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

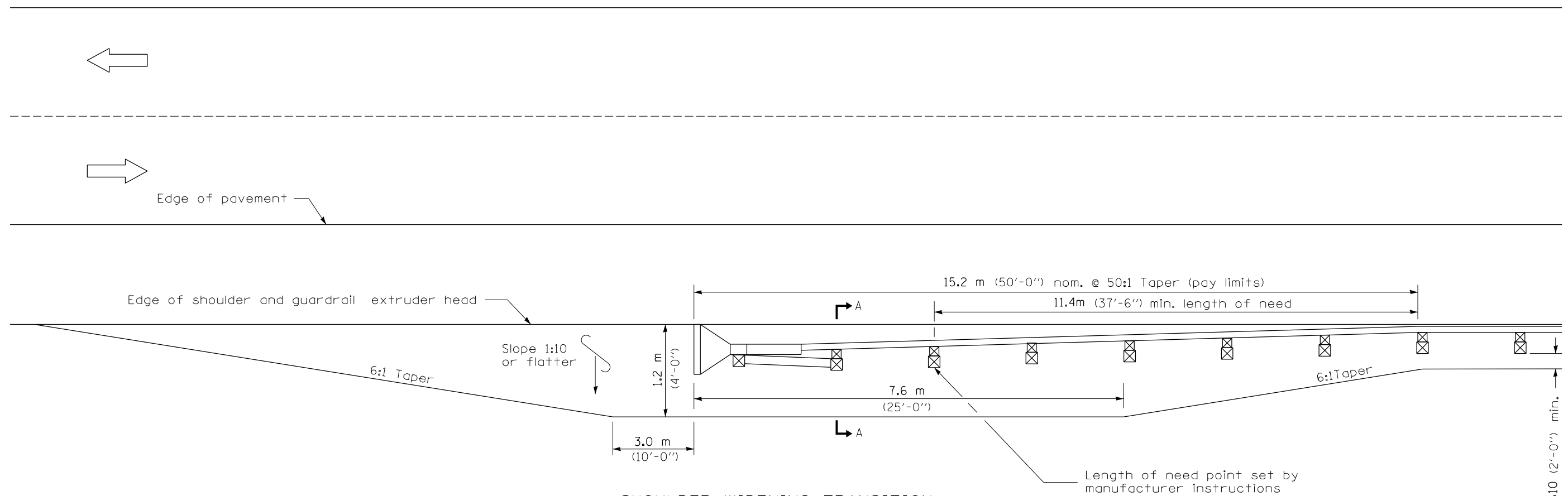
FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

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)

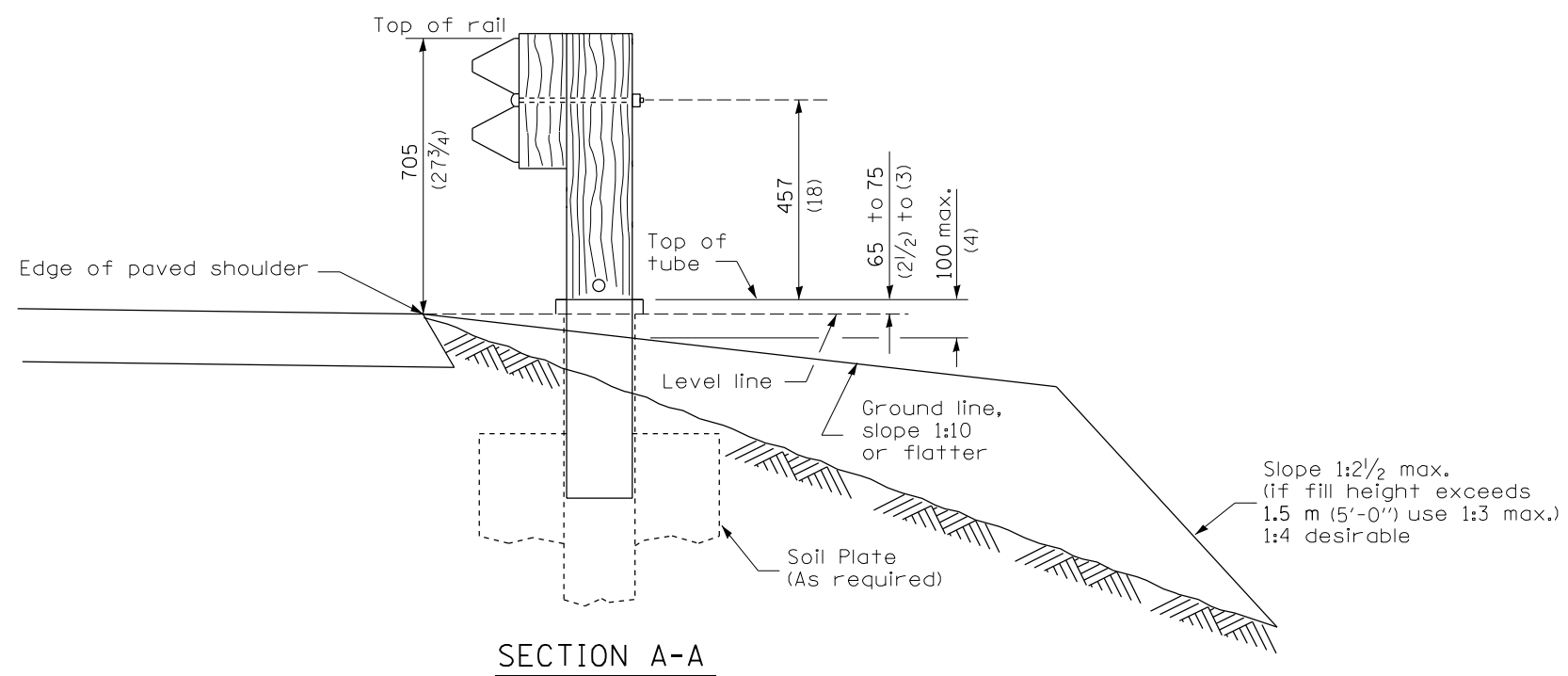


CABLE ASSEMBLY

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



**SHOULDER WIDENING TRANSITION
FOR TANGENT TERMINAL**



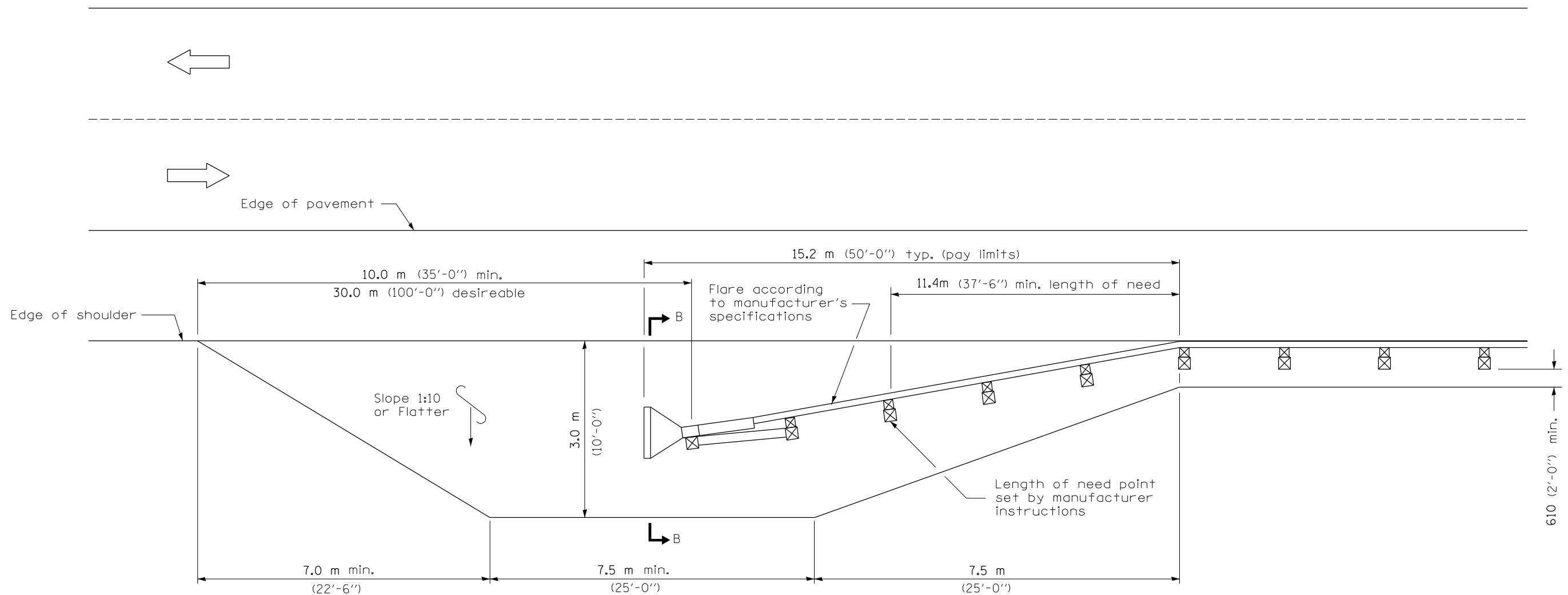
SECTION A-A

GENERAL NOTES

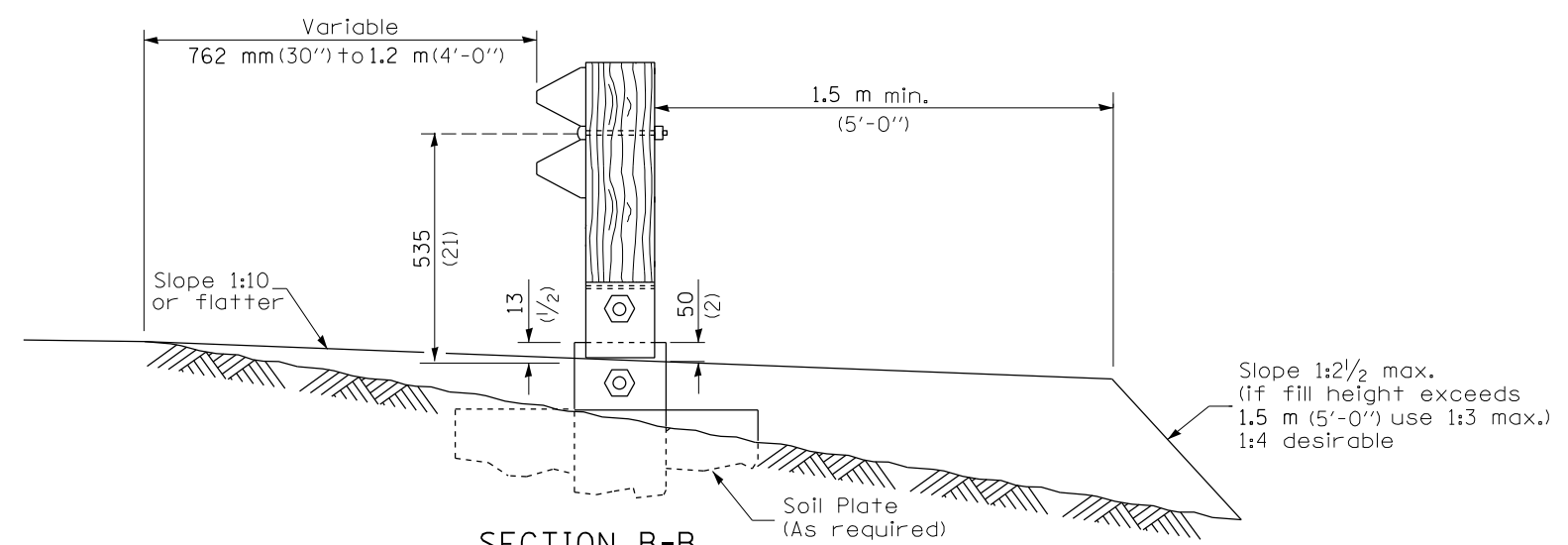
50:1 Taper required so the guardrail head will not encroach on the shoulder.

FILE NAME =	USER NAME = specht	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRE-MGS HIGHWAY STANDARD 630301-03 SHOULDER WID. FOR TYPE 1 (SPL) GUARDRAIL TERMINAL EFFECTIVE 4-1-06			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
pwz\ldoc-pw.bentley.com:PWIDOT\Documents\SIDO	Offices\District_6\Projects\D672N22\CADDData_5510\CADD	DRAWN -	REVISED -		SCALE:	SHEET 1	OF 2	SHEETS	STA.	TO STA.	ILLINOIS	FED. AID PROJECT	15	9
Default	PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -								CONTRACT NO. 72N22			
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* D6 CABLE/GUARDRAIL 2022-1

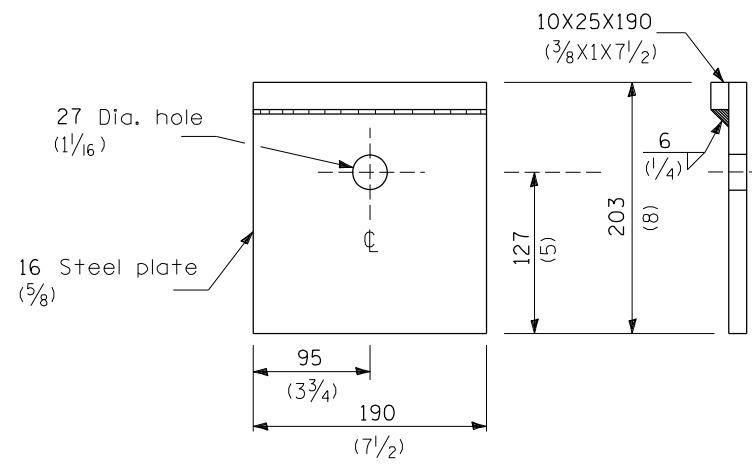


**SHOULDER WIDENING TRANSITION
FOR FLARED TERMINAL**

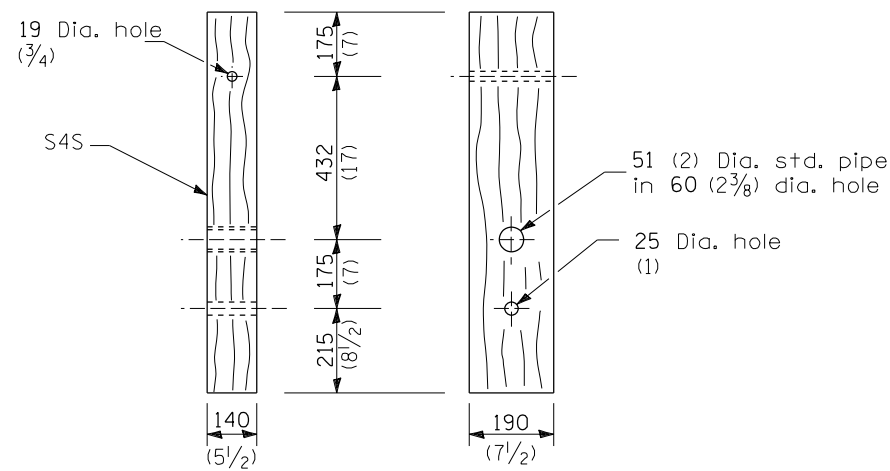


SECTION B-B
(End section omitted for clarity.)

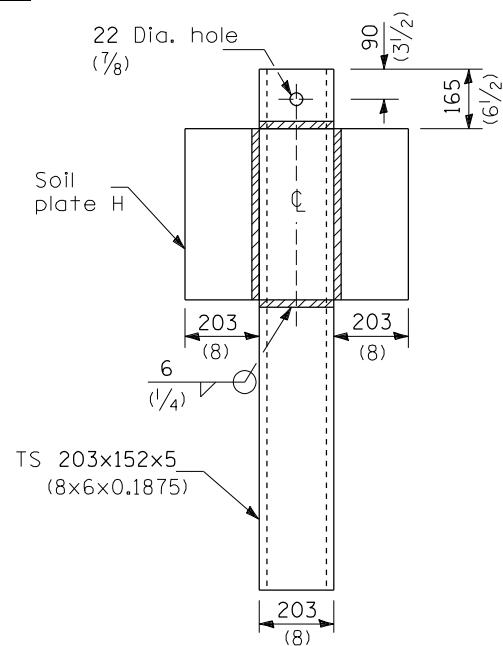
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Default	PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 72N22									
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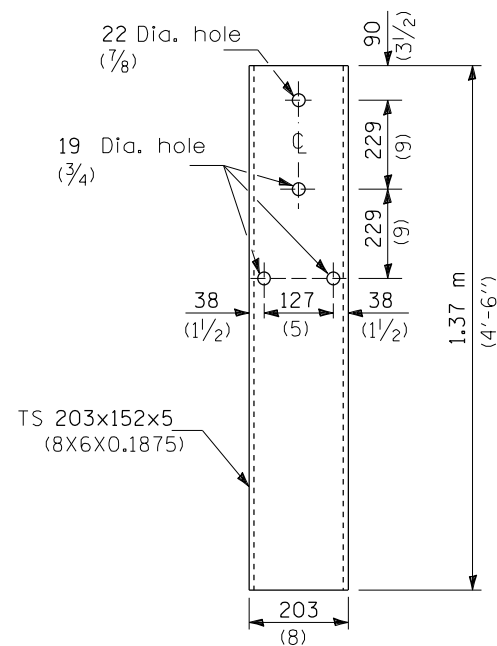
BEARING PLATE K



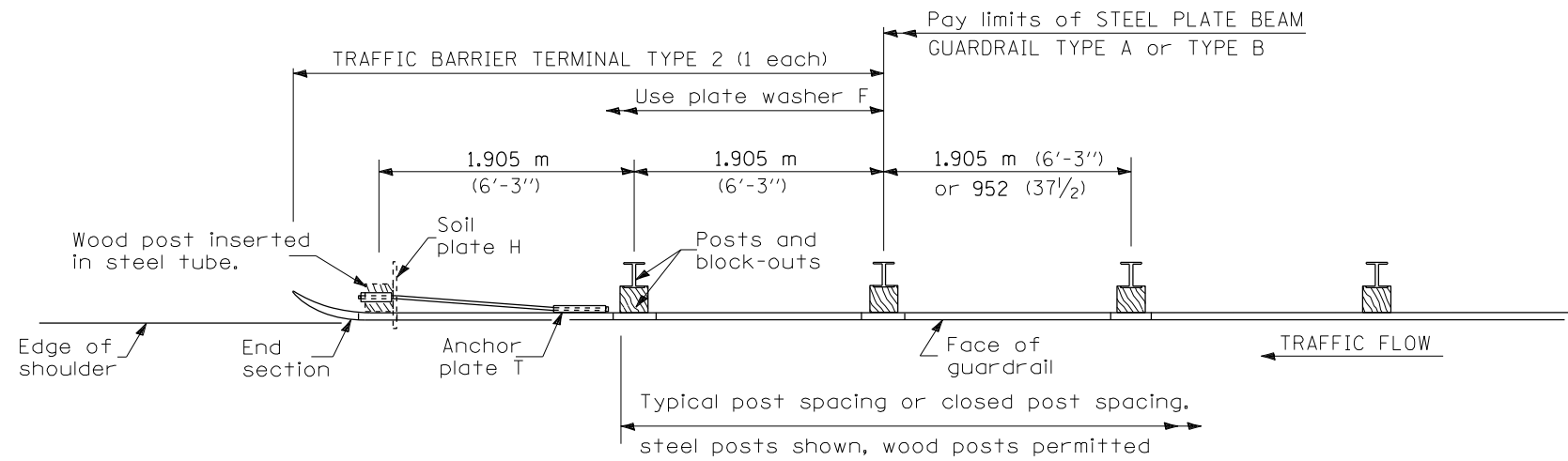
WOOD POST



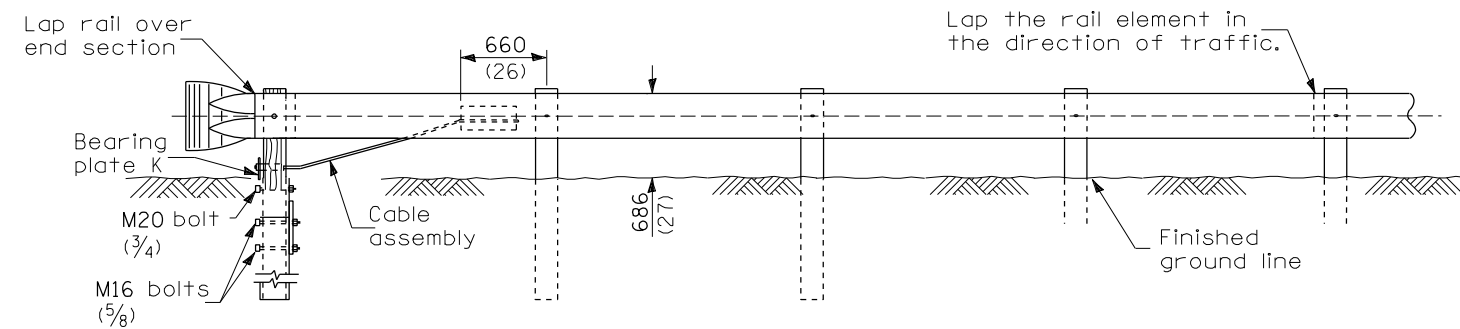
ALTERNATE SOIL PLATE CONNECTION



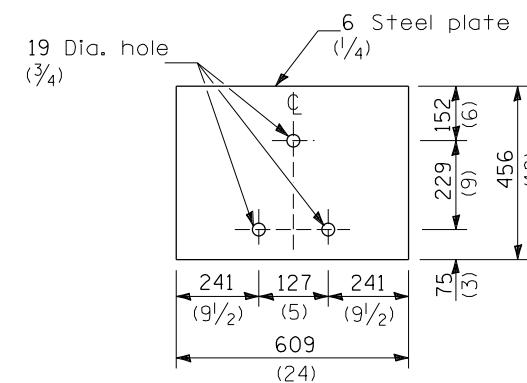
STEEL TUBE



PLAN



ELEVATION

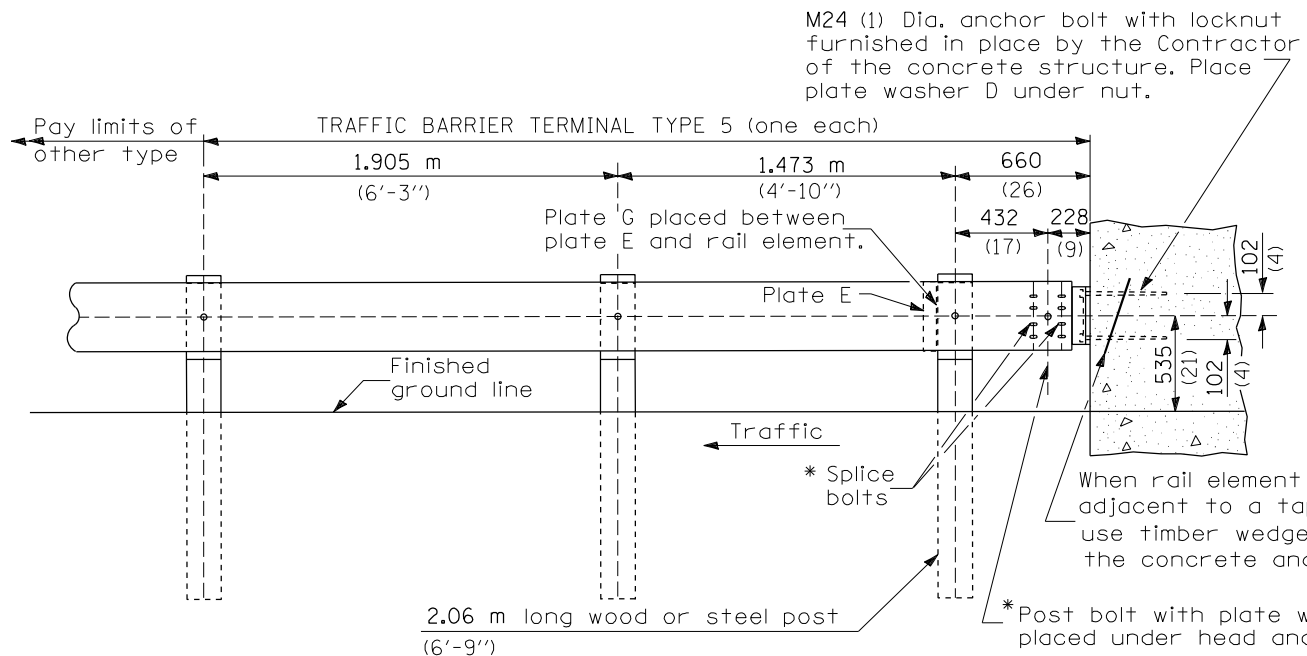


SOIL PLATE H

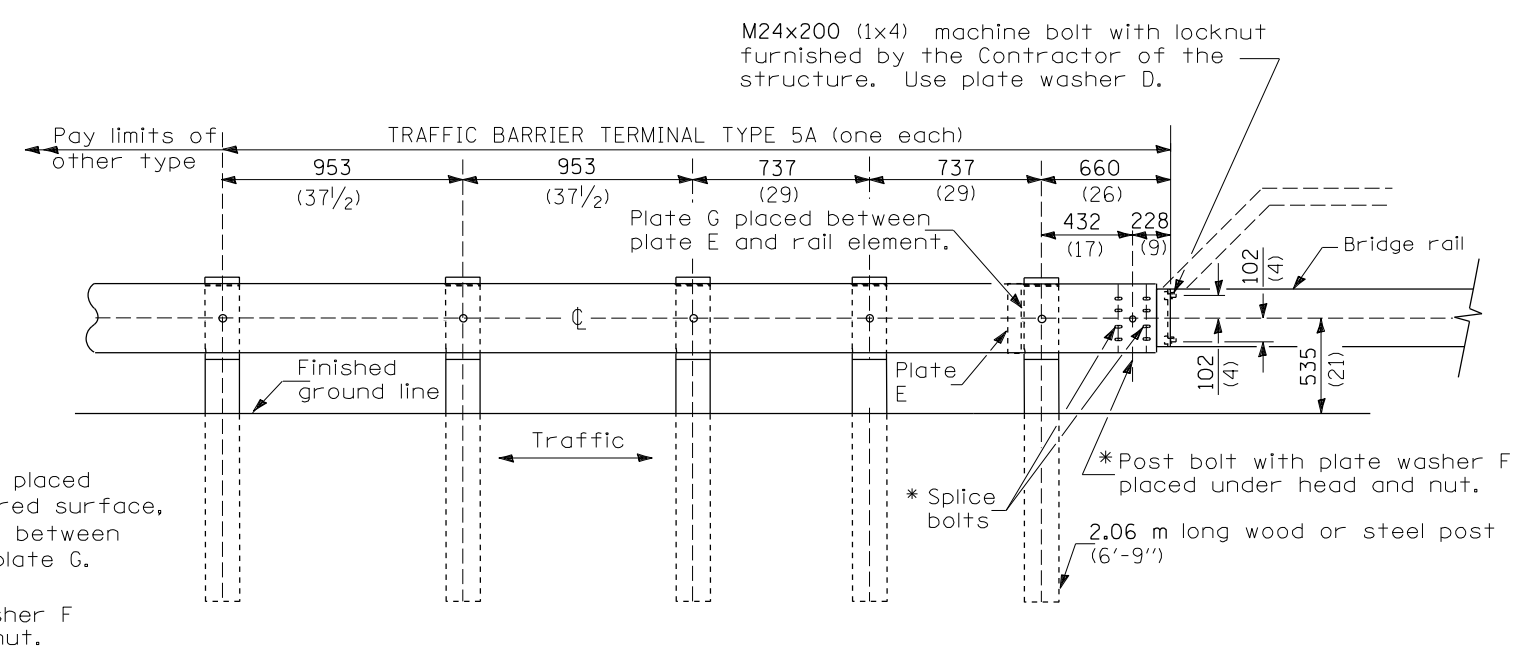
GENERAL NOTES

- See Standard 630001 for details of guardrail not shown.
- Use plate washer F at all posts.
- The bearing plate K shall be held in position by (2) two eight penny nails driven into the post and bent over the top of the plate.

FILE NAME =	USER NAME = spechtd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRE-MGS HIGHWAY STANDARD 631011-02 TRAFFIC BARRIER TERMINAL, TYPE 2 EFFECTIVE 4-1-06	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pwz\ldoc-pw.bentley.com:PWIDOT\Documents\SIDOT\Offices\District 6\Projects\D672N22\CADDData 5510\CADD\DRAWN22-sht-631011-02_TRAF_BAR_TERM	PLLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -			*VAR	**	VARIOUS	15	11	
Default	PLOT DATE = 7/3/2018	DATE -	REVISED -			SHEET 1 OF 1 SHEETS		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 72N22	
						STA. TO STA.					



TYPE 5 - CONCRETE BRIDGE PARAPET



TYPE 5A - STEEL BRIDGE RAIL

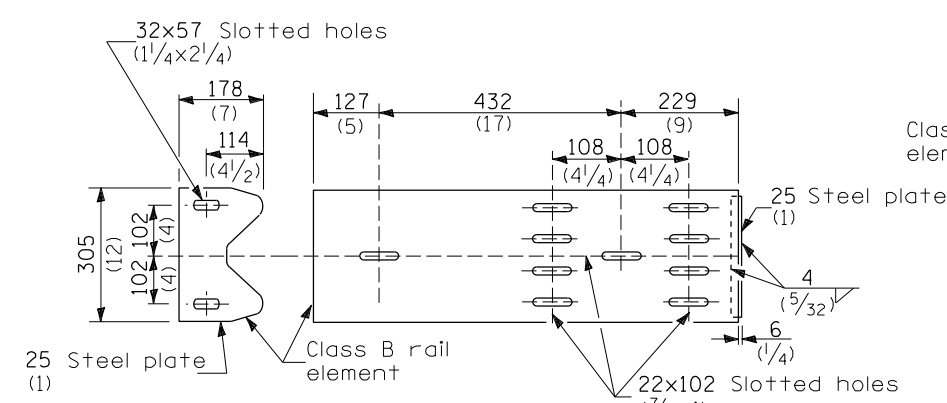


PLATE G

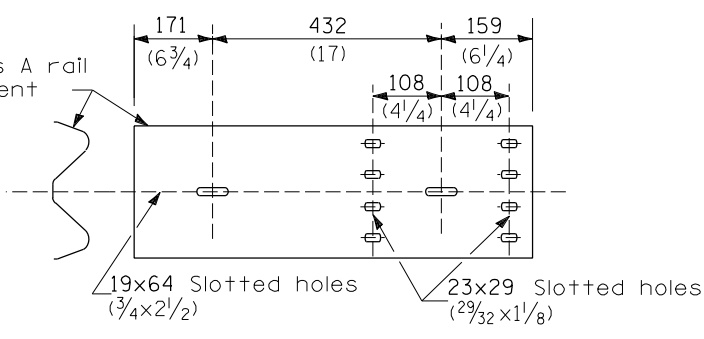
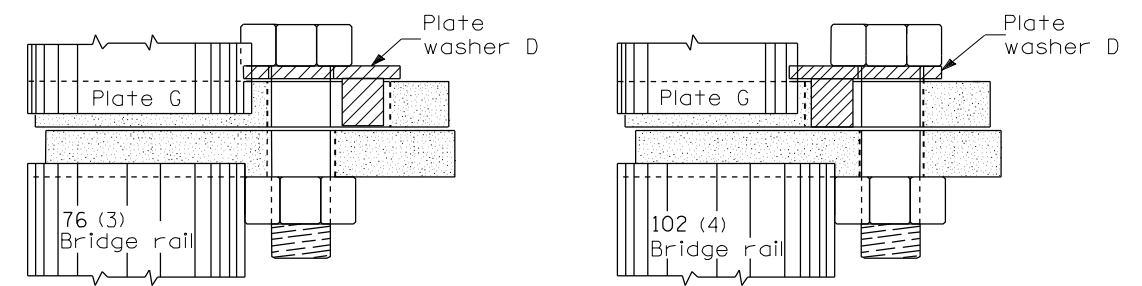


PLATE E



PLACEMENT OF PLATE WASHER D (PLAN)

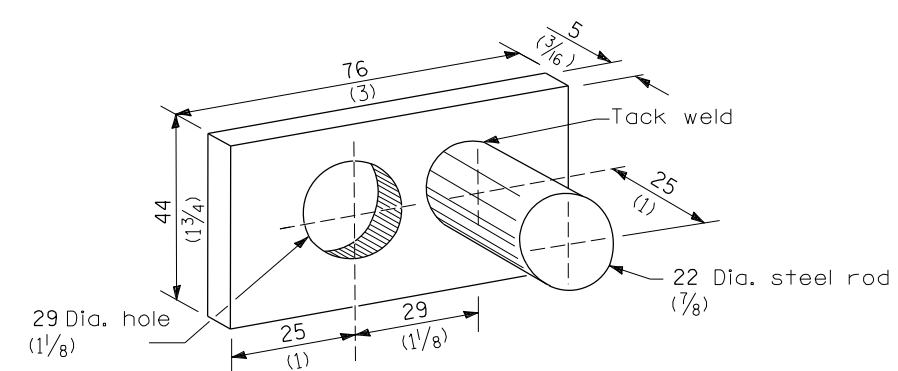
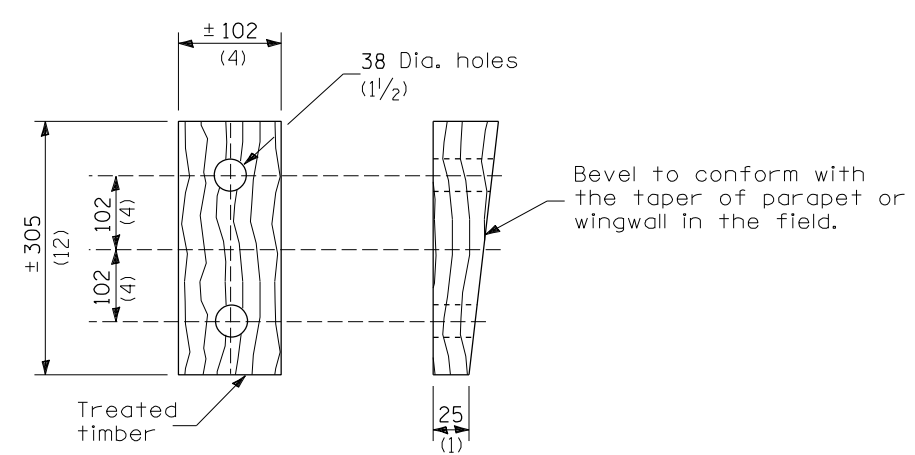


PLATE WASHER D

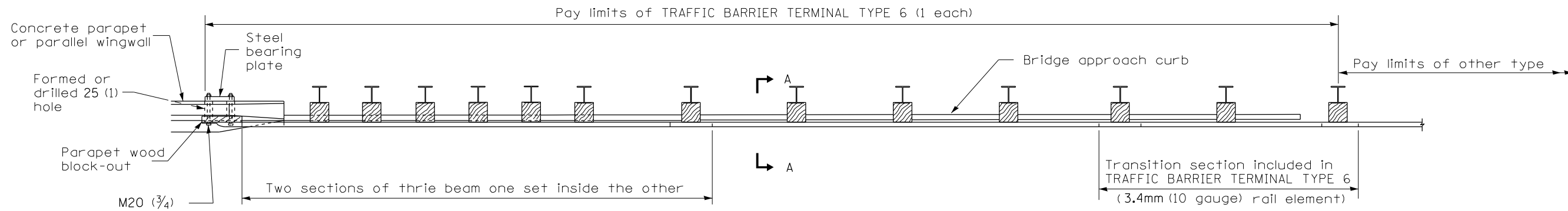


WEDGE M

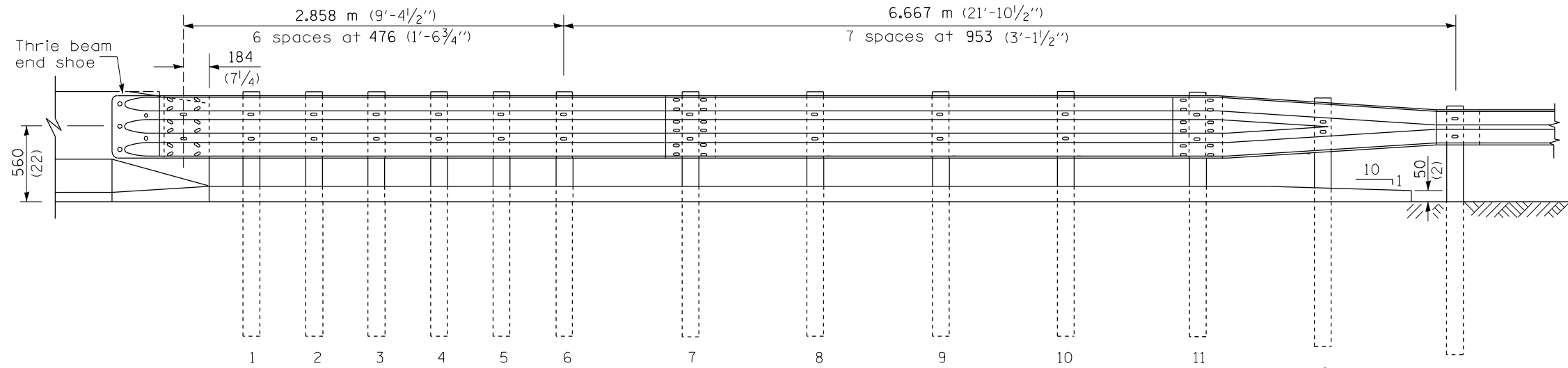
GENERAL NOTES

- Install plate washer D so that the 25 mm (1") projection fills the remainder of the slotted holes in the 25 mm (1") end plate on plate G after the M24 (1") dia. bolts are in place.
- * Bolts shall be provided with locknut or double nut and shall be tightened only to a point that will allow plate G to be free to move when an expansion joint exists below the connector.
- See Standard 630001 for details of guardrail not shown.
- All dimensions are in millimeters (inches) unless otherwise shown.

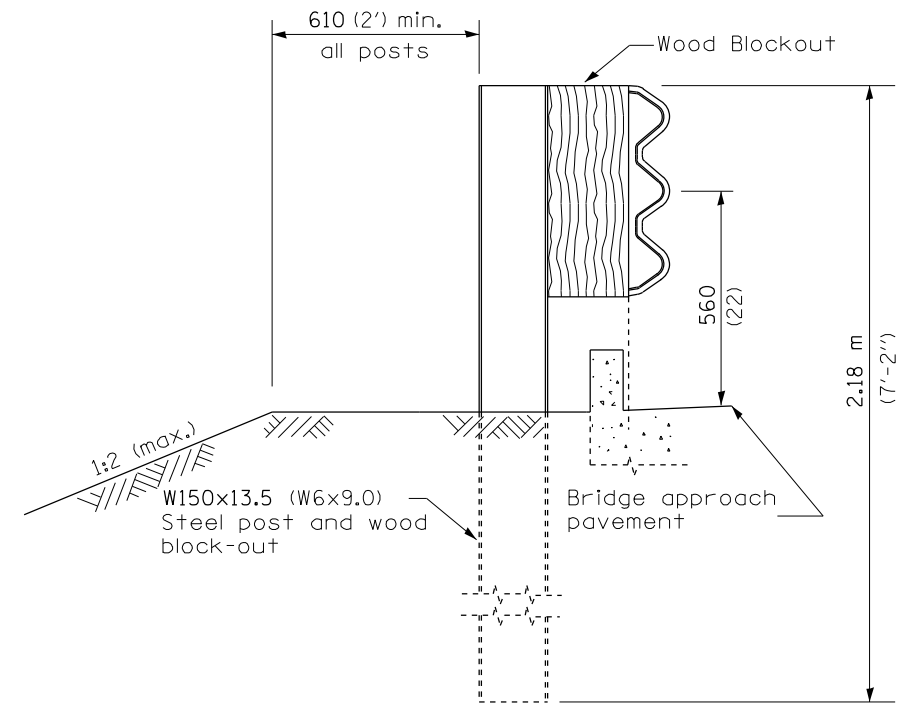
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pw2\ldoi-pw.bentley.com:PWIDOT\Documents\SIDDO	Offices\District 6\Projects\672N22\CADDData 5510\CADD	DRAWN 72N22-sht- 631026-02_TRAF_BAR_TERM	REVISED -			*VAR	**	VARIOUS	15	12	
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PLAN



ELEVATION



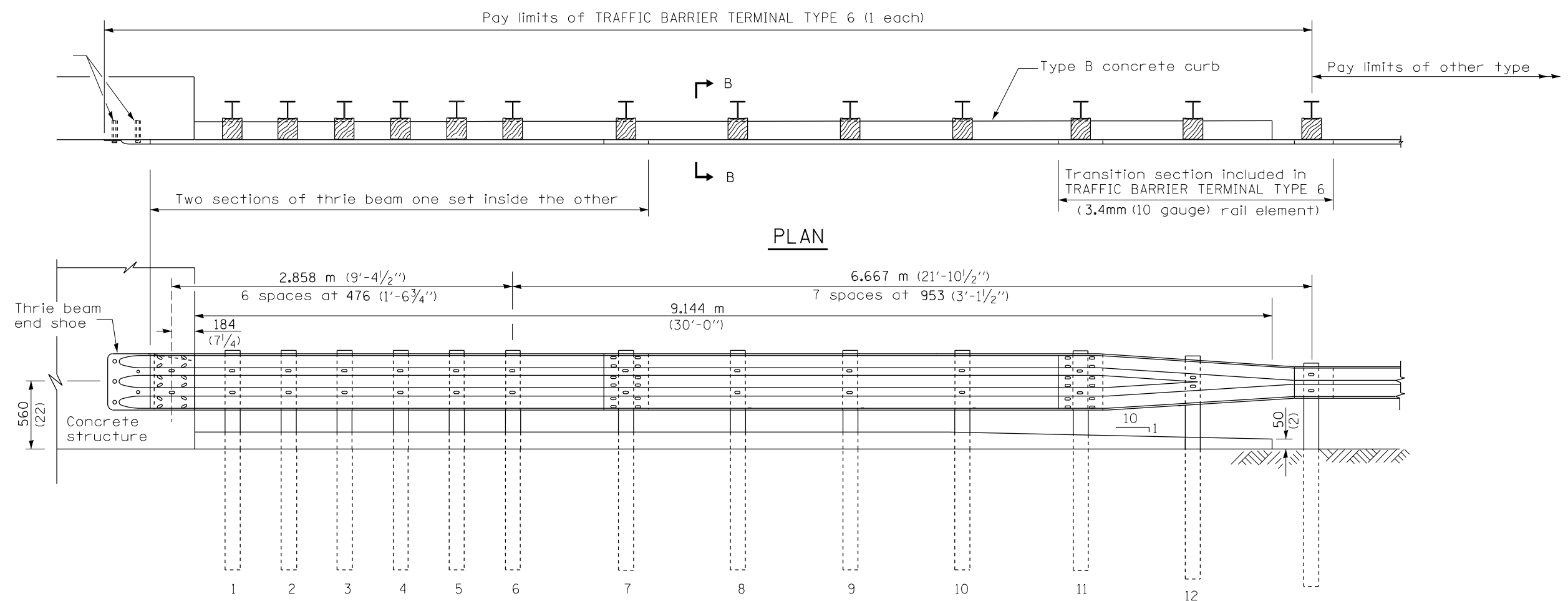
SECTION A-A

GENERAL NOTES

- See Standard 630001 for details of guardrail not shown.
- Thrie beam rail shall be bolted to block-out at all posts.
- See Standard 420401 for details of bridge approach pavement.
- 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.

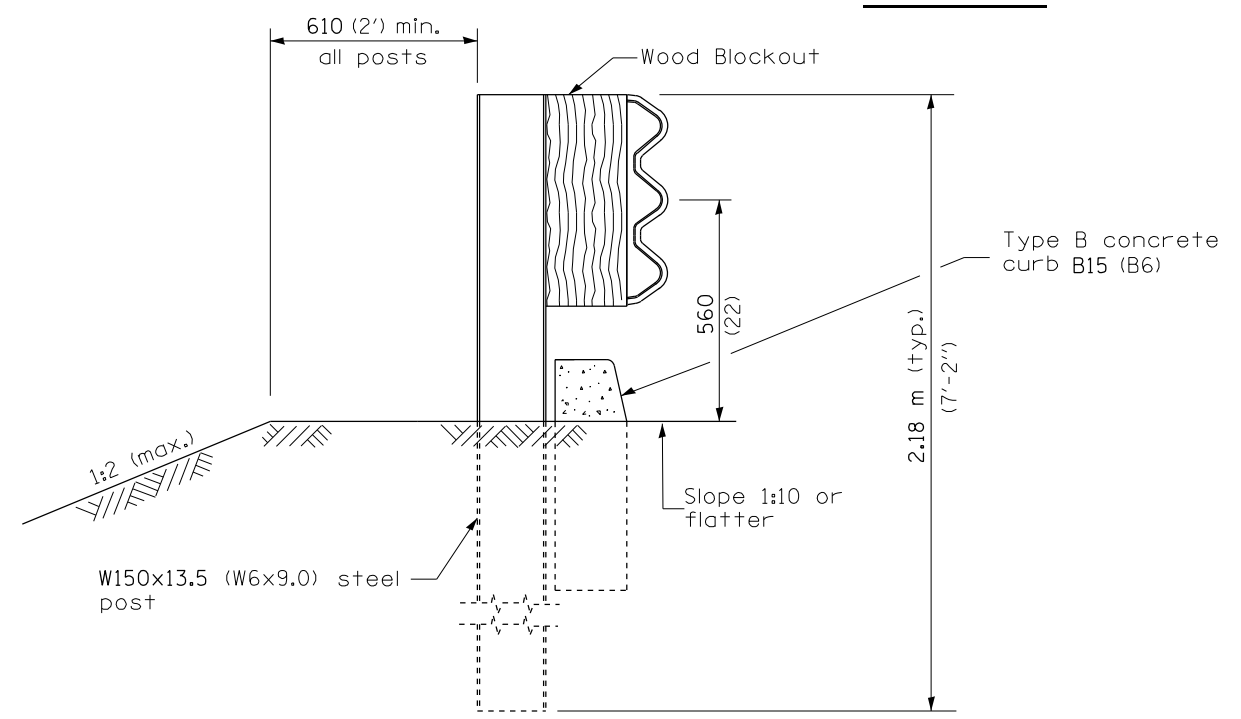
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** D6 CABLE/GUARDRAIL 2022 -1



PLAN

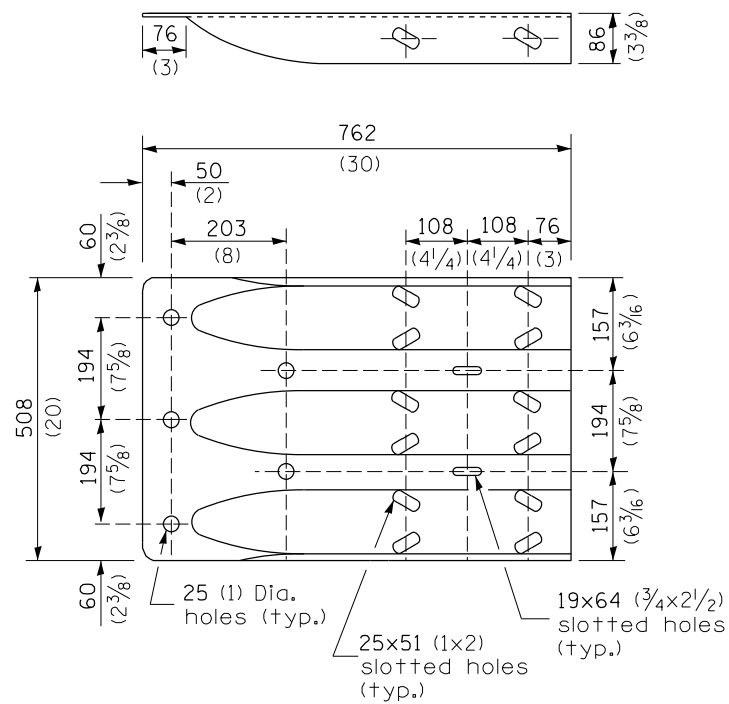
ELEVATION



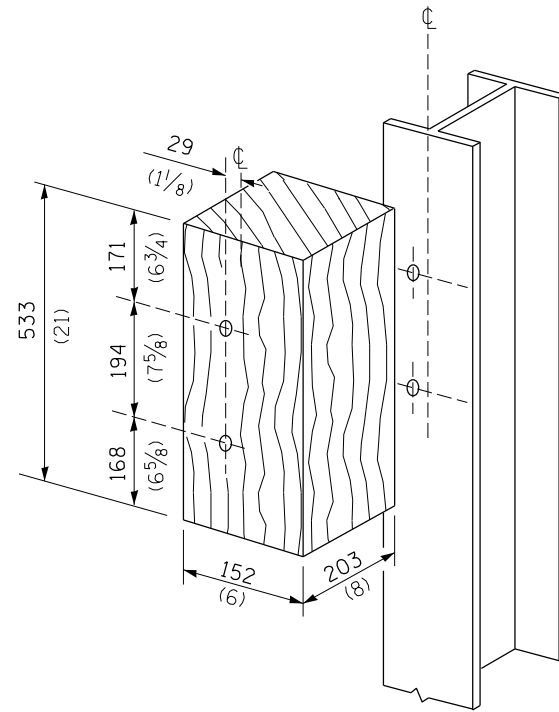
SECTION B-B

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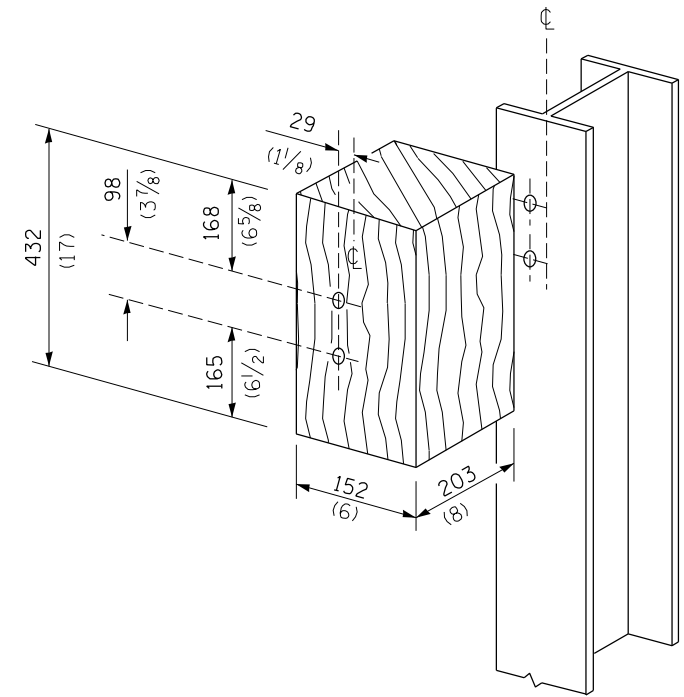
** D6 CABLE/GUARDRAIL 2022 -1



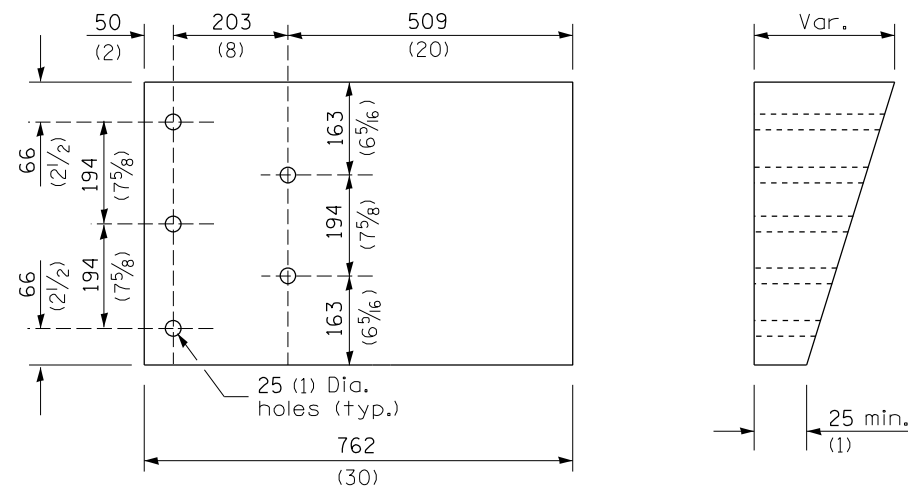
THRIE BEAM END SHOE DETAIL



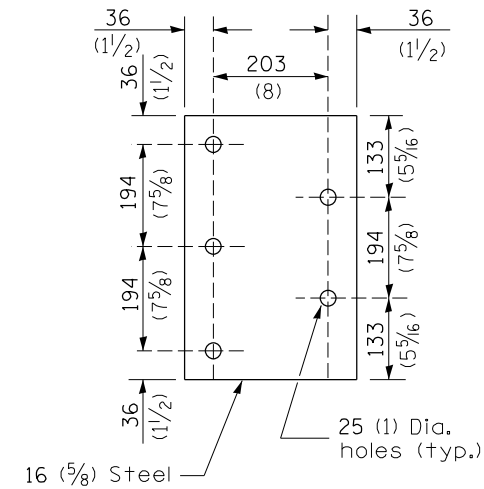
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL



PARAPET STEEL BEARING PLATE DETAIL

(5 each individual 125x125x16 (5x5x5/8) steel plates with centered 25 (1) holes may be substituted for the plate shown.)

FILE NAME =	USER NAME = spechtd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PRE-MGS HIGHWAY STANDARD 631031-05 TRAFFIC BARRIER TERMINAL, TYPE 6 EFFECTIVE 4-1-06	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pwz\ldoc-pw.bentley.com:PWIDOT\Documents\SIDDO	Offices\District 6\Projects\D672N22\CADDData 5510\CAD	DRAWN 72N22- sht- 631031-05 -TRAF_BAR_ TER	REVISED -			*VAR	**	VARIOUS	15	15
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	PLOT DATE = 7/3/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				