WHITMAN COUNTY PUBLIC WORKS
SMALL WORKS WORKSHEET

PROJECT NAME: **2021 Guardrail and Terminals @ 3 locations on Pine City Malden Road.**

1. **Pine City-Malden Road #3000 Bridge @ m.p. 6.46**
2. **Pine City-Malden Road #3000 @ m.p. 7.4**
3. **Pine City-Malden Road #3000 Bridge @ m.p. 9.30**

DESCRIPTION: **See Detail Attached.**

All materials, equipment, labor and tax costs should be included in the quote, including Temporary Traffic Control and removal of existing rail. Whitman County would like to retain all salvageable rail, posts, and hardware. Depending on schedule and crew availability, Whitman County may be able to remove existing rail. All contractors shall be bonded and must pay State Prevailing Wage Rate for labor except for fabrication. A contract bond will be required. (Please initial your acknowledgement of these requirements: (_____).

All work must be completed by: **December 31, 2021**
QUOTES MUST BE RETURNED BY: **October 8th, at 5:00 p.m.**

Contact: **Brandon Kruger – Ext. 5203**
Email: Brandon.Kruger@whitmancount.net
Whitman County Public Works: (509) 397-4622 FAX (509) 397-6210.

(Anticipated award date: Oct. 11th, 2021)

BASIS OF AWARD: **$_____**

Tax **$_____**

Total: **$_____**

Company Name: _____

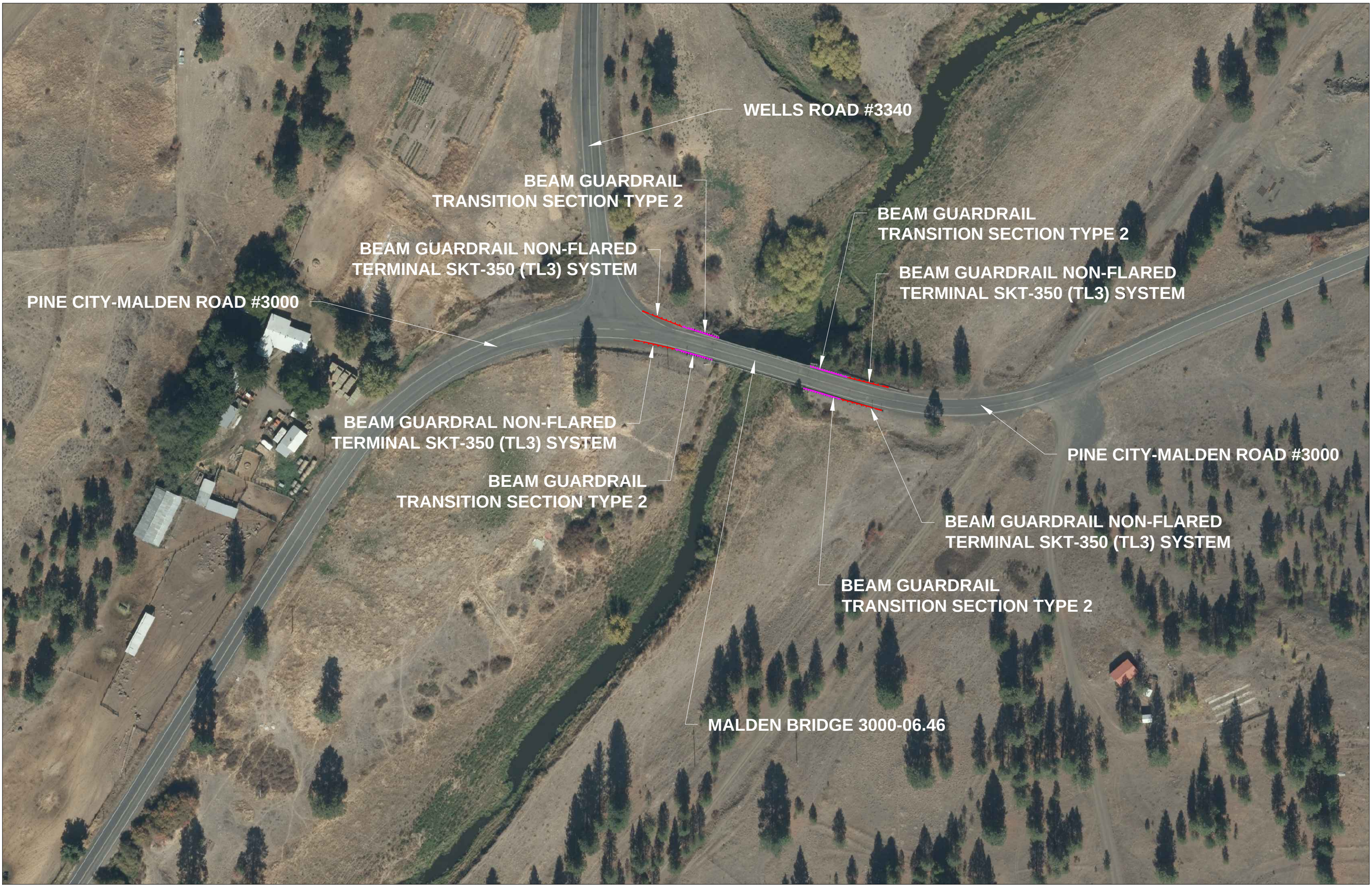
Signature: _____

Print: _____

Address: _____

Phone: _____ FAX: _____

Email: _____


WELLS ROAD #3340
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
PINE CITY-MALDEN ROAD #3000
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
BEAM GUARDRAL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
PINE CITY-MALDEN ROAD #3000
BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
MALDEN BRIDGE 3000-06.46

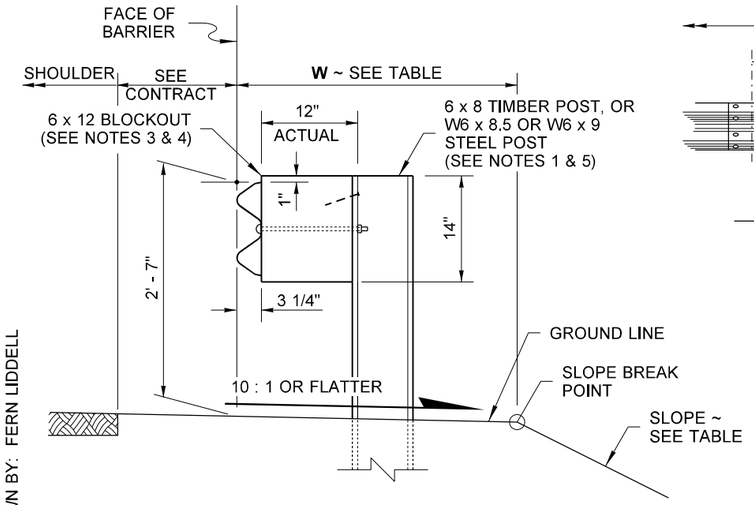

BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
PINE CITY-MALDEN ROAD #3000
TEXAS FERRY ROAD #3290
100.00' TYPE 1 - 9' STEEL
POST BEAM GUARDRAIL
BEAM GUARDRAIL
TYPE 1 ANCHOR
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
PINE CITY BRIDGE 3000-09.30
BEAM GUARDRAIL
TRANSITION SECTION TYPE 2
BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
BEAM GUARDRAIL NON-FLARED
TERMINAL SKT-350 (TL3) SYSTEM
PINE CITY-MALDEN ROAD #3000


PINE CITY-MALDEN ROAD #3000
(APPROXIMATE M.P. 7.40)
TYPE 31 NON-FLARED TERMINAL
SKT-SP-MGS (TL-3) SYSTEM
375.00' TYPE 31 STEEL
POST BEAM GUARDRAIL
TYPE 31 NON-FLARED TERMINAL
SKT-SP-MGS (TL-3) SYSTEM

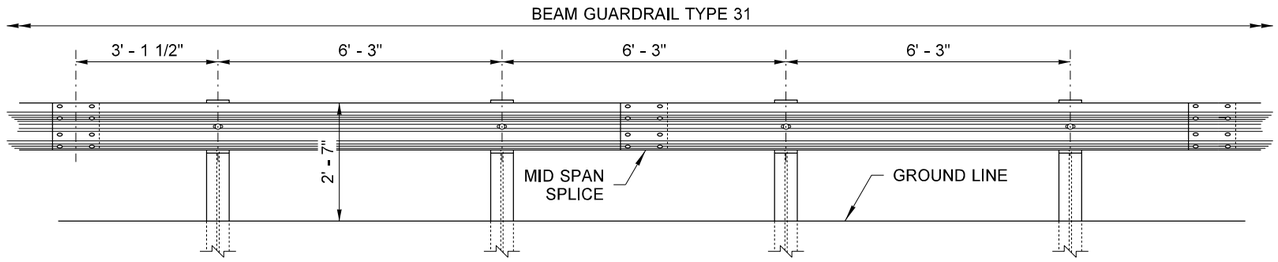
Guardrail - Pine City-Malden Road (Repairs)

	Furnish and Install the following rail elements at given locations.					
Location No.	**BEAM GUARDRAIL ANCHOR TYPE 1 (EA)**	**TRANSITION SECTION TYPE 2**	**TYPE 31 NON-FLARED TERMINAL**	**TYPE 31 (L.F.)**	**NON-FLARED TERMINAL**	**TYPE 1 - 9 FT. LONG POST**
Malden Bridge M.P 6.46		4.00			4.00	
M.P. 7.40			2.00	375.00		
Pine City Bridge M.P. 9.30	1.00	3.00			3.00	100.00
TOTALS	1.00	7.00	2.00	375.00	7.00	100.00

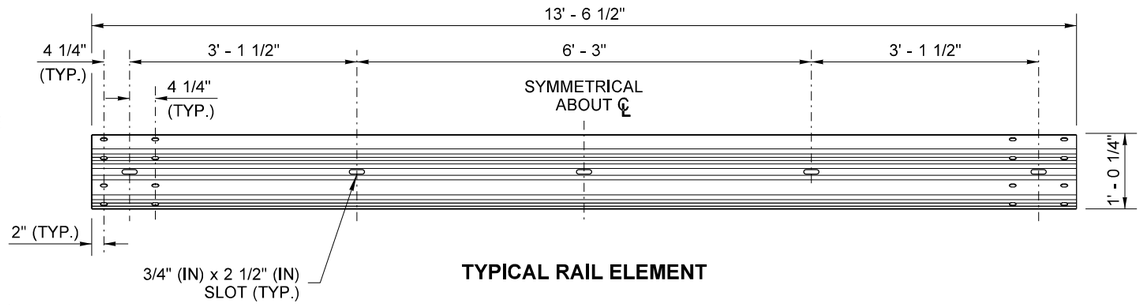
STD ITEM NO.	UNITS	ITEM	TOTAL QUANTITY
		PREPARATION	
0001	L.S.	MOBILIZATION	100.00%
		TRAFFIC	
6717	EACH	BEAM GUARDRAIL NON-FLARED TERMINAL	7.00
6719	EACH	BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL	2.00
6747	L.F.	BEAM GUARDRAIL TYPE 1 - 9 FT. LONG STEEL POSTS	100.00
6757	L.F.	BEAM GUARDRAIL TYPE 31 - STEEL POSTS	375.00
6760	EACH	BEAM GUARDRAIL TRANSITION SECTION TYPE 2	7.00
6771	EACH	BEAM GUARDRAIL ANCHOR TYPE 1	1.00
6971	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL	100.00%



TYPICAL SECTION ~ WITHOUT CURB
(6' - 0" POSTS)



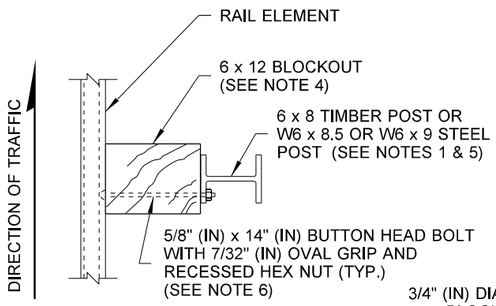
TYPICAL ELEVATION



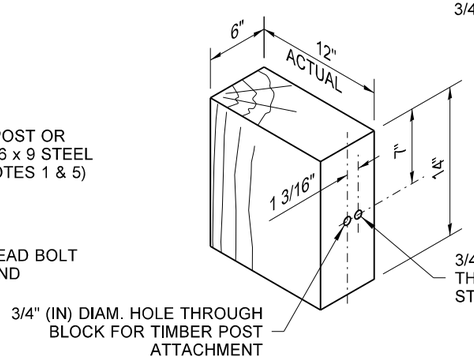
TYPICAL RAIL ELEMENT

NOTES

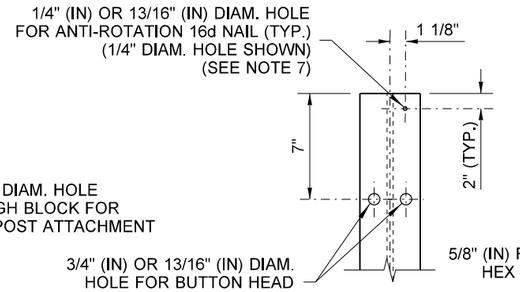
1. Refer to **Standard Plan C-1b** and **C-20.11** for additional details not shown on this plan.
2. Extend shoulder pavement to provide a base for the extruded curb. See Contract Plans for exceptions to distances shown.
3. Use a single block or combination of blocks (no more than two (2) to achieve the actual 12" (in) offset. See **Standard Specification, Section 9-16.3(2)**. Wood blocks shall be secured to the posts with anti-rotation nails. If combination blocks are used, the adjacent blocks shall be toenailed with two 16d galvanized nails to prevent block rotation.
4. Wood blocks are shown. Blocks of an approved alternative material may be used. See **Standard Specification, Section 9-16.3(2).**
5. All posts for any standard barrier run shall be of the same type: timber or steel.
6. Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
7. Anti-rotation holes in steel posts are not required when using blocks with anti-rotation features (e.g., routed blocks).



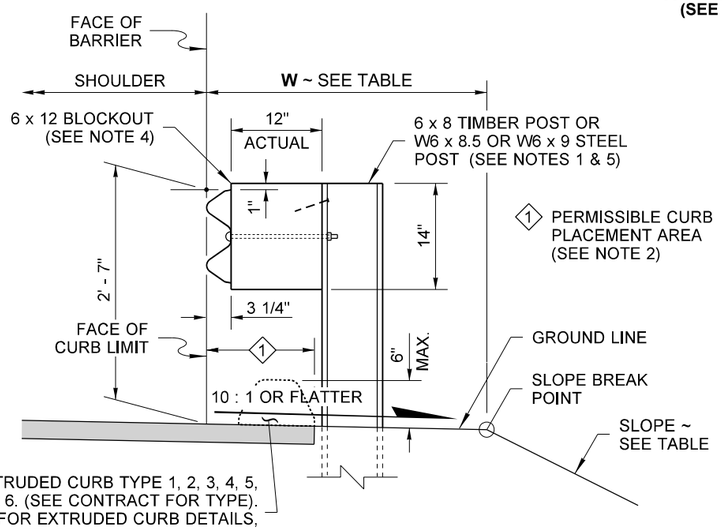
PLAN VIEW



WOOD BLOCK
(SEE NOTE 4)



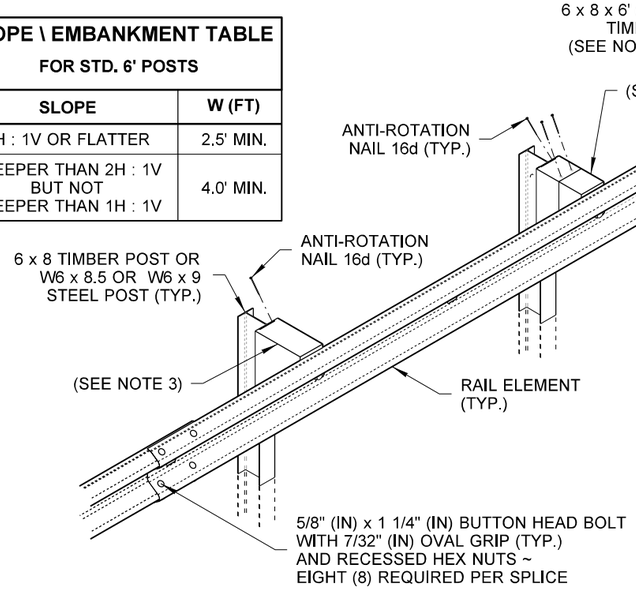
STEEL POST

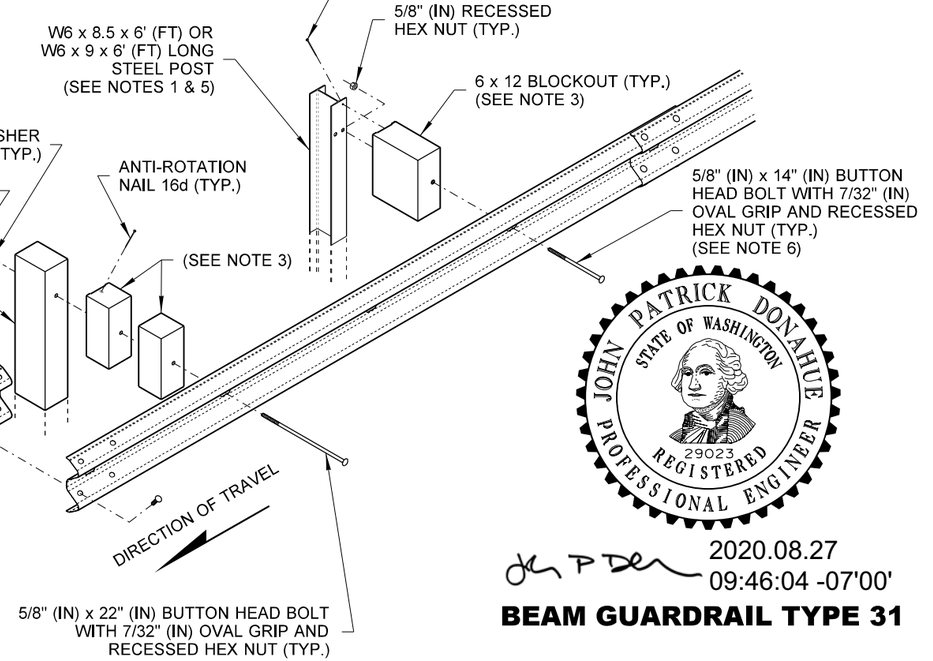


ELEVATION VIEW

TYPICAL SECTION ~ WITH CURB
(6' - 0" LONG POSTS)

SLOPE \ EMBANKMENT TABLE FOR STD. 6' POSTS	
SLOPE	**W (FT)**
2H : 1V OR FLATTER	2.5' MIN.
STEEPER THAN 2H : 1V BUT NOT STEEPER THAN 1H : 1V	4.0' MIN.





ISOMETRIC VIEW

JOHN PATRICK DONAHUE
STATE OF WASHINGTON
29023
REGISTERED
PROFESSIONAL ENGINEER

2020.08.27
09:46:04 -07'00'

BEAM GUARDRAIL TYPE 31

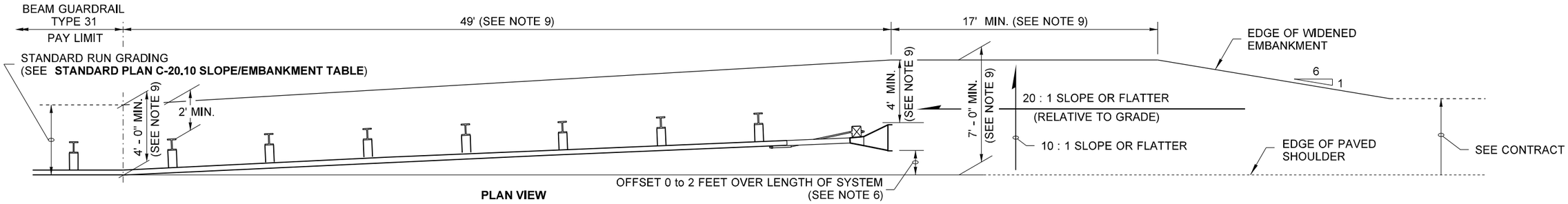
STANDARD PLAN C-20.10-06

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Date: 2020.09.16
09:51:38 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

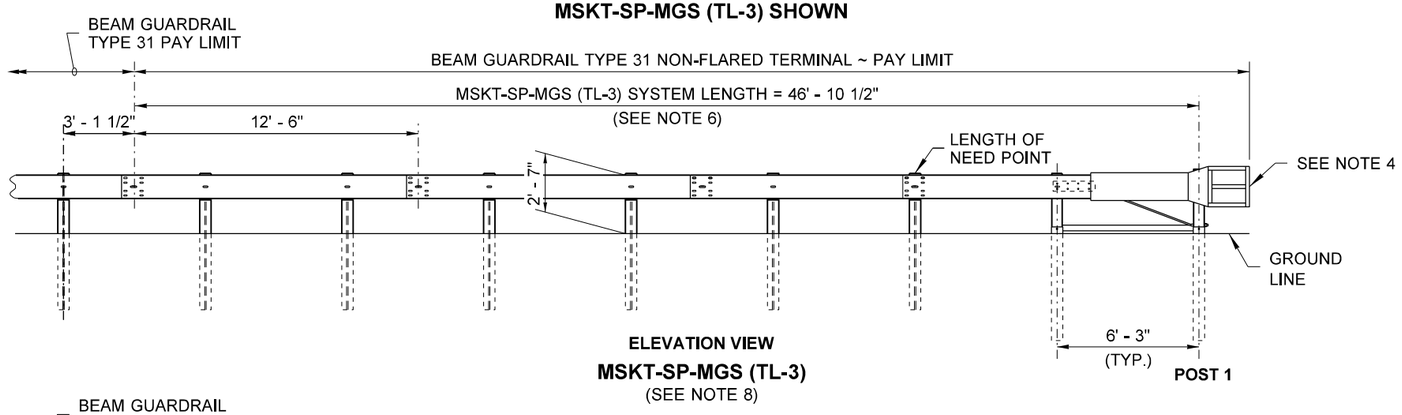
DRAWN BY: FERN LIDDELL

DRAWN BY: FERN LIDDELL



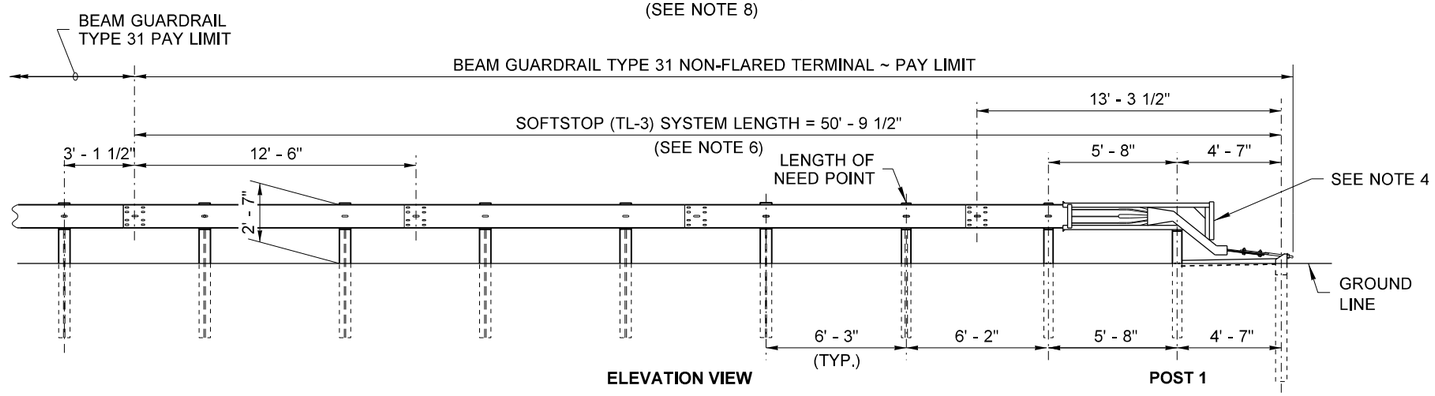
PLAN VIEW

MSKT-SP-MGS (TL-3) SHOWN



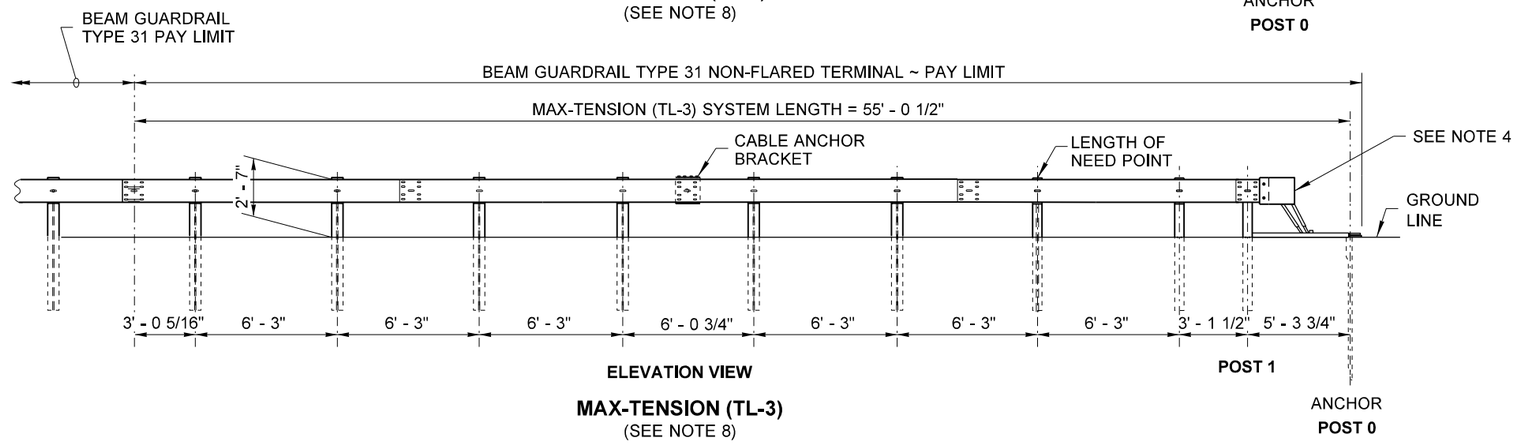
ELEVATION VIEW

MSKT-SP-MGS (TL-3)
(SEE NOTE 8)



ELEVATION VIEW

SOFTSTOP (TL-3)
(SEE NOTE 8)



ELEVATION VIEW

MAX-TENSION (TL-3)
(SEE NOTE 8)

NOTES

1. The Implementation of the Manual for Assessment of Safety Hardware (MASH) criteria may result in the acceptance of guardrail terminal systems currently not shown on this plan. Non-Flared terminals shall be selected from the WSDOT Qualified Products List (QPL) or approved through the WSDOT Request for Approval of Materials (RAM) process.
2. This terminal is MASH compliant at Test Level Three (TL-3) and may be used for all posted speeds.
3. An MSKT-SP-MGS (TL-3) as manufactured by Road Systems, Inc, SOFTSTOP (TL-3) as manufactured by Trinity Highway Products, LLC, or MAX-TENSION (TL-3) as manufactured by Lindsay Transportation Solutions, shall be installed according to manufacturer's recommendations.
4. A reflectorized object marker shall be installed according to manufacturer's recommendations.
5. Snow load rail washers shall not be installed within the terminal limits.
6. Provide an offset between 0 to 2 feet so that the impact head does not encroach onto the paved shoulder. The offset is provided over the length of the terminal system from the center of the last post splice to either: (1) The face of the impact head at its leading edge (MSKT-SP-MGS), or (2) The center of Anchor **Post 0** (Softstop or Max-Tension). Provide maximum offset where practicable.
7. For terminal details, see WSDOT approved manufacturer's drawings.
8. These terminals are supplied with steel posts only. They can be used with beam guardrail Type 31 runs composed of steel or wood guardrail posts.
9. The widened embankment dimensions shown on this plan will satisfy the installation requirements of all 3 guardrail terminal systems shown on this plan.

JOHN PATRICK DONAHUE
STATE OF WASHINGTON
29023
REGISTERED
PROFESSIONAL ENGINEER

2020.08.27 09:46:51 -07'00'

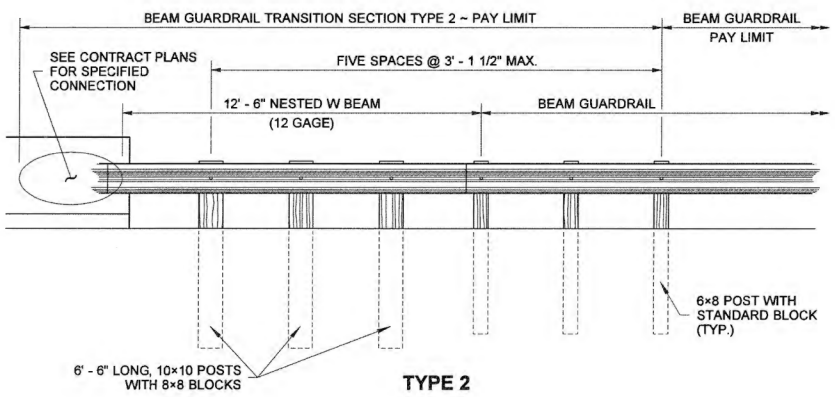
BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL (ALL POSTED SPEEDS) STANDARD PLAN C-22.40-08

SHEET 1 OF 1 SHEET

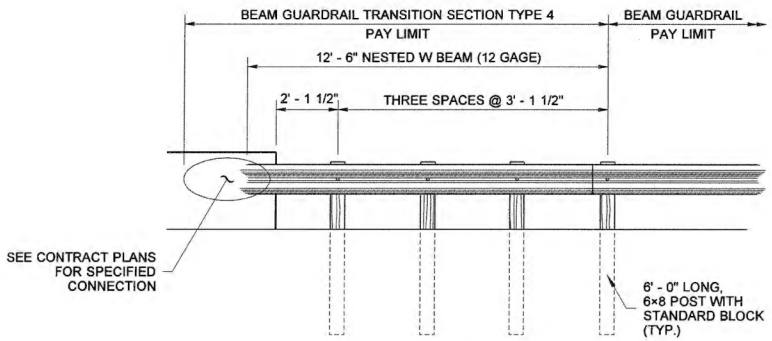
APPROVED FOR PUBLICATION
Date: 2020.09.16 09:53:50 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015

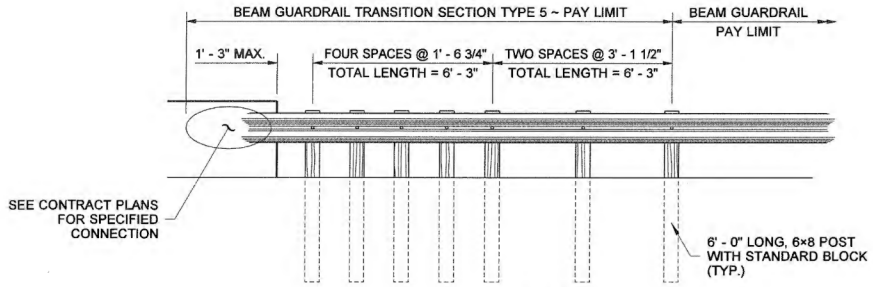
DRAWN BY: MARK SUJKA



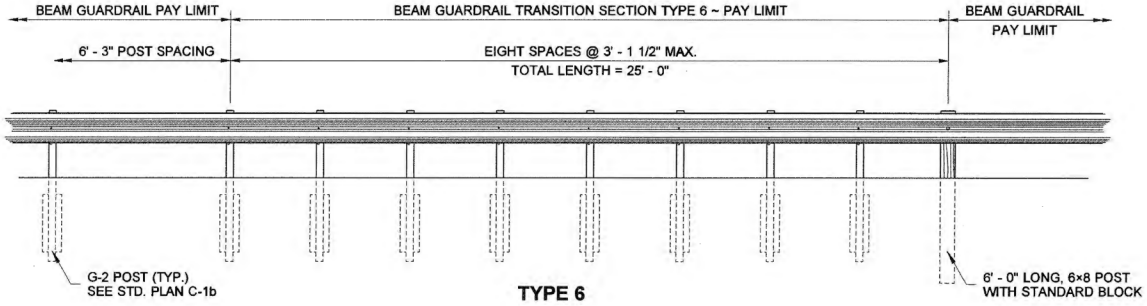
TYPE 2



TYPE 4
FOR 45 MPH AND BELOW



TYPE 5



TYPE 6

EXPIRES JULY 24, 2006

BEAM GUARDRAIL TRANSITION SECTIONS

STANDARD PLAN C-3a

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold Peterson 10-4-05

STATE DESIGN ENGINEER — DATE

Washington State Department of Transportation

EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015

NOTES

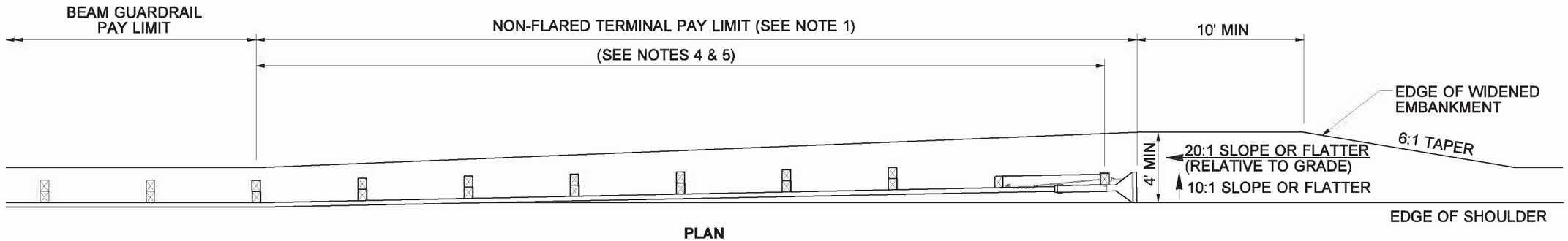
1. An ET-PLUS (TL3) as manufactured by Trinity Industries, Inc. or an SKT-350 as manufactured by Road Systems Inc. shall be installed according to manufacturer's recommendations. When a TL2 terminal is specified in the contract an ET-PLUS (TL2) as manufactured by Trinity Industries, Inc., or an SKT-TL2 as manufactured by Road Systems, Inc. shall be installed according to manufacturer's recommendations.

2. A reflectorized object marker shall be installed according to manufacturer's recommendations.

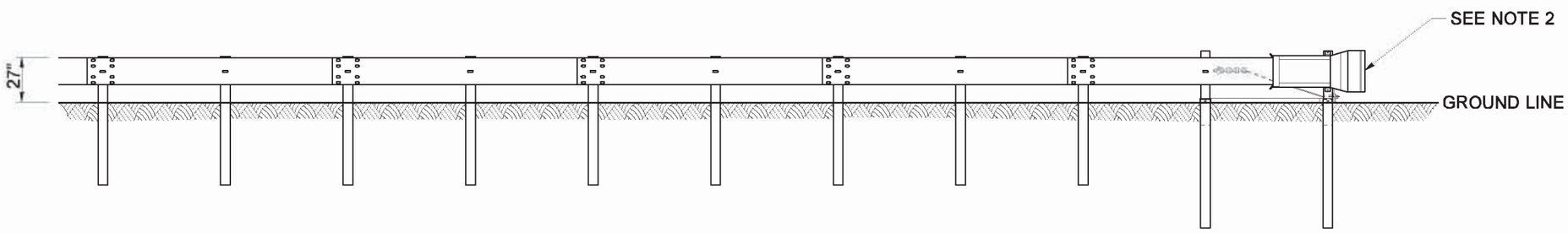
3. When snow load post washers and snow load rail washers are required by the contract, the snow load rail washers must not be installed within the terminal limits.

4. Terminal shall be installed at a taper, ensuring that end piece is entirely off shoulder.

5. Length for ET-PLUS (TL3) and SKT-350 is 50'. Length for ET-PLUS (TL2) and SKT-TL2 is 25'.



PLAN



ELEVATION

RICHARD BARSTOW ALBIN
STATE OF WASHINGTON
34042
REGISTERED
PROFESSIONAL ENGINEER

EXPIRES JULY 24, 2004

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

BEAM GUARDRAIL NON-FLARED TERMINAL

STANDARD PLAN C-4e

SHEET 1 OF 1 SHEET

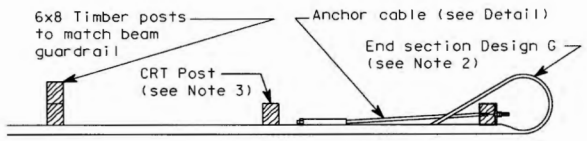
DATE	REVISION	BY
01/2003	REVISED NOTES 1 & 5; ADDED SLOPES.	RG

APPROVED FOR PUBLICATION

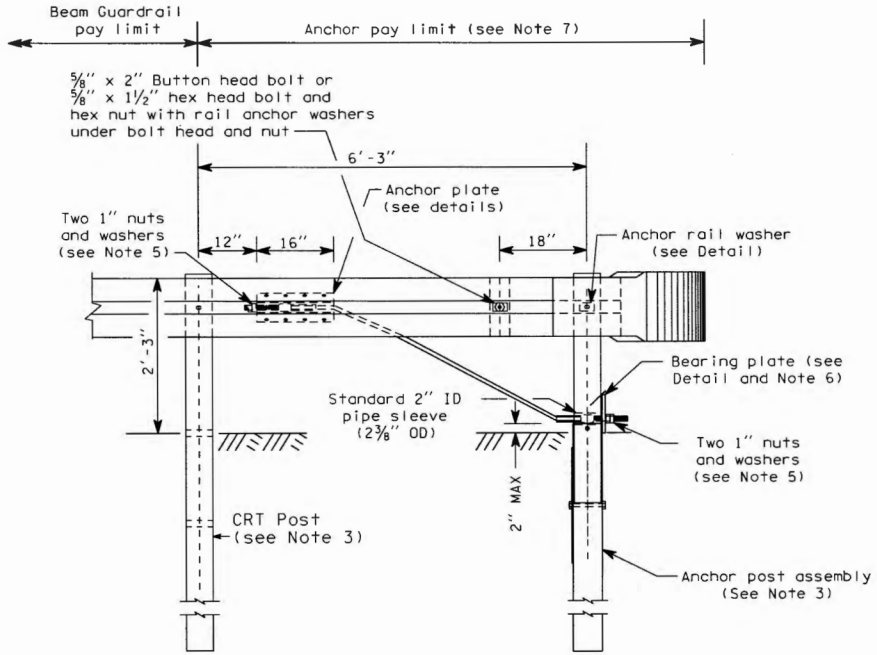
Harold J. Peterfeso — STATE DESIGN ENGINEER — *02-20-03* — DATE

Washington State Department of Transportation

EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015



PLAN



TYPE 1 ANCHOR

NOTES

1. Anchor plate may be constructed from ¼" plates welded to equal strength and dimensions as shown.
2. For end section details see Standard Plan "Beam Guardrail End Sections".
3. For post details, see Standard Plan "Beam Guardrail Posts and Blocks".
4. Eight 5/8" x 1½" machine bolts with hex nut and washer. Place washer on face side of rail.
5. Outside nut shall be torqued against inside nut a minimum of 100 ft-lbs.
6. Toenail bearing plate with 10d nail at corners to prevent turning.
7. Anchor pay limit does not apply when anchor is included in a Beam Guardrail Terminal.

BEAM GUARDRAIL ANCHOR TYPE 1

CLIFFORD B. MANSFIELD STATE OF WASHINGTON 15224 REGISTERED PROFESSIONAL ENGINEER

EXPIRES MAY 3, 1998

STANDARD PLAN C-6

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER — DATE 5/30/97

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

Sheet 1 of 2 Sheets

EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
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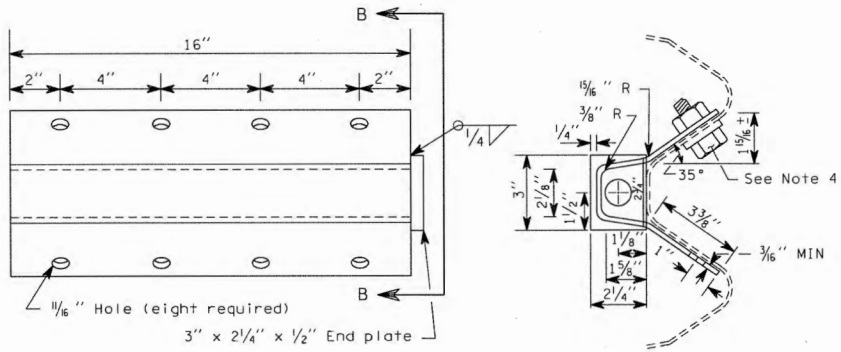
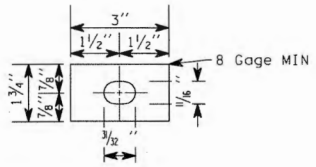
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015



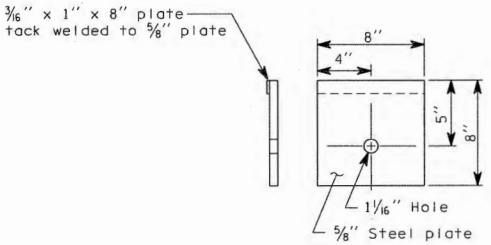
ELEVATION

SECTION B-B

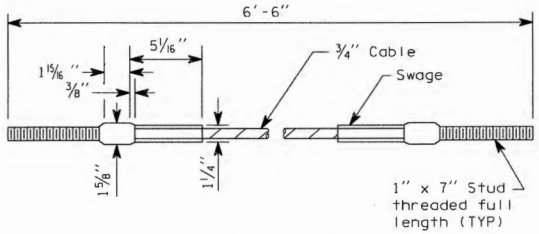
ANCHOR PLATE
(See Note 1)



ANCHOR RAIL WASHER



BEARING PLATE



ANCHOR CABLE

BEAM GUARDRAIL ANCHOR TYPE 1

CLIFFORD E. MANSFIELD
STATE OF WASHINGTON
15224
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES MAY 3, 1998

STANDARD PLAN C-6

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER — DATE 5/22/97

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

Sheet 2 of 2 Sheets

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EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015
EFFECTIVE: AUGUST 4, 2014 TO August 2, 2015