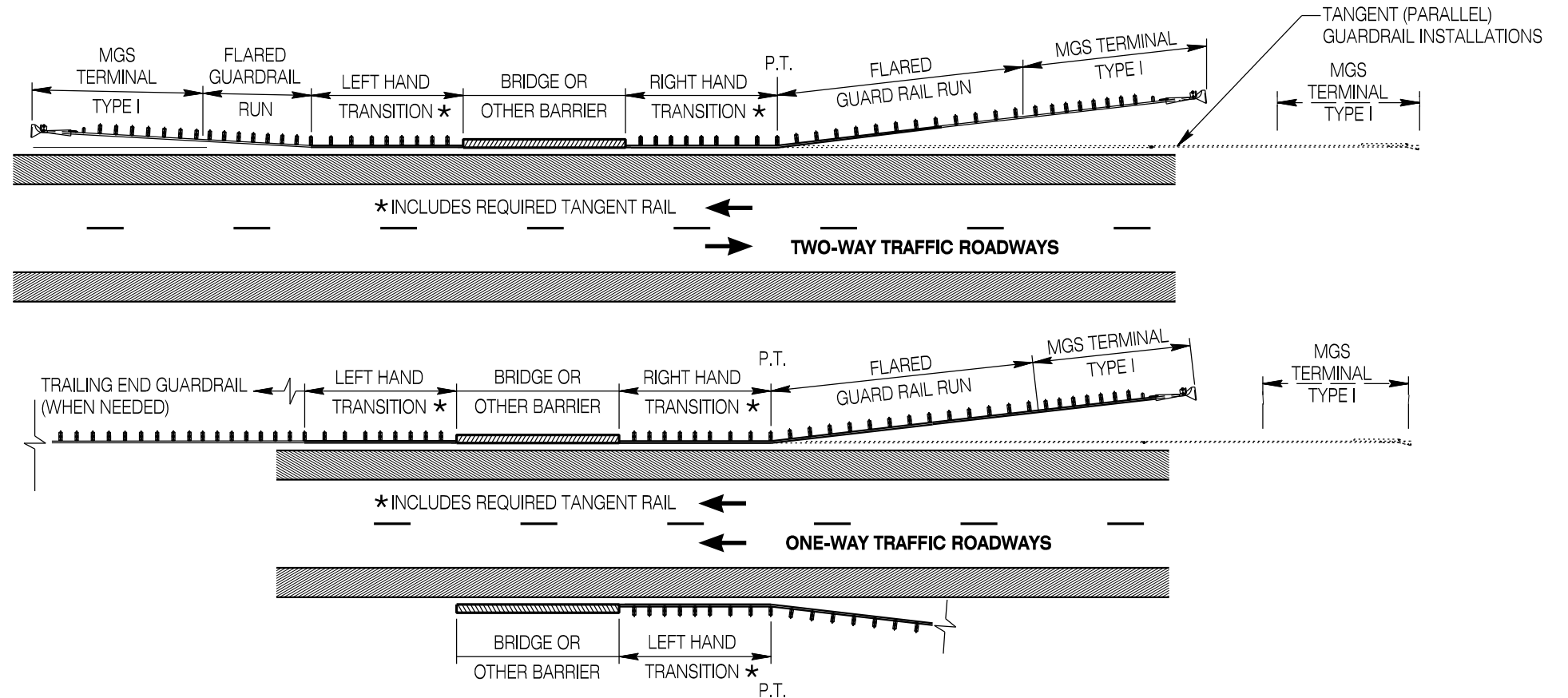


**MGS GUARDRAIL STANDARD PLAN  
INDEX OF SHEETS**

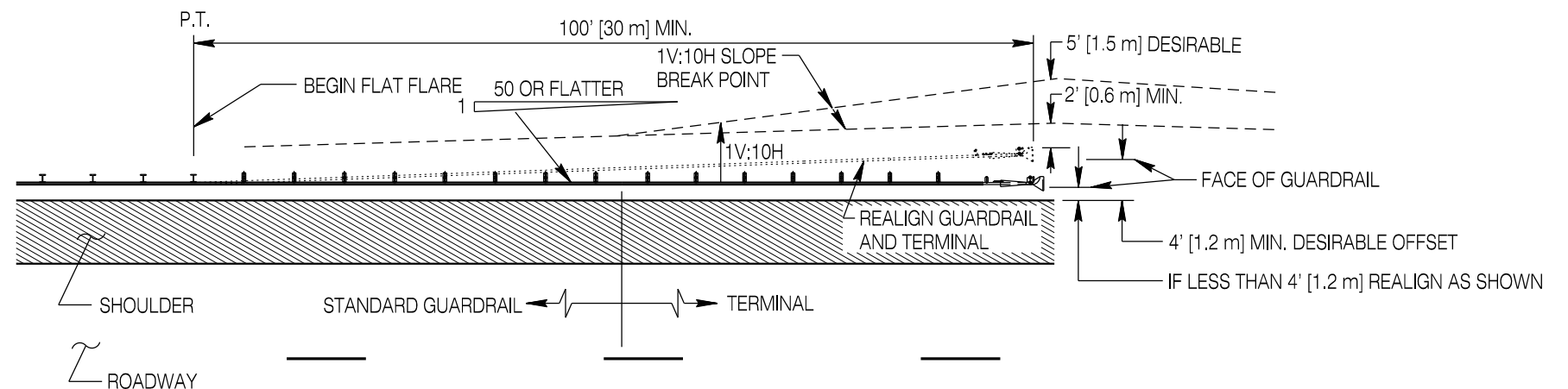
**SHEET TOPIC**

LAYOUT DETAILS	
1	General Requirements
2	Guardrail Placement Around Fixed Object Hazards
3	Grading Requirements
4	Grading Requirements (continued)
INSTALLATION DETAILS	
5	Standard Run of MGS Guardrail
6	Transition A - to TL-3 Steel Bridge Rail
7	Transition B - to TL-4 Steel Bridge Rail
8	Transition C - To New Jersey Concrete Barrier
9	Transition D - To Single Slope Concrete Barrier
10	Terminal Type I (Option 1 - MSKT MGS, Sheet 1 of 2)
11	Terminal Type I (Option 1 - MSKT MGS, Sheet 2 of 2)
12	Terminal Type I (Option 2 - SOFTSTOP, Sheet 1 of 2)
13	Terminal Type I (Option 2 - SOFTSTOP, Sheet 2 of 2)
14	MGS Long Span
15	MGS Half Post Spacing
	MGS Quarter Post Spacing
	MGS Long Post - Constricted Slope Grading
	MGS 8" [205] Blocks
16	Post Placement in Pavements and Rock

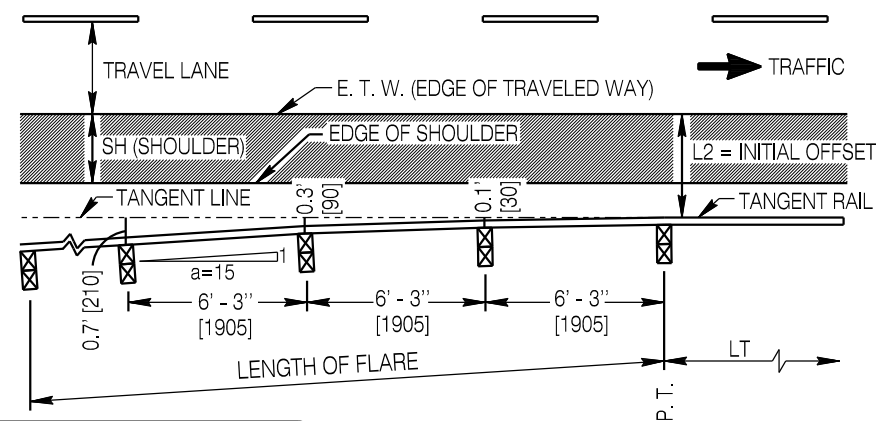


**CONNECTIONS TO BRIDGE RAILING AND OTHER TRAFFIC BARRIERS**

Connect MGS guardrail to bridge rail and/or concrete barrier using the appropriate transition section at all ends receiving guardrail.



**Initiating a straight guardrail flare** - Initiate a 1W:15L guardrail flare (typical for high speed roadways) as shown below:



**TYPICAL 1W:15L FLARE LAYOUT**

For tangent (parallel) guardrail installations within 4 feet [1.2 m] of the edge of the shoulder, realign a minimum of the last 100 feet [30 m] of guardrail on a flat flare to obtain up to a 4 foot [1.2 m] offset at the terminal, assuming adequate grading can be provided behind the guardrail and terminal. Maintain 1V:10H slopes from the shoulder to a minimum of 2 feet [0.6 m] behind the terminal or more desirably to 5 feet [1.5 m] behind the terminal.

Designed by: WBW  
Drawn by: RCS  
Checked by: WBW  
Previous Dwg. No. 606-2

GENERAL REQUIREMENTS



WYOMING DEPARTMENT  
OF  
TRANSPORTATION



MGS GUARDRAIL

STANDARD PLAN

STANDARD PLAN NUMBER

606-2A

SHEET 1 of 16

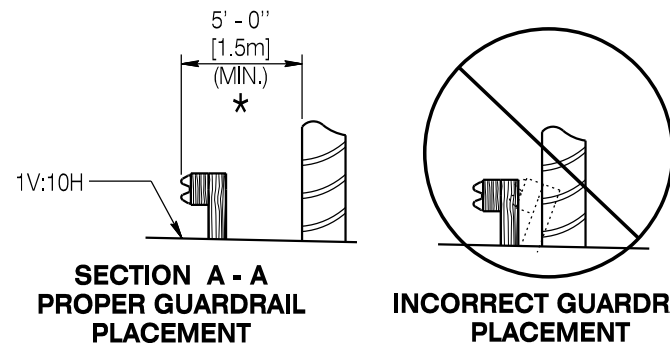
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Date Issued: JULY 2018

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.

**NOTES**

① **Shielding Fixed Object Hazards** - Do not place the guardrail any closer than the working width of the system to fixed object hazards which extend above ground line behind. Working width is the minimum distance from front face of the guardrail to the closest exposed face of a fixed object hazard located behind the guardrail.

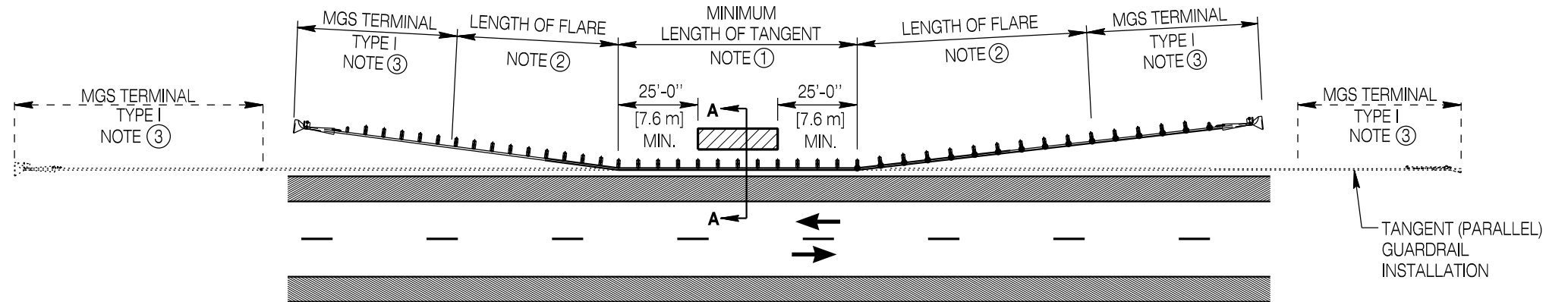


For fixed object hazards within close proximity of the guardrail (up to 1 1/2 ft. [0.5 m] plus the working width of the system), place a minimum of 25 ft. [7.6 m] of guardrail tangent (parallel) to the roadway on both the upstream and downstream end of the guardrail before flaring. When using reduced post spacing, extend the reduced spacing 25 ft. [7.5 m] upstream and downstream of the hazard and place tangent (parallel) to the roadway.

System	Post Spacing	Working Width *
Standard MGS	6' - 3" [1905]	5 ft. [1.5 m]
MGS Half Post Spacing	3' - 1 1/2" [950]	4 ft. [1.2 m]
MGS Quarter Post Spacing	1' - 6 3/4" [475]	3 ft. [0.9 m]
MGS with Long Post & Steep Slope Behind	6' - 3" [1905]	5 1/2 ft [1.7 m]
MGS Long Span	Up to 25' [7.6 m]	8 ft. [2.4 m]

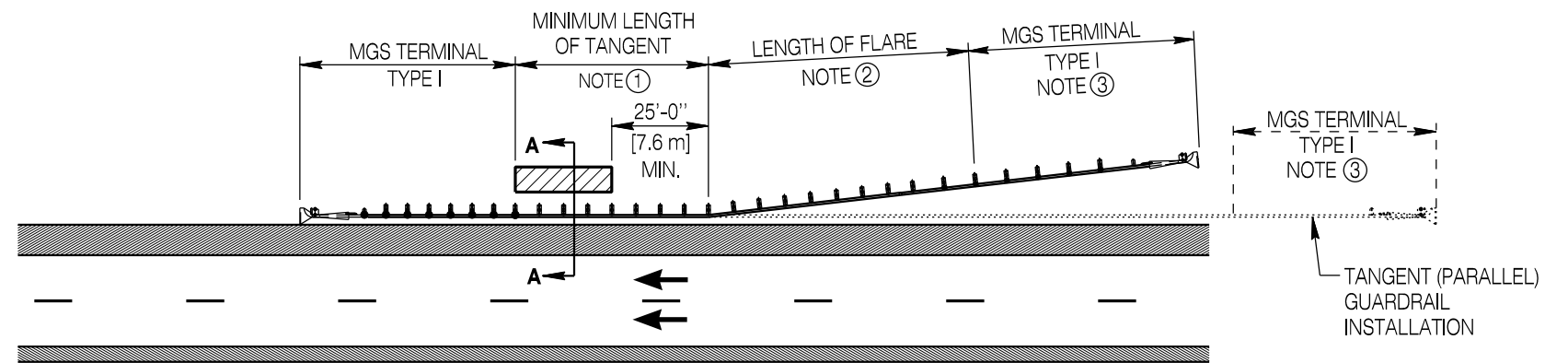
② **Flared vs. Tangent (Parallel) Installation** - Drawing depicts flared guardrail runs with solid lines and tangent (parallel) installations in dashed lines.

③ **Flared Terminals** - If Terminal Type II is specified, provide the required terminal offset flare in addition to any guardrail flare or to a tangent alignment.



**TYPICAL GUARDRAIL PLACEMENT AROUND A FIXED OBJECT**

TWO WAY TRAFFIC ROADWAYS



**TYPICAL GUARDRAIL PLACEMENT AROUND A FIXED OBJECT**

ONE WAY TRAFFIC ROADWAYS SUCH AS DIVIDED HIGHWAYS

Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

**GUARDRAIL PLACEMENT AROUND FIXED OBJECT HAZARDS**

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



**MGS GUARDRAIL**

STANDARD PLAN

STANDARD PLAN NUMBER

**606-2A**

SHEET 2 of 16

Issued by: ENGINEERING SERVICES  
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**GRADING NOTES**

If necessary, modify the earthwork shown in the plans and as staked to provide these minimum grading requirements at guardrail installations. The engineer will pay for this work using standard grading bid items as provided in the plans.

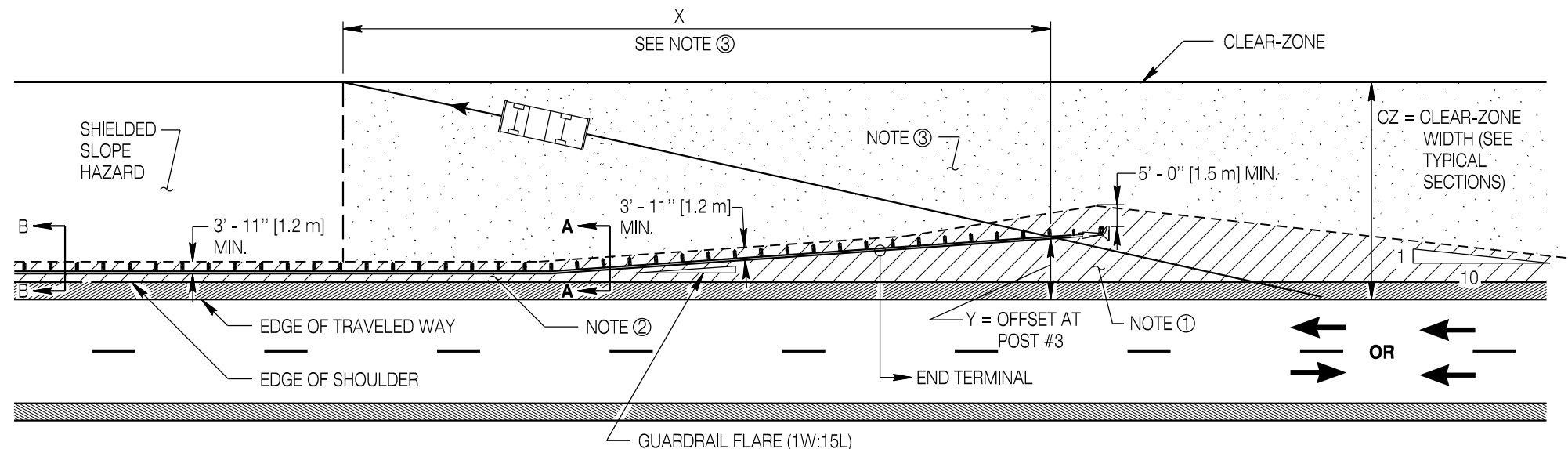
- Ensure the cross-slope of the earthwork in the area approaching a guardrail installation, the area around the terminal and the area of the guardrail flare is a 1V:10H surface or flatter.
- Ensure cross slope of grading from roadway to the barrier face is 1V:10H or flatter. Extend 1V:10H a minimum of 2 ft. [610] behind the guardrail posts. The department may specify 1V:8H for the guardrail installation where drainage and/or snow accumulation must be mitigated.
- Ensure the area immediately behind and beyond the terminal is traversable and free from fixed object hazards or at least similar in character to upstream, unshielded slopes located within the clear-zone. Ensure a slope of 1V:4H or flatter; if not practical, use a maximum slope of 1V:3H. Extend the traversable slope for a distance X beyond post 3 of the end terminal.

If not shown in the plans, calculate X from the formula below:

$$X = (CZ - Y) (L_R) / (CZ)$$

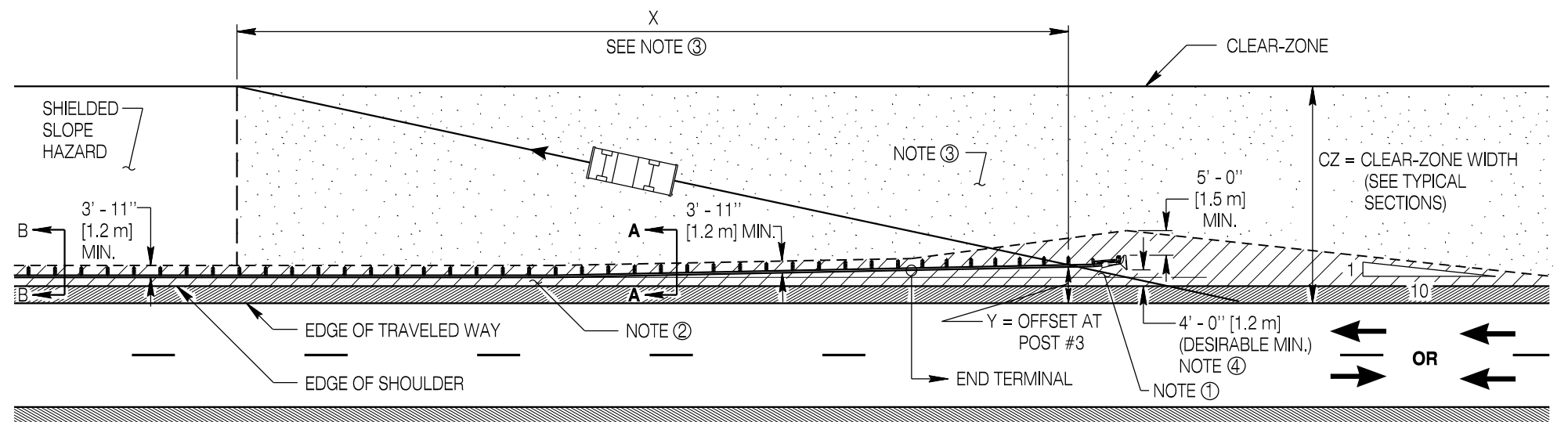
DESIGN SPEED	L <sub>R</sub> Runout Length								
	ADT OVER 10,000		ADT 5,000 to 10,000		ADT 1,000 to 5,000		ADT Under 1000		
mph	[km/h]	ft	[m]	ft	[m]	ft	[m]	ft	[m]
80	130	470	143	430	131	380	116	330	101
70	110	360	110	330	101	290	88	250	76
60	100	300	91	250	76	210	64	200	61
50	80	230	70	190	58	160	49	150	46
40	60	160	49	130	40	110	34	100	30
30	50	110	34	90	27	80	24	70	21

- For tangent guardrail installations where the face of the guardrail at the impact head of the terminal is less than 4 ft. [1.2 m] from the shoulder break point, realign the guardrail and terminal as shown in detail on **SHEET 1** of this standard plan.



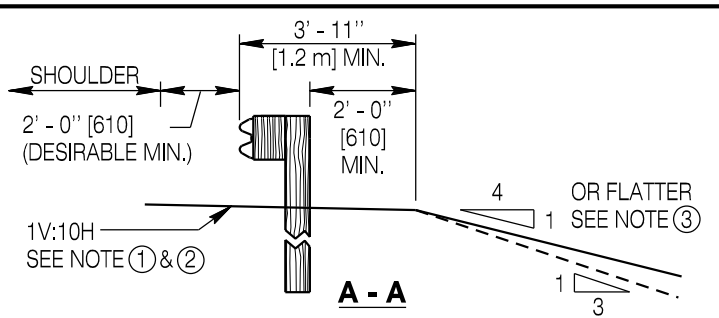
**APPROACH END GRADING - FLARED GUARDRAIL INSTALLATION**

(APPLIES TO TWO WAY TRAFFIC AND ONE WAY TRAFFIC ROADWAYS SUCH AS DIVIDED HIGHWAYS)

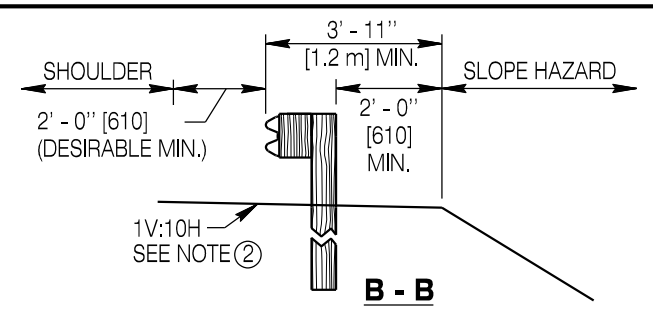


**APPROACH END GRADING - TANGENT (PARALLEL) GUARDRAIL INSTALLATION**

(APPLIES TO TWO WAY TRAFFIC AND ONE WAY TRAFFIC ROADWAYS SUCH AS DIVIDED HIGHWAYS)



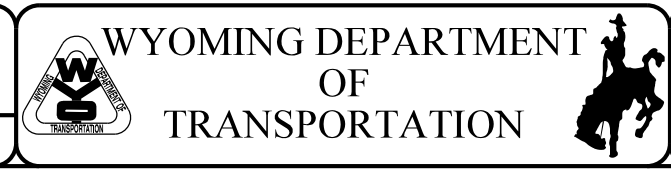
**RUNOUT GRADING BEHIND GUARDRAIL**



**FILL SLOPE HAZARD PROTECTION**

Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

**GRADING REQUIREMENTS**



**MGS GUARDRAIL**  
 STANDARD PLAN

STANDARD PLAN NUMBER  
**606-2A**  
 SHEET 3 of 16  
 Issued by: ENGINEERING SERVICES  
 Date Issued: JULY 2018

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.

**GRADING NOTES**

If necessary, modify the earthwork shown in the plans and as staked to provide these minimum grading requirements at guardrail installations. The engineer will pay for this work using standard grading bid items as provided in the plans.

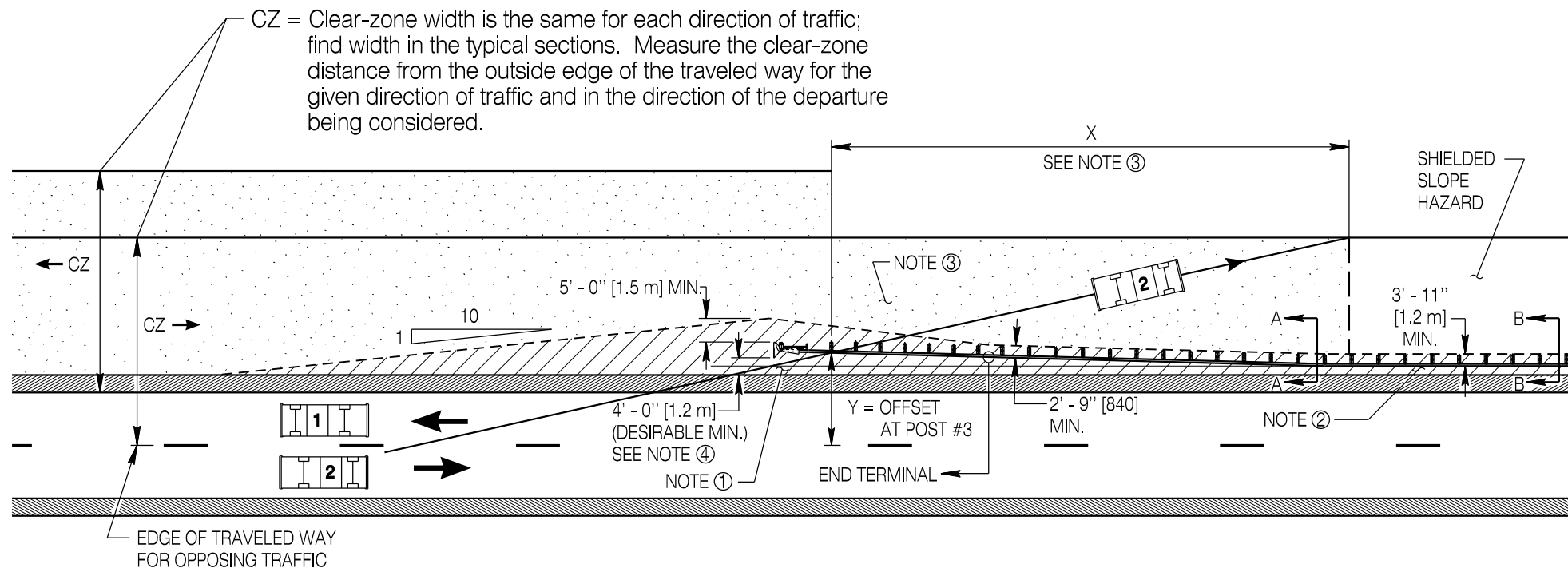
- ① Ensure the cross-slope of the earthwork in the area approaching a guardrail installation, the area around the terminal and the area of the guardrail flare is a 1V:10H surface or flatter.
- ② Ensure cross slope of grading from roadway to the barrier face is 1V:10H or flatter. Extend 1V:10H a minimum of 2 ft. [610] behind the guardrail posts. The department may specify 1V:8H for the guardrail installation where drainage and/or snow accumulation must be mitigated.
- ③ Ensure the area immediately behind and beyond the terminal is traversable and free from fixed object hazards or at least similar in character to upstream, unshielded slopes located within the clear-zone. Ensure a slope of 1V:4H or flatter; if not practical, use a maximum slope of 1V:3H. Extend the traversable slope for a distance X beyond post 3 of the end terminal.

If not shown in the plans, calculate X from the formula below:

$$X = (CZ - Y) (L_R) / (CZ)$$

DESIGN SPEED		L <sub>R</sub> Runout Length							
		ADT OVER 10,000		ADT 5,000 to 10,000		ADT 1,000 to 5,000		ADT Under 1000	
mph	[km/h]	ft	[m]	ft	[m]	ft	[m]	ft	[m]
80	130	470	143	430	131	380	116	330	101
70	110	360	110	330	101	290	88	250	76
60	100	300	91	250	76	210	64	200	61
50	80	230	70	190	58	160	49	150	46
40	60	160	49	130	40	110	34	100	30
30	50	110	34	90	27	80	24	70	21

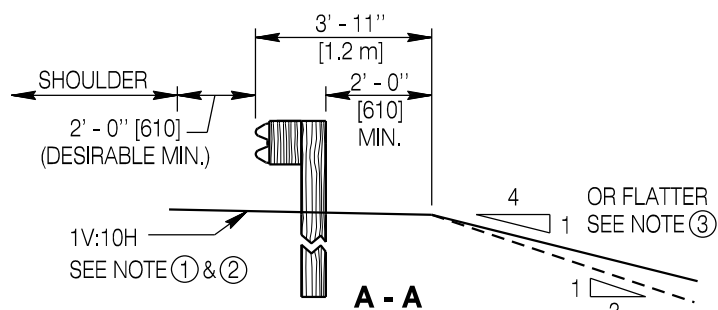
- ④ For tangent guardrail installations where the face of the guardrail at the impact head of the terminal is less than 4 ft. [1.2 m] from the shoulder break point, realign the guardrail and terminal as shown in detail on **SHEET 1** of this standard plan.



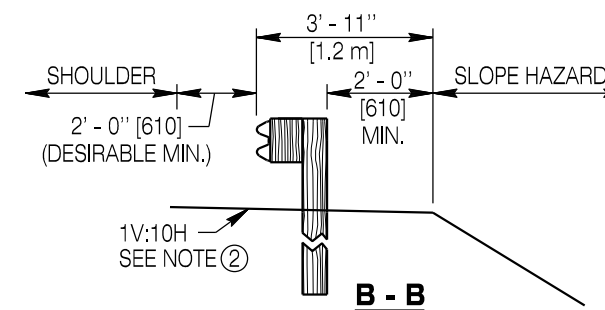
**APPROACH END GRADING FOR OPPOSING TRAFFIC LANES**

(APPLIES TO TWO WAY TRAFFIC ROADWAYS)

**Note:** Tangent installation shown, apply same concept for flared installations



**RUNOUT GRADING BEHIND GUARDRAIL**



**FILL SLOPE HAZARD PROTECTION**

Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

**GRADING REQUIREMENTS (CONTINUED)**

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



**MGS GUARDRAIL**

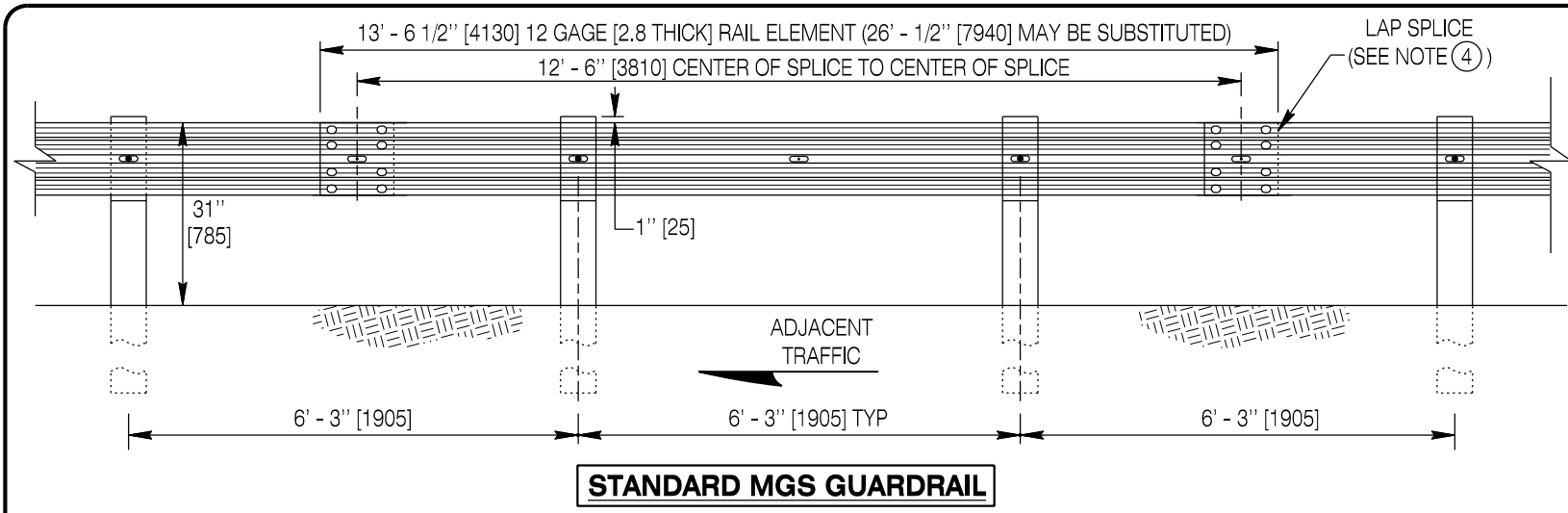
STANDARD PLAN

STANDARD PLAN NUMBER

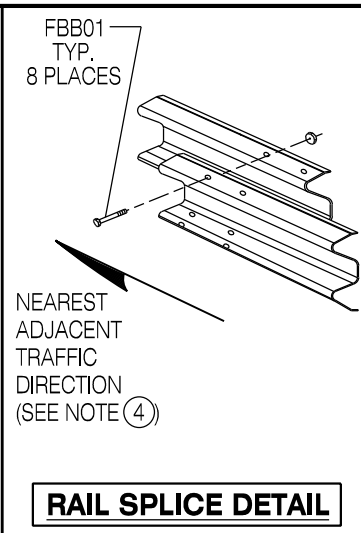
**606-2A**

SHEET 4 of 16

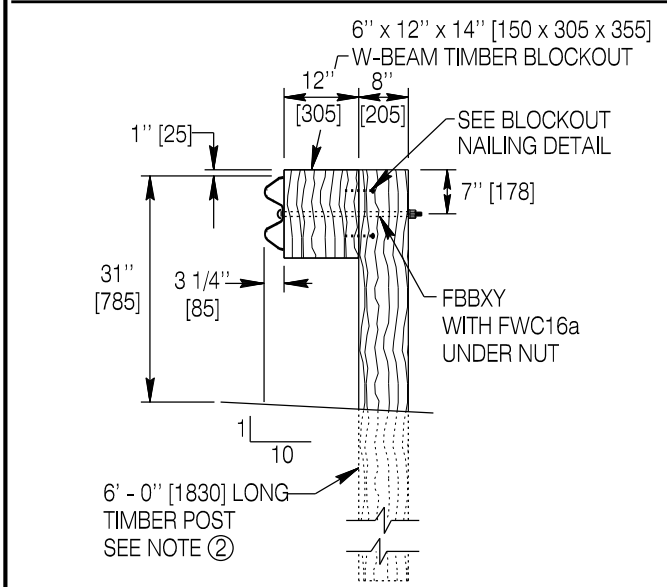
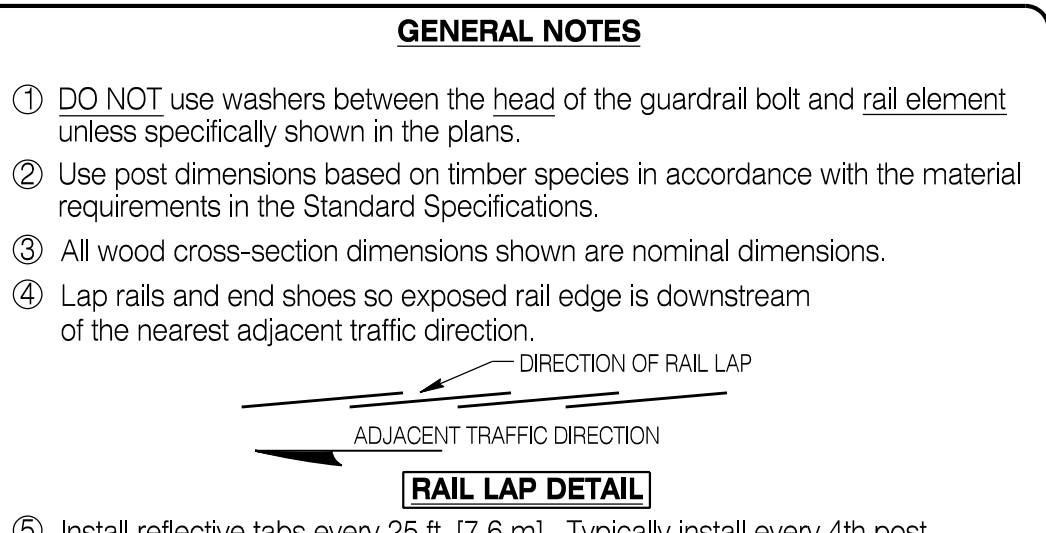
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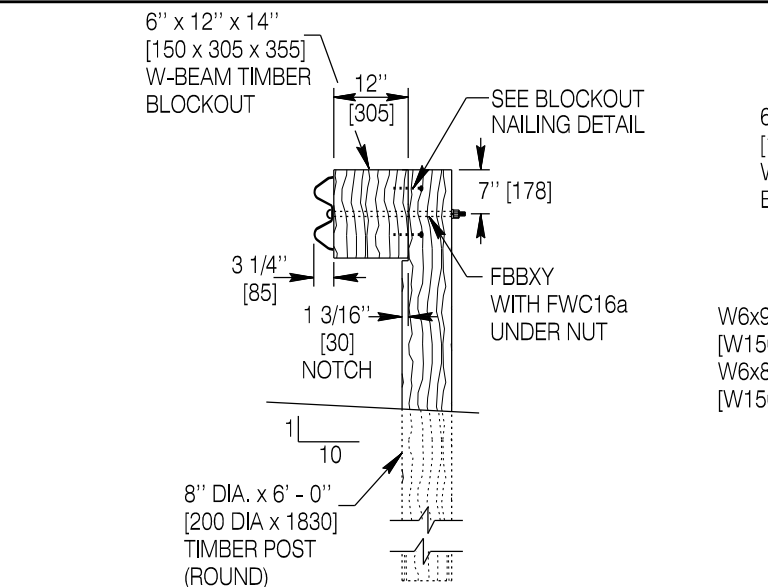
**STANDARD MGS GUARDRAIL**



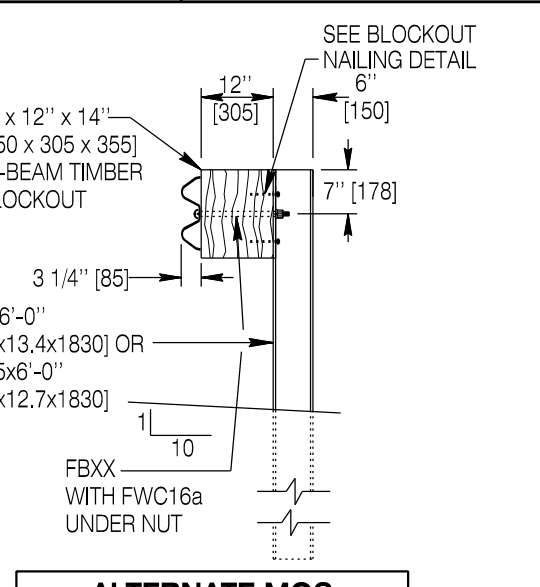
**RAIL SPLICE DETAIL**



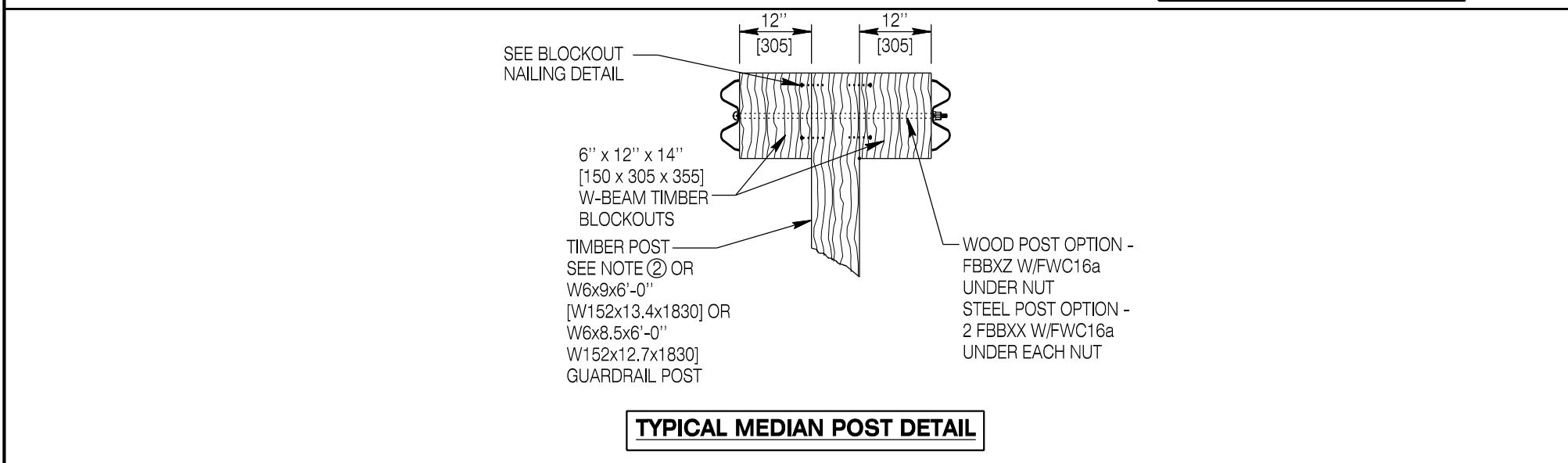
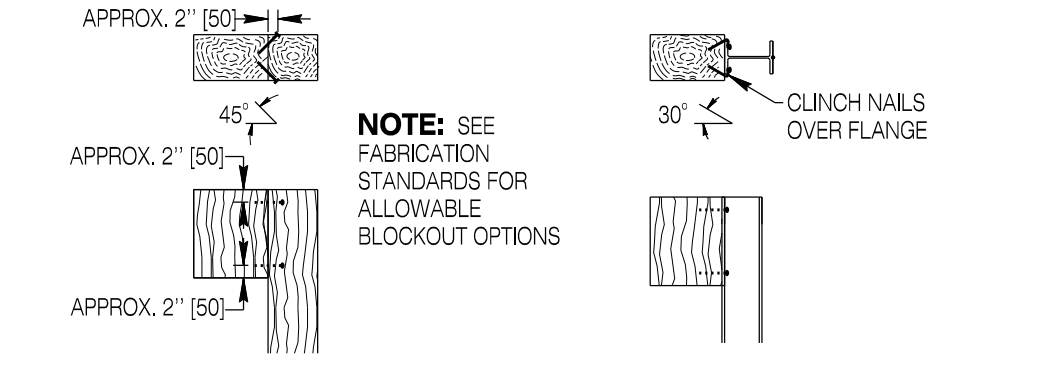
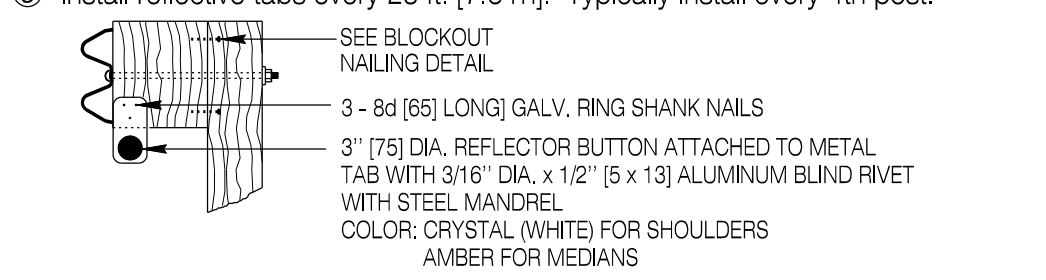
**STANDARD MGS WOOD POST DETAIL**



**ALTERNATE MGS ROUND WOOD POST DETAIL**



**ALTERNATE MGS WITH STEEL POST DETAIL**

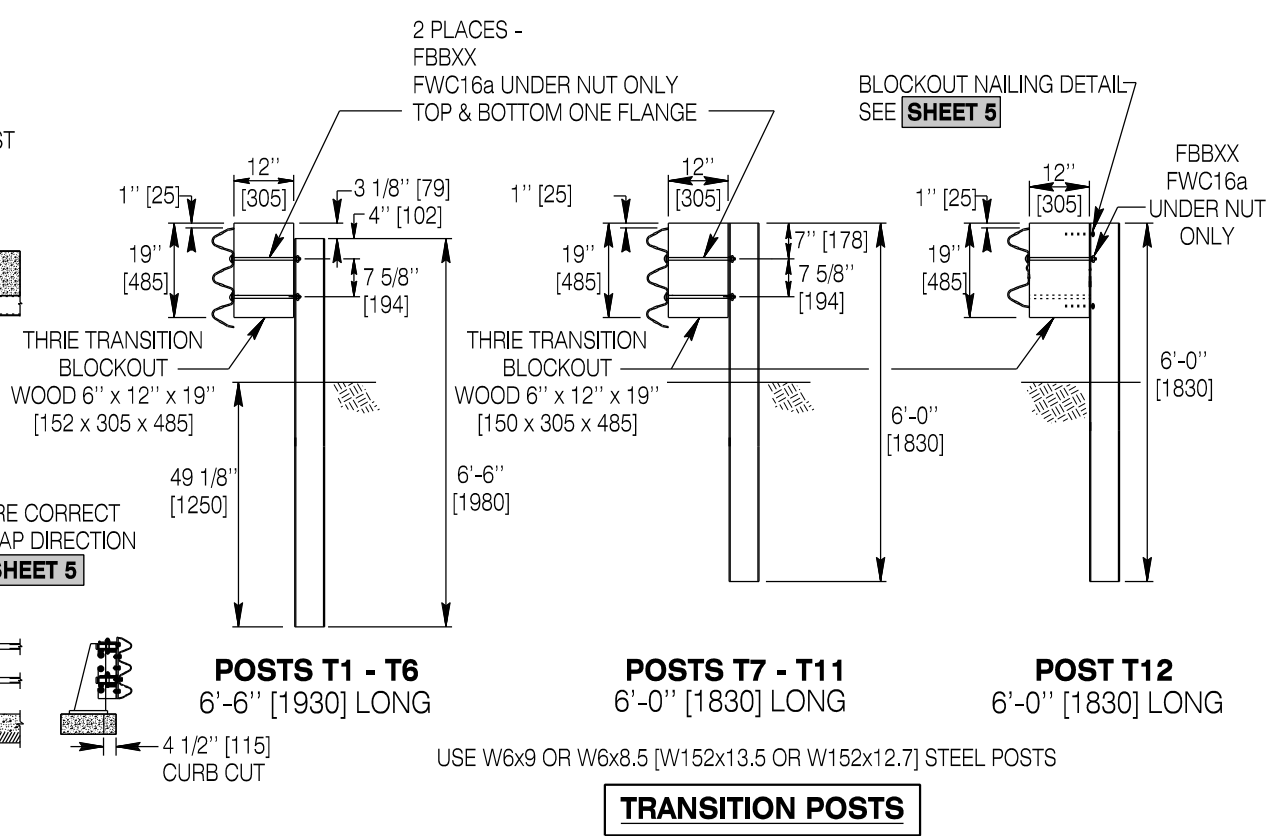
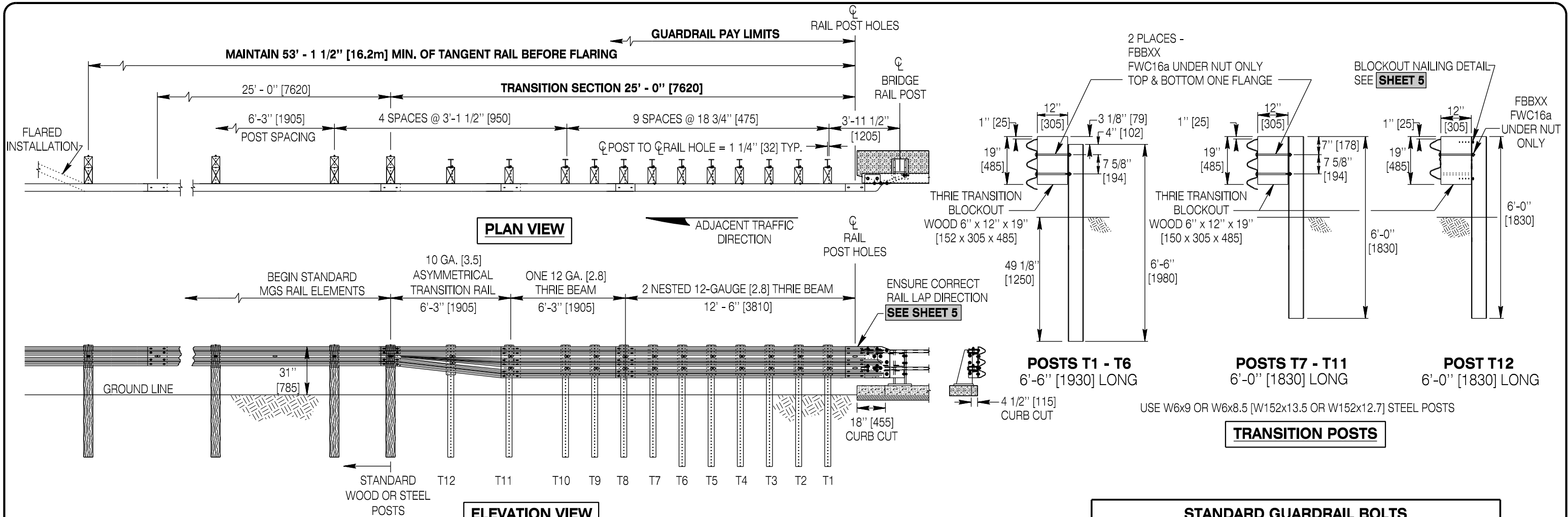


**TYPICAL MEDIAN POST DETAIL**

**STANDARD GUARDRAIL BOLTS**

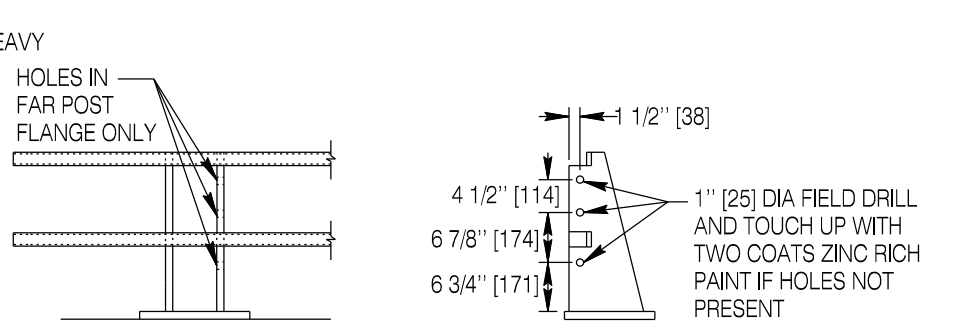
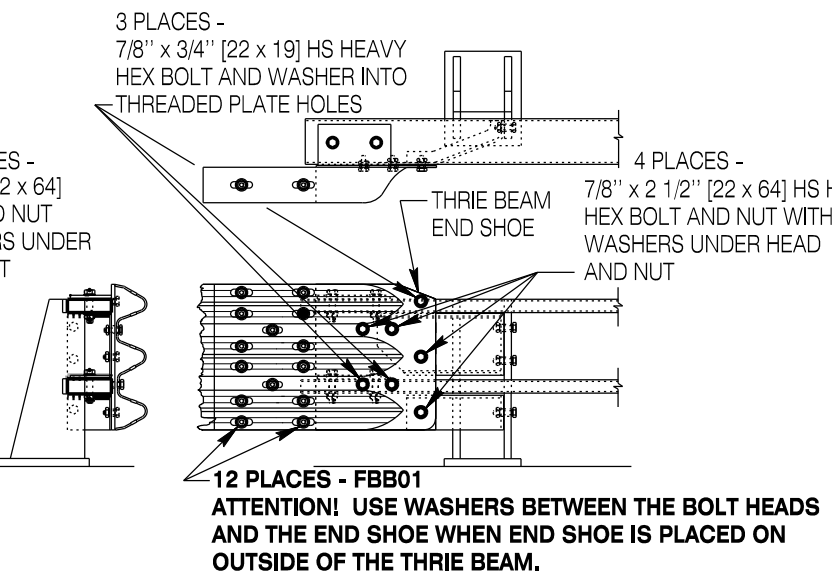
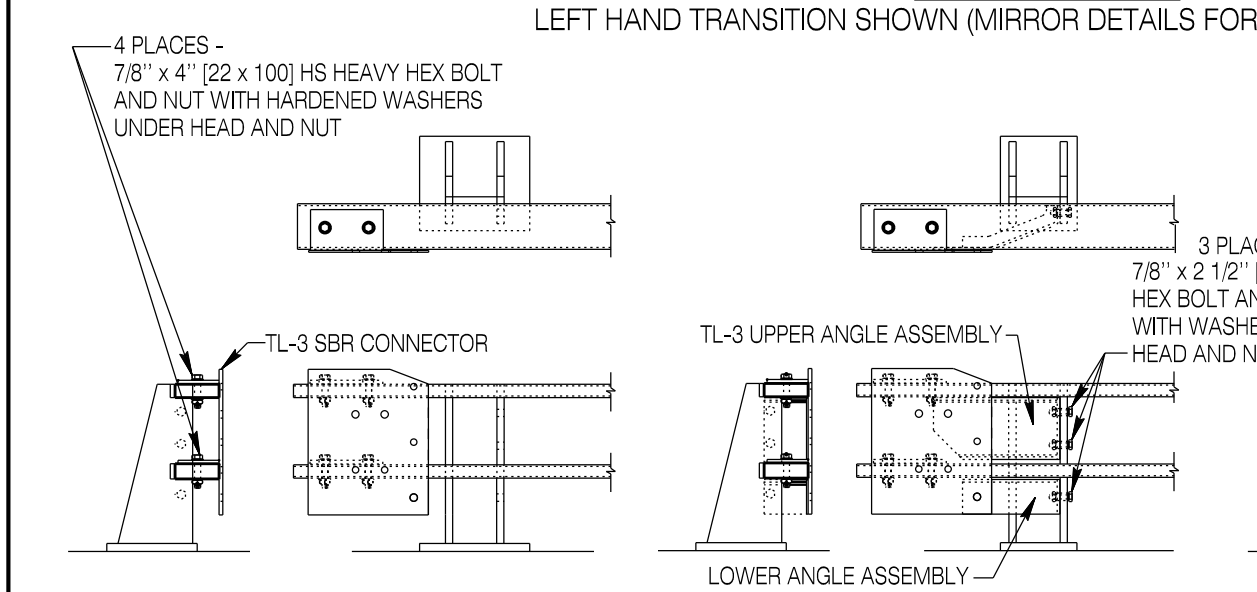
*DESIGNATOR	
FBB01	5/8" x 1 1/4" [16 x 32] BUTTON HEAD GUARDRAIL BOLT WITH NUT
FBBXX	5/8" x 14" [16 x 355] BUTTON HEAD GUARDRAIL BOLT WITH NUT
FBBXY	5/8" x 22" [16 x 560] BUTTON HEAD GUARDRAIL BOLT WITH NUT
FBBXZ	5/8" x 34" [16 x 865] BUTTON HEAD GUARDRAIL BOLT WITH NUT
FWC16a	ROUND WASHER FOR 5/8" [16] GUARDRAIL BOLT

\*TASK FORCE13 STANDARD BARRIER GUIDE

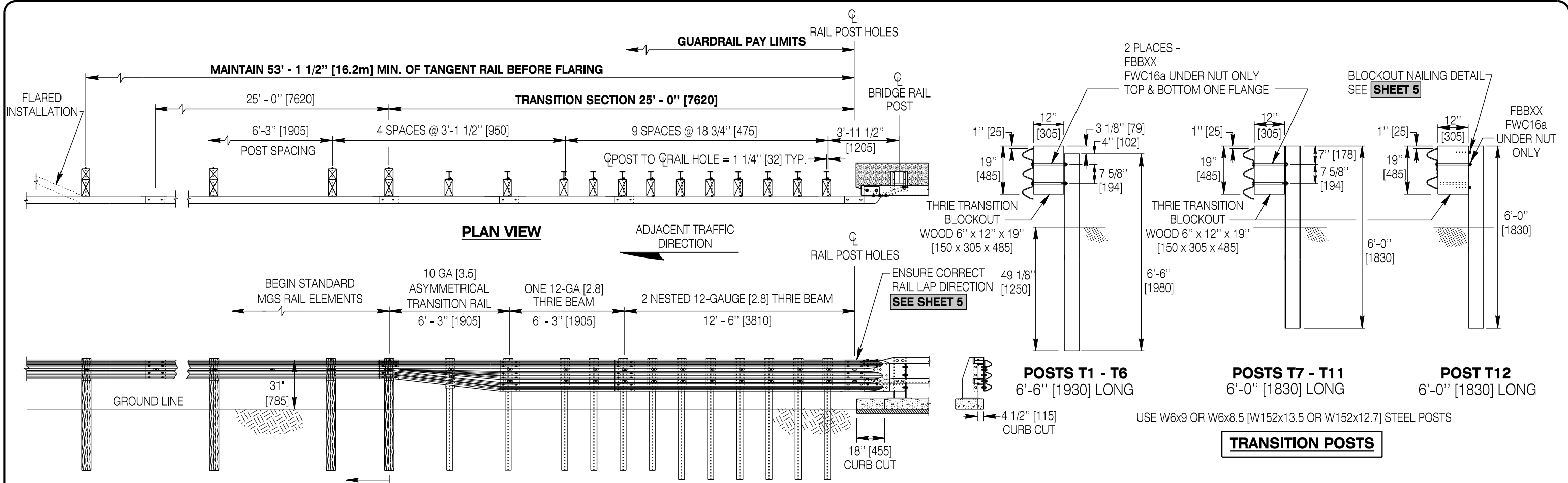


STANDARD GUARDRAIL BOLTS	
*DESIGNATOR	
FBB01	5/8" x 1 1/4" [16 x 32] BUTTON HEAD GUARDRAIL BOLT W/NUT
FBBXX	5/8" x 14" [16 x 355] BUTTON HEAD GUARDRAIL BOLT W/NUT
FWC16a	ROUND WASHER FOR 5/8" [16] BOLT

\* TASK FORCE 13 STANDARD BARRIER GUIDE

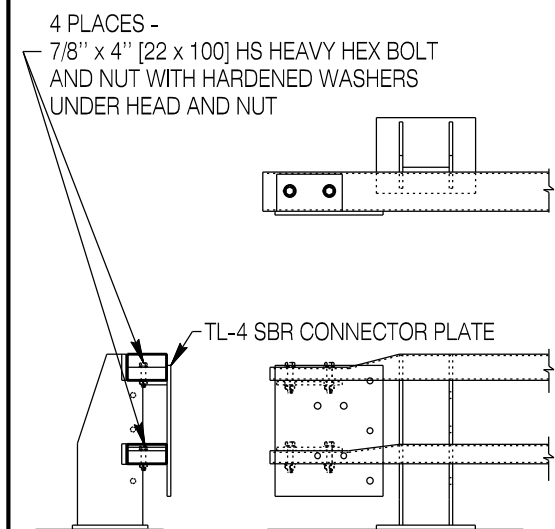


**INSTALLATION OF TL-3 SBR CONNECTOR    INSTALLATION OF ANGLE ASSEMBLIES    INSTALLATION OF THRIE-BEAM END SHOE    ANGLE PLATE MOUNTING HOLES**

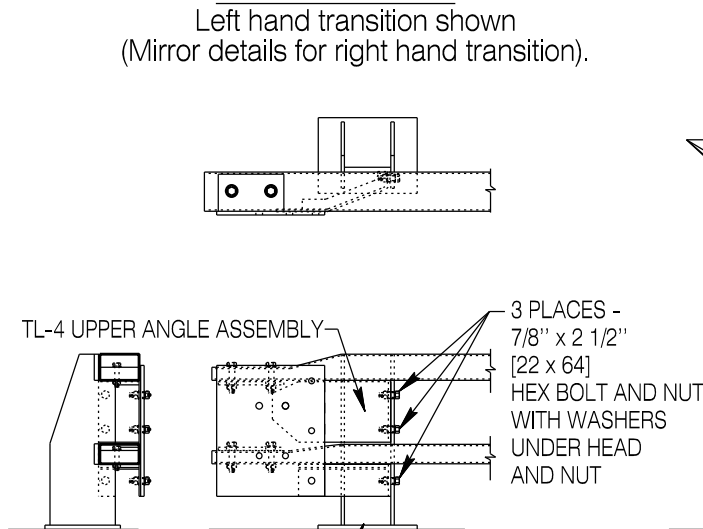


STANDARD GUARDRAIL BOLTS	
*DESIGNATOR	
FBB01	5/8" x 1 1/4" [16 x 32] BUTTON HEAD GUARDRAIL BOLT W/NUT
FBBXX	5/8" x 14" [16 x 355] BUTTON HEAD GUARDRAIL BOLT W/NUT
FWC16a	ROUND WASHER FOR 5/8" [16] BOLT

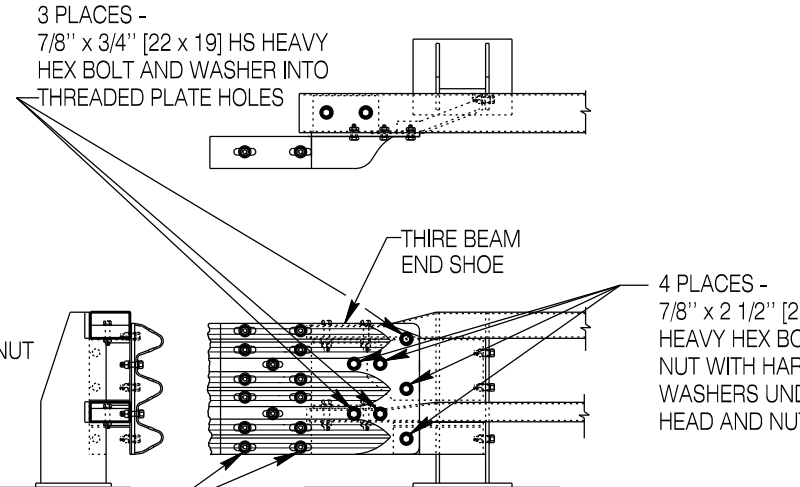
\* TASK FORCE13 STANDARD BARRIER GUIDE



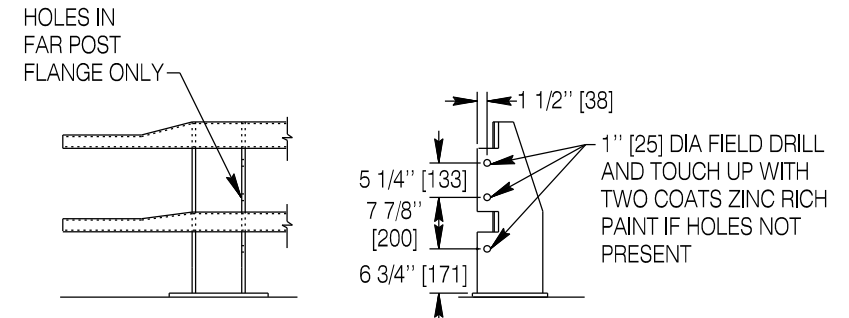
**INSTALLATION OF TL-4 SBR CONNECTOR**



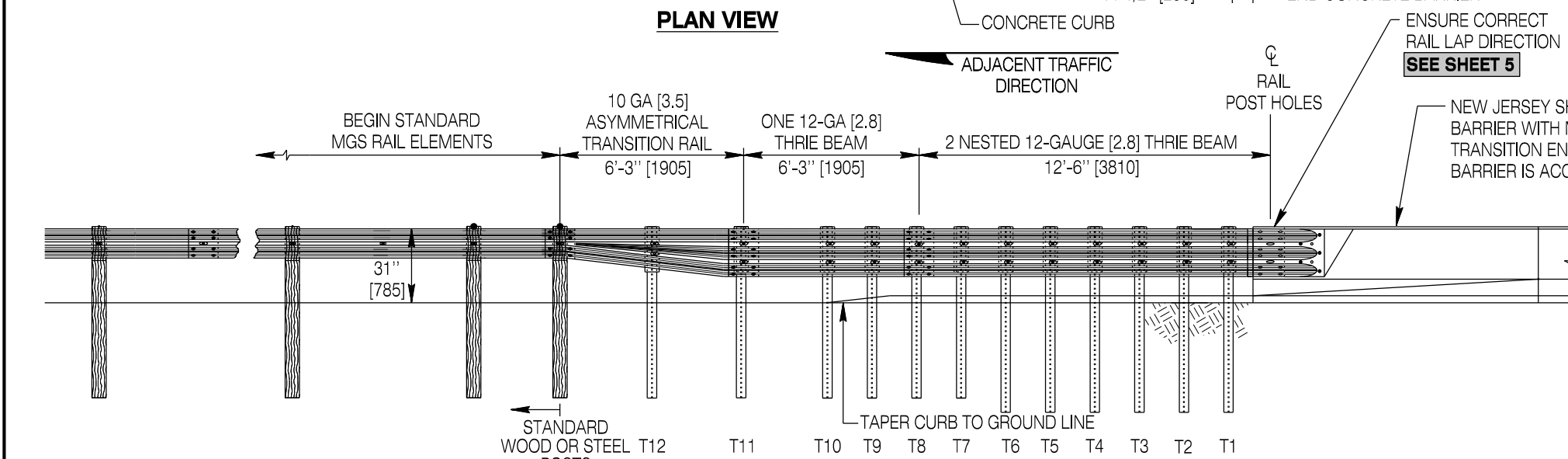
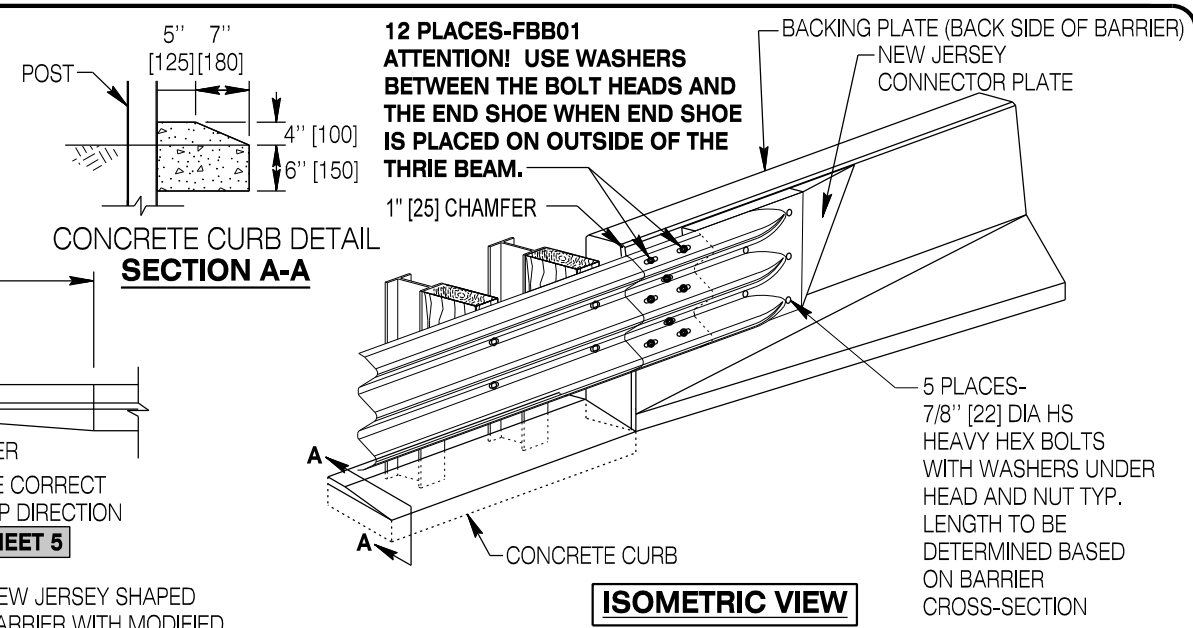
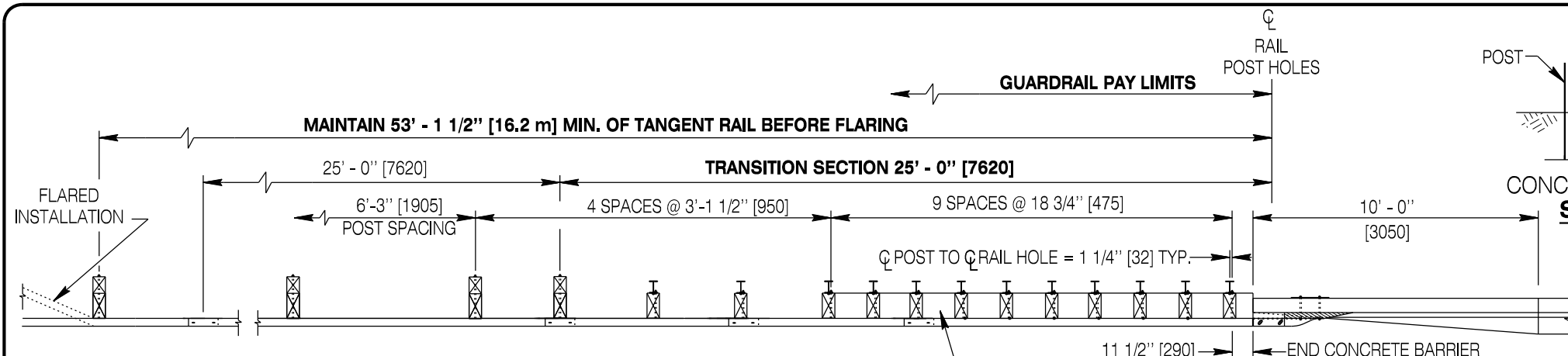
**INSTALLATION OF ANGLE ASSEMBLIES**



**INSTALLATION OF THRIE-BEAM END SHOE**

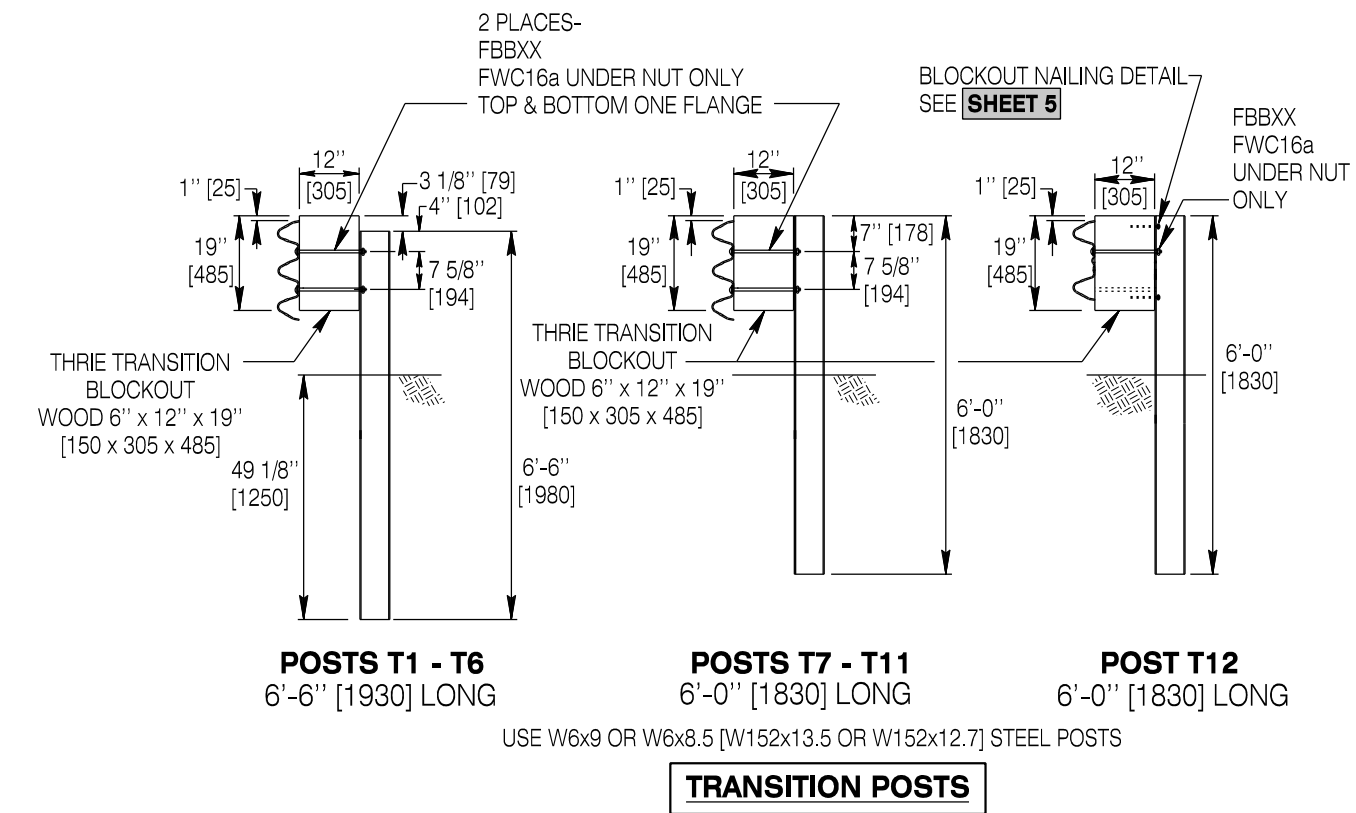
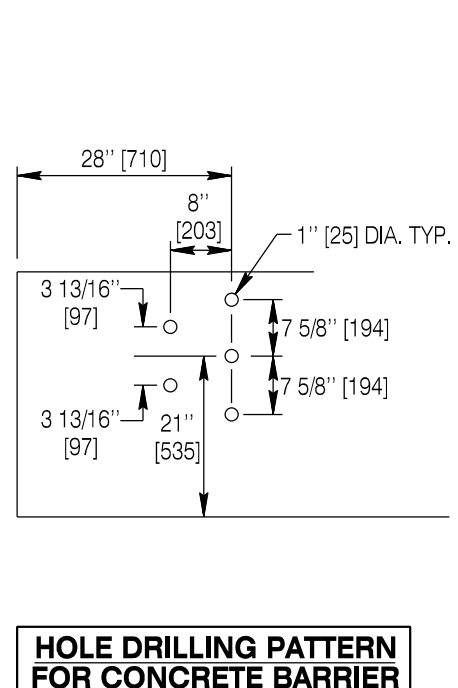
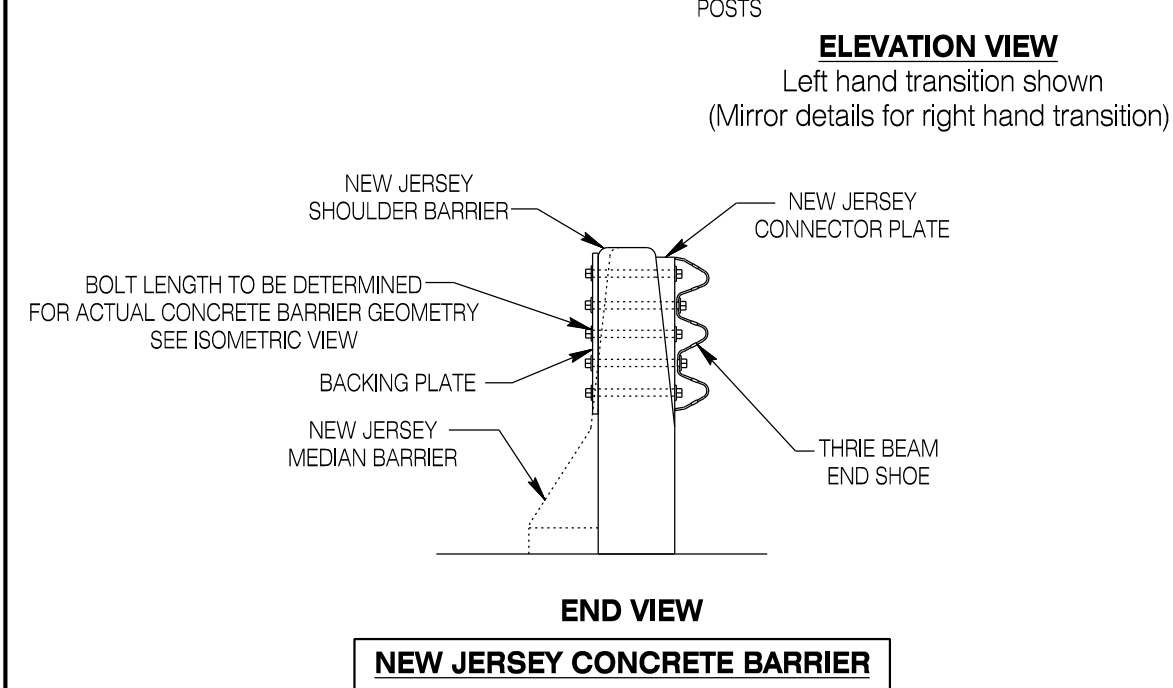


**ANGLE PLATE MOUNTING HOLES**



STANDARD GUARDRAIL BOLTS	
*DESIGNATOR	
FBB01	5/8" x 1 1/4" [16 x 32] BUTTON HEAD GUARDRAIL BOLT W/NUT
FBBXX	5/8" x 14" [16 x 355] BUTTON HEAD GUARDRAIL BOLT W/NUT
FWC16a	ROUND WASHER FOR 5/8" [16] BOLT

\* TASK FORCE13 STANDARD BARRIER GUIDE



Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

TRANSITION C - TO NEW JERSEY CONCRETE BARRIER

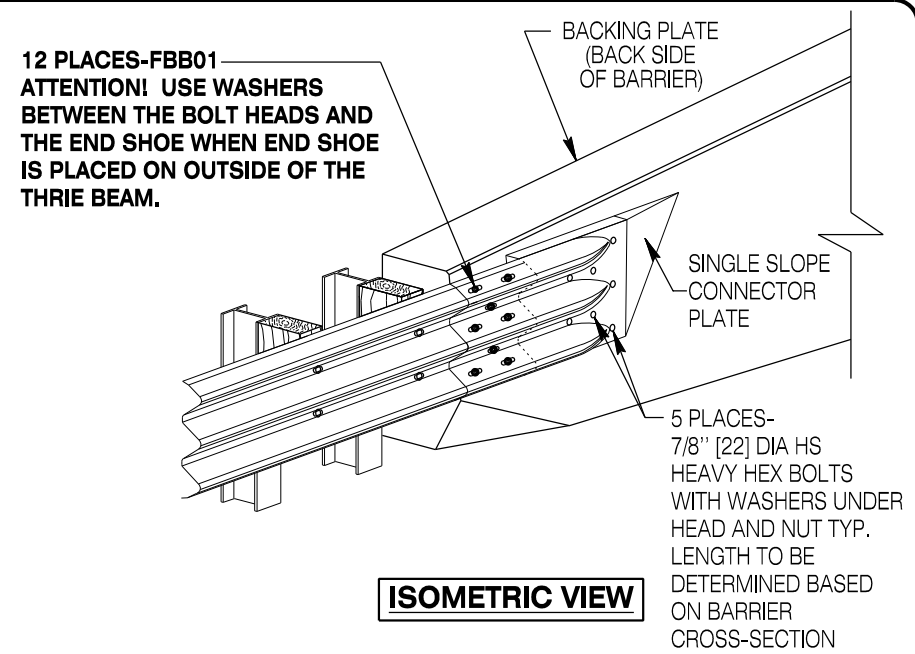
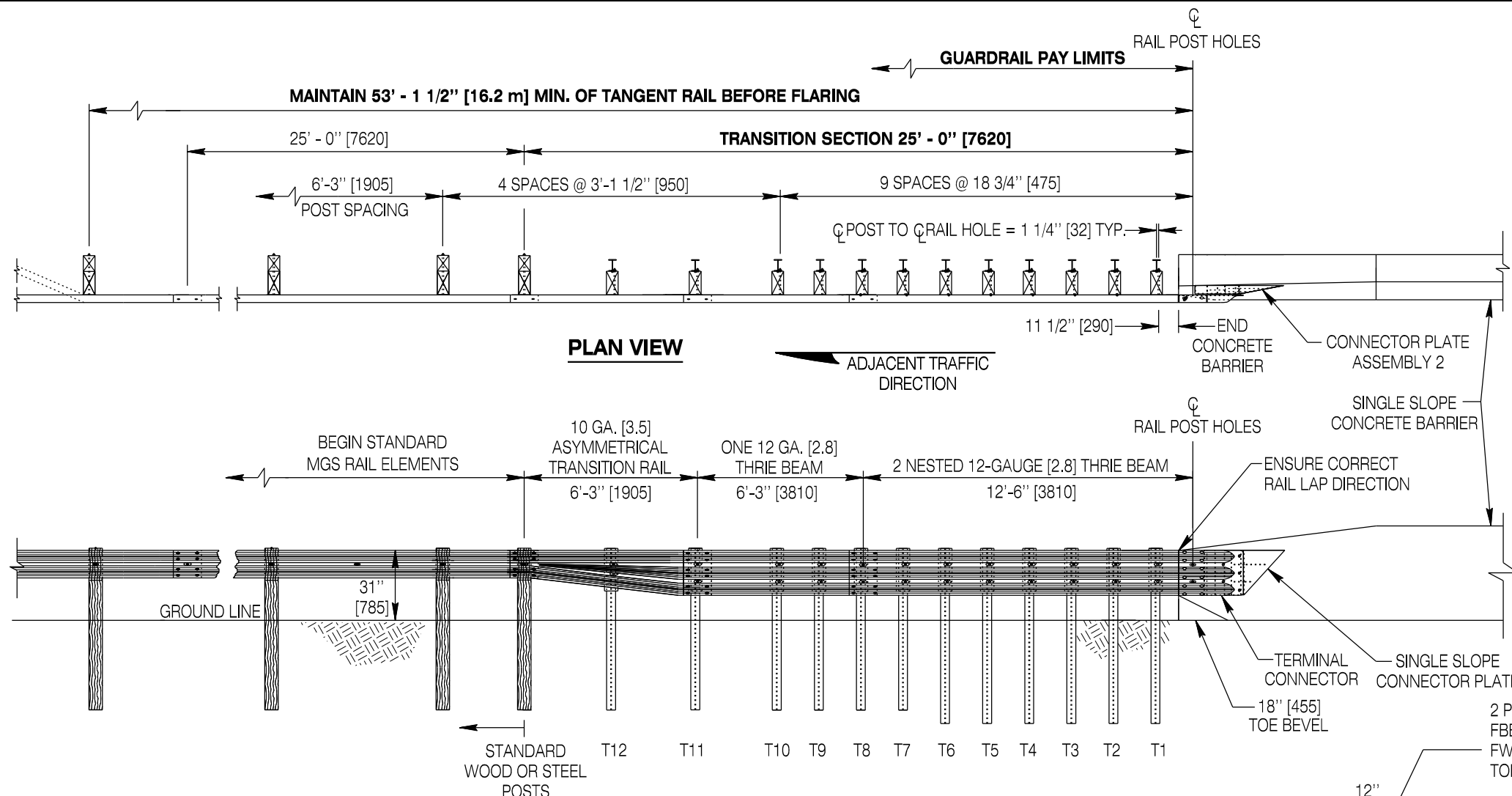


MGS GUARDRAIL  
 STANDARD PLAN

STANDARD PLAN NUMBER  
**606-2A**  
 SHEET 8 of 16  
 Issued by: ENGINEERING SERVICES  
 Date Issued: JULY 2018

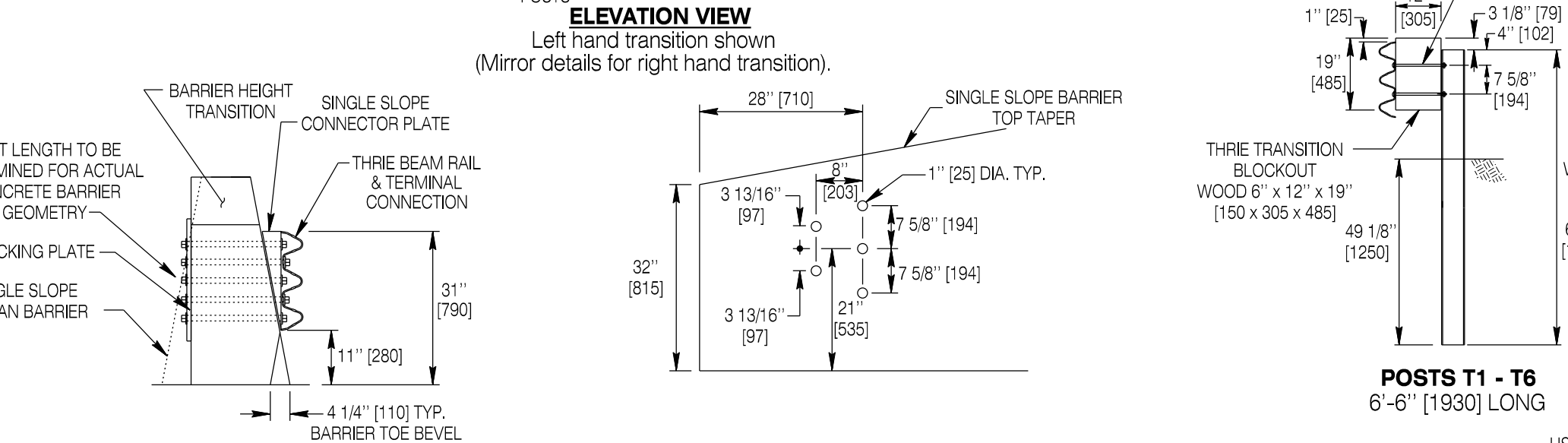
Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.





STANDARD GUARDRAIL BOLTS	
*DESIGNATOR	
FBB01	5/8" x 1 1/4" [35 x 32] BUTTON HEAD GUARDRAIL BOLT W/NUT
FBBXX	5/8" x 14" [16 x 355] BUTTON HEAD GUARDRAIL BOLT W/NUT
FWC16a	ROUND WASHER FOR 5/8" [16] BOLT

\* TASK FORCE13 STANDARD BARRIER GUIDE



Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

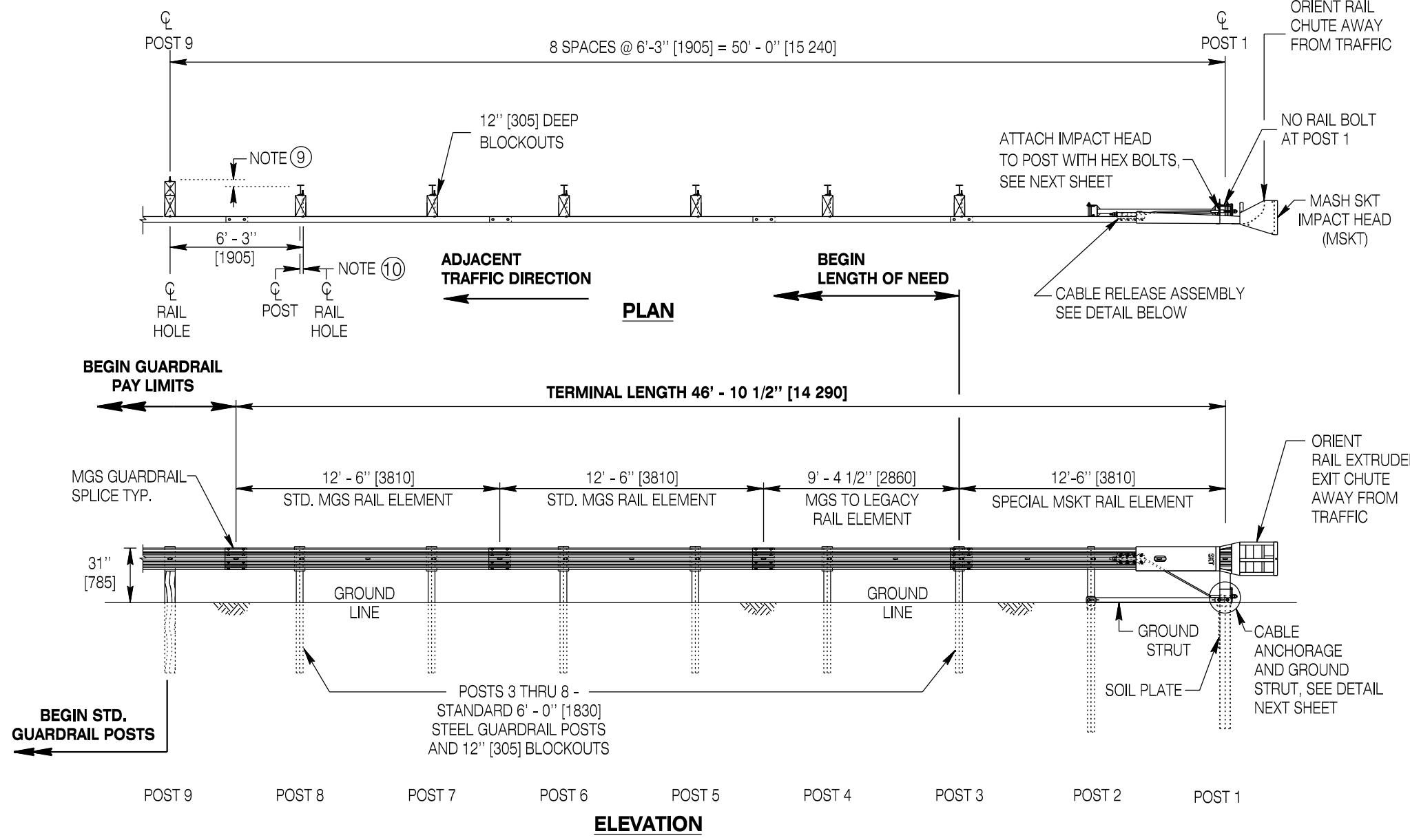
TRANSITION D - TO SINGLE SLOPE CONCRETE BARRIER

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



MGS GUARDRAIL  
 STANDARD PLAN

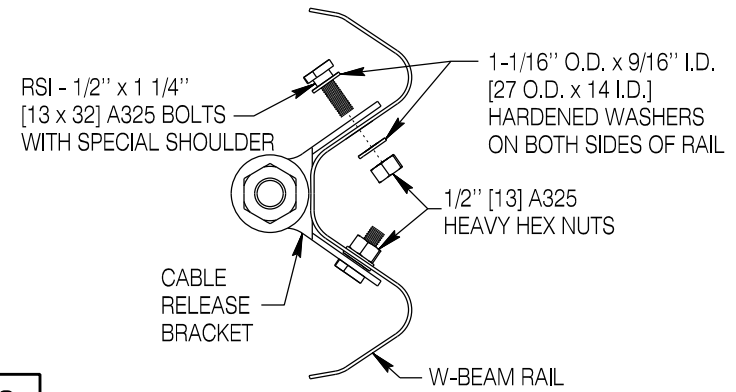
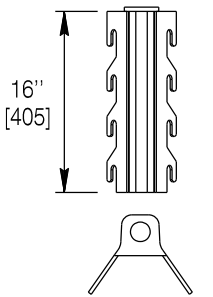
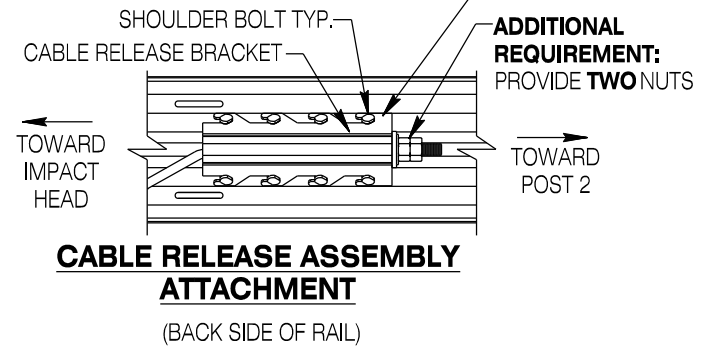
STANDARD PLAN NUMBER  
**606-2A**  
 SHEET 9 of 16  
 Issued by: ENGINEERING SERVICES  
 Date Issued: JULY 2018



**NOTES**

- ① MSKT MGS (for MGS 31" [785] Guardrail) = MASH Tested, TL-3, redirective, gating terminal. This is an approved option for "MGS Terminal Type I." Provide terminal with steel posts. This terminal may be attached to standard guardrail runs having either wood or steel posts.  
  
The MSKT MGS Terminal shown herein is proprietary and can only be manufactured and sold by Road Systems Inc. or its duly authorized representative. Details shown herein are approximate. Install in strict accordance with the manufacturer's installation manual. Provide and install any items shown herein as an "additional requirement."  
Summary of "Additional requirements:" Double nut each end of the cable anchor.
- ② Lap the upstream rail (for the adjacent traffic direction) over the downstream rail element at each splice. See rail lap detail on **SHEET 5**.
- ③ Attach impact head to post 1 as shown. Do not attach rail to post 1.
- ④ Do not place any type of washer or delineation under the head of the rail/post bolts.
- ⑤ The lower section of the hinged post should not be driven with the upper post attached. If the post is placed in a drilled hole, the backfill material must be satisfactorily compacted to prevent settlement.
- ⑥ The lower sections of posts 1 & 2 shall not protrude more than 4 inches [100] above the ground line. Correct site grading when necessary as directed by the engineer.
- ⑦ Ensure the cable anchor assembly is taut. Use a locking device (vice grips or channel locking pliers) to prevent twisting or untwisting of the cable when tightening nuts.
- ⑧ Ensure all hardware and assemblies are galvanized or coated to prevent corrosion.
- ⑨ Note the lateral offset to the back of posts changes from the terminal section with 12 inch [305] blockouts and steel posts to the standard guardrail section with 12 inch [305] blockouts if wood posts are provided.
- ⑩ The first spacing from the centerline of steel posts in the terminal section to the centerline of wood post (if provided) in the standard guardrail section will be 6' - 3" [1905] plus or minus 1 1/8" [30] to account for bolt holes being offset in steel posts.

ENSURE THIS ORIENTATION OF SLOTS SO IMPACT HEAD CAN DRIVE BRACKET OFF BOLTS WHEN IMPACTED



Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

**TERMINAL TYPE I (OPTION 1 - MSKT MGS, SHEET 1 OF 2)**

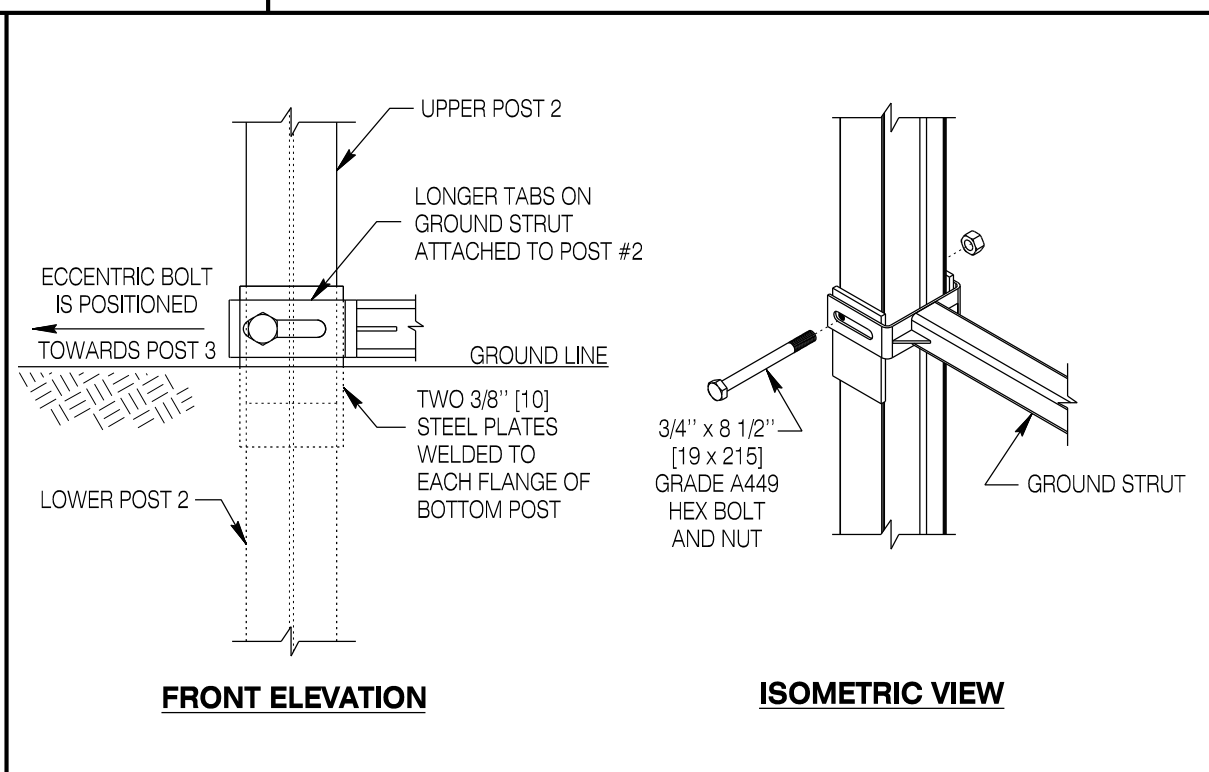
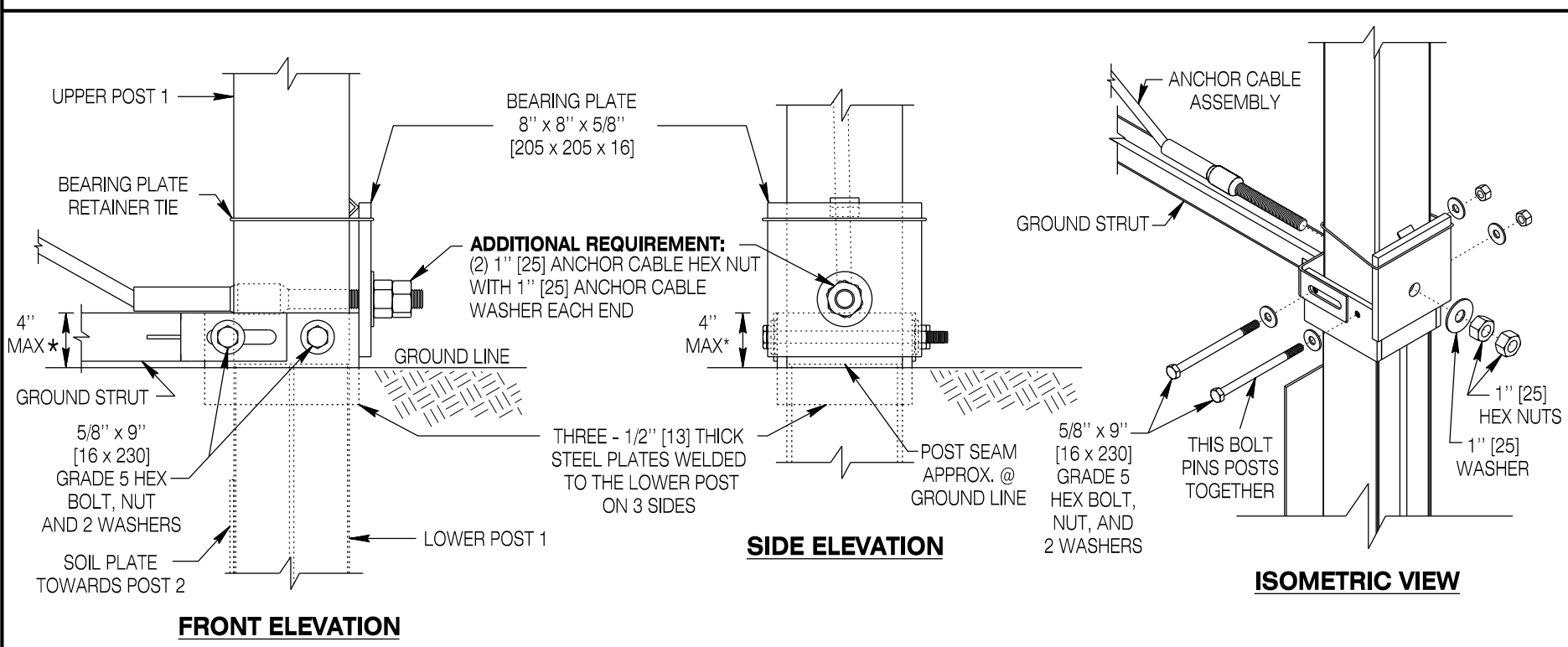
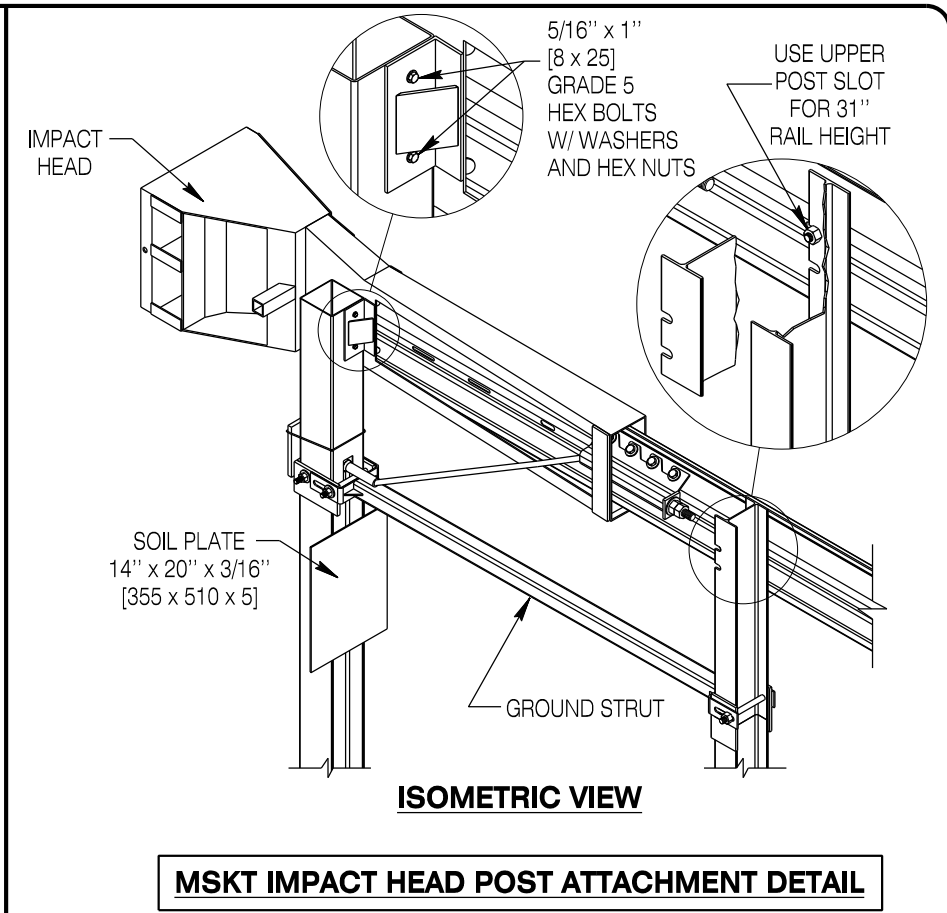
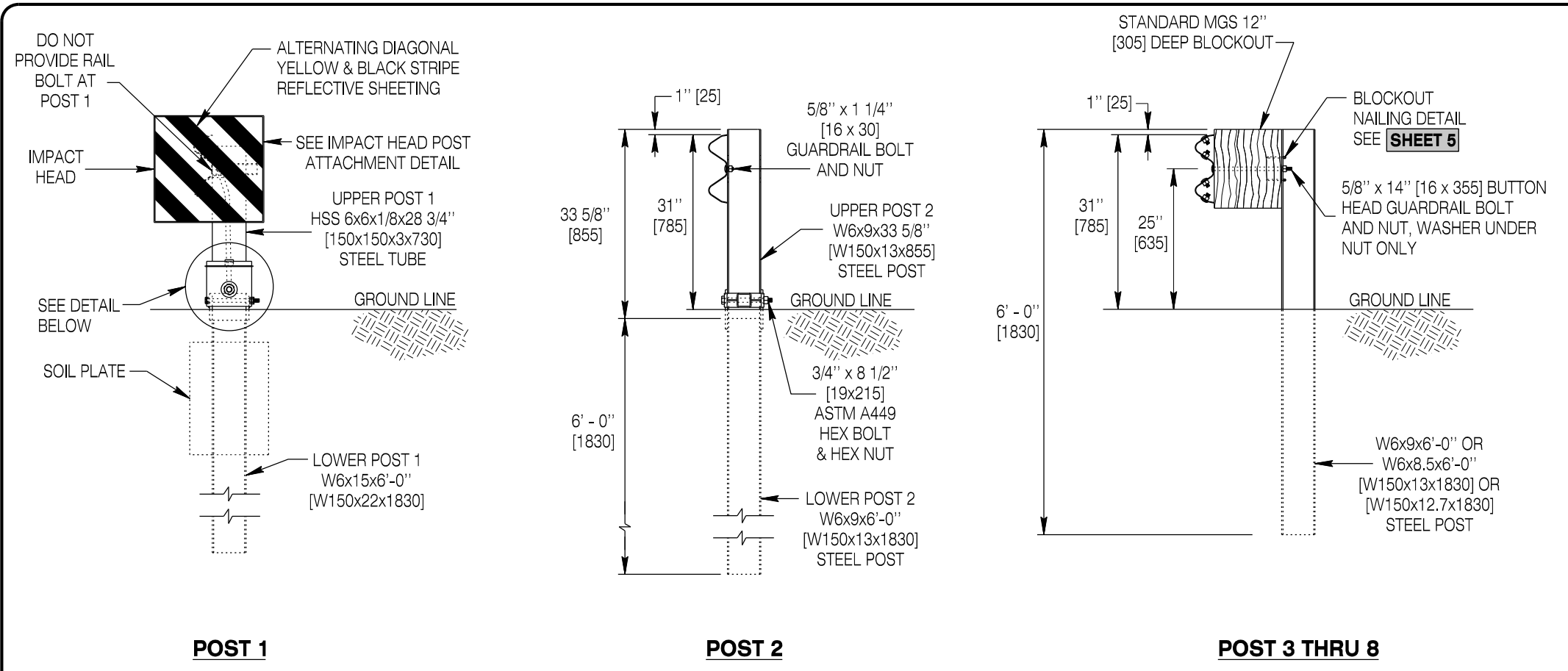
Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



**MGS GUARDRAIL**

STANDARD PLAN

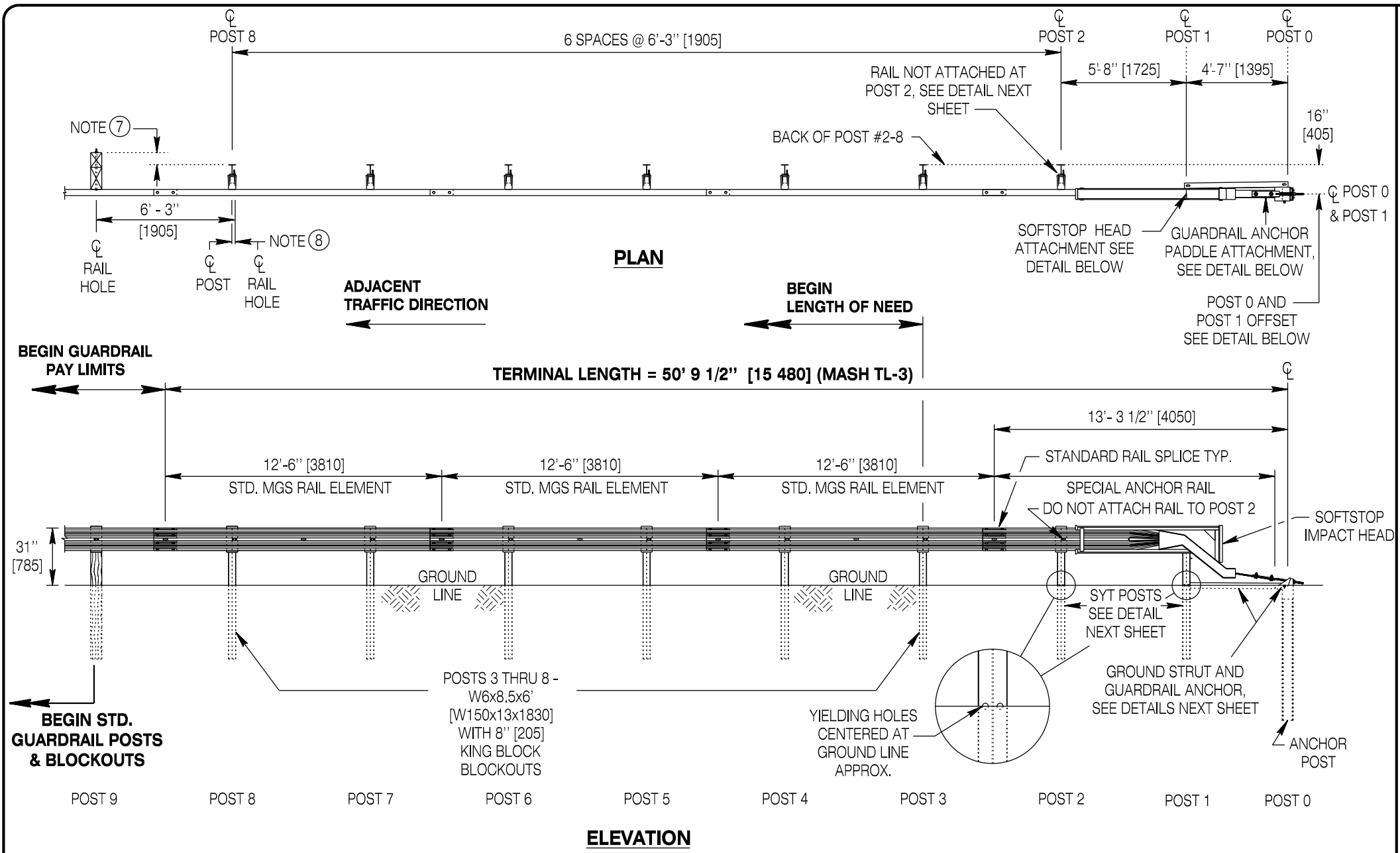
STANDARD PLAN NUMBER  
**606-2A**  
 SHEET 10 of 16  
 Issued by: ENGINEERING SERVICES  
 Date Issued: JULY 2018



\* ATTENTION, IF THIS DIMENSION EXCEEDS 4" [100] CONSULT THE ENGINEER AS THERE MAY BE A GRADING ISSUE

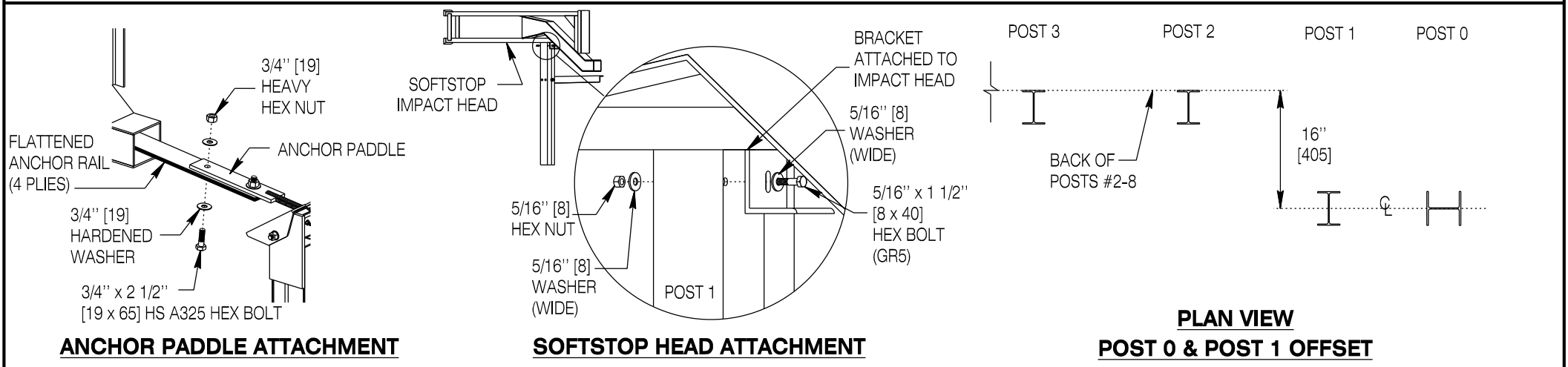
**POST 1 CABLE ANCHORAGE AND GROUND STRUT DETAILS**

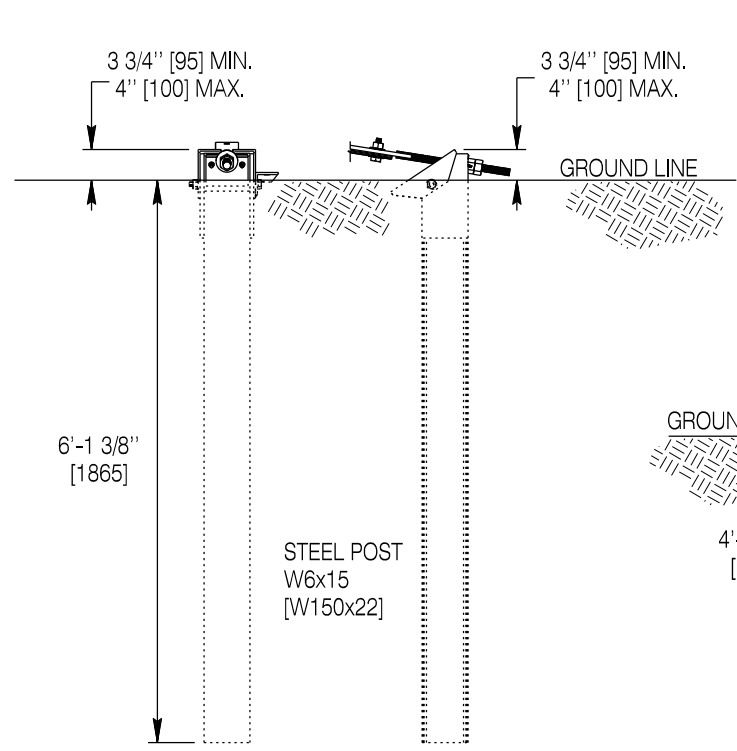
**POST 2 GROUND STRUT DETAILS**



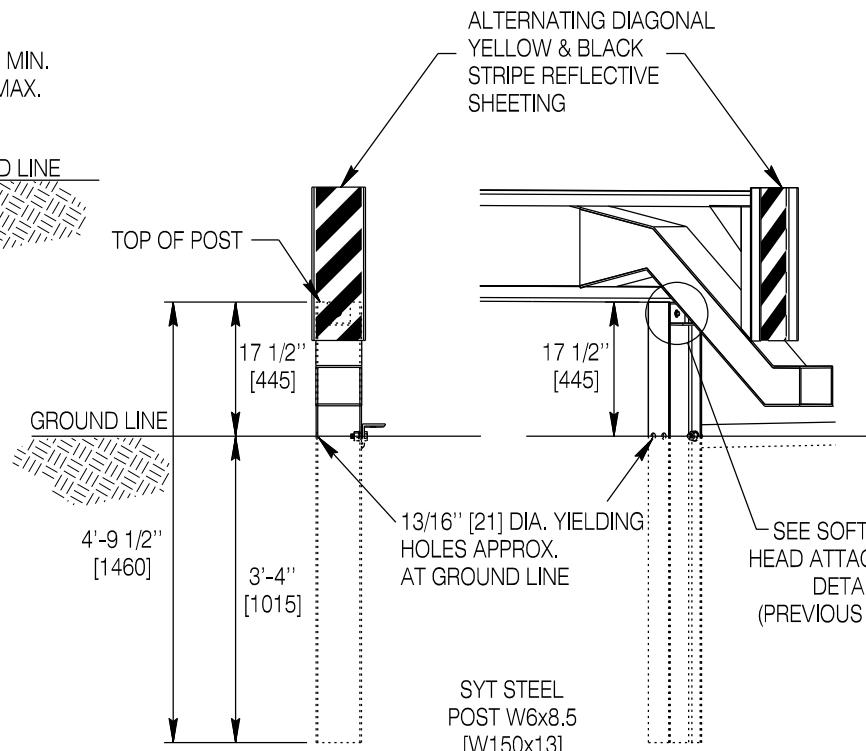
**NOTES**

- ① SoftStop (for MGS 31" [785] Guardrail) = MASH Tested, TL-3, redirective, gating terminal. This is an approved option for "MGS Terminal Type I." Provide terminal with steel posts. This terminal may be attached to standard guardrail runs having either wood or steel posts.  
The SoftStop Terminal shown herein is proprietary and can only be manufactured and sold by Trinity Industries or its duly authorized representative. Details shown herein are approximate. Install in strict accordance to the manufacturer's installation manual. Provide and install any items shown herein as an "additional requirement." Summary of "Additional Requirements:" Double nut end of anchor paddle.
- ② Lap the upstream rail (for the adjacent traffic direction) over the downstream rail element at each splice. See rail lap detail on **SHEET 5**.
- ③ Do not attach the rail element to the post/blockout at post 2.
- ④ Do not place any type of washer or delineator under the head of the rail post bolts.
- ⑤ If the anchor guardrail and SoftStop head are assembled in the field, select one method, approved by Trinity Highway Products, LLC. See assembly manual or assembly video for details on properly pulling the anchor rail through the impact head to the correct position.
- ⑥ Ensure all hardware and assemblies are galvanized or coated to prevent corrosion.
- ⑦ Note the lateral offset to the back of posts changes from the terminal section with 8 inch [205] blockouts and steel posts to the standard guardrail section with 12 inch [305] blockouts and either wood or steel posts.
- ⑧ The first spacing from the centerline of steel posts in the terminal section to the centerline of wood post (if provided) in the standard guardrail section will be 6' - 3" [1905] plus or minus 1 1/8" [30] to account for bolt holes being offset in steel posts.

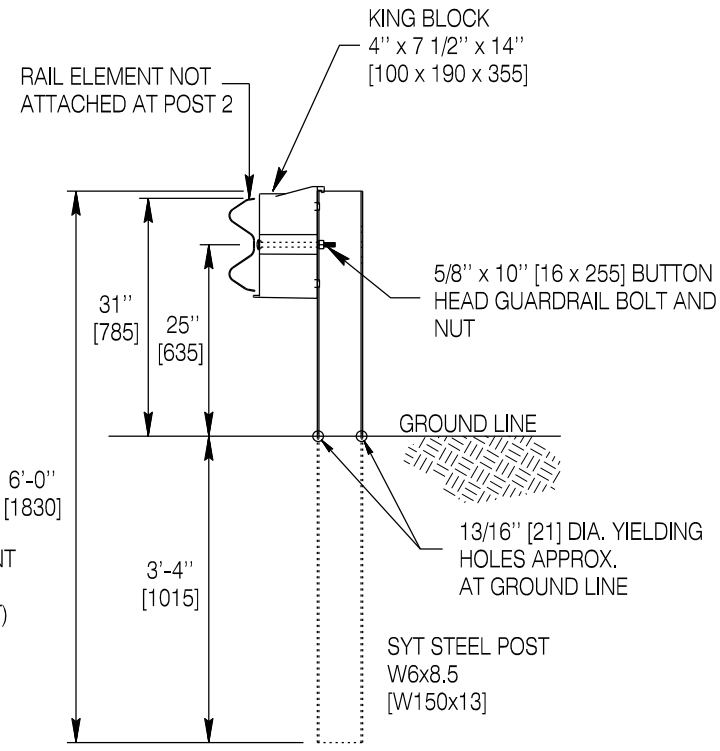




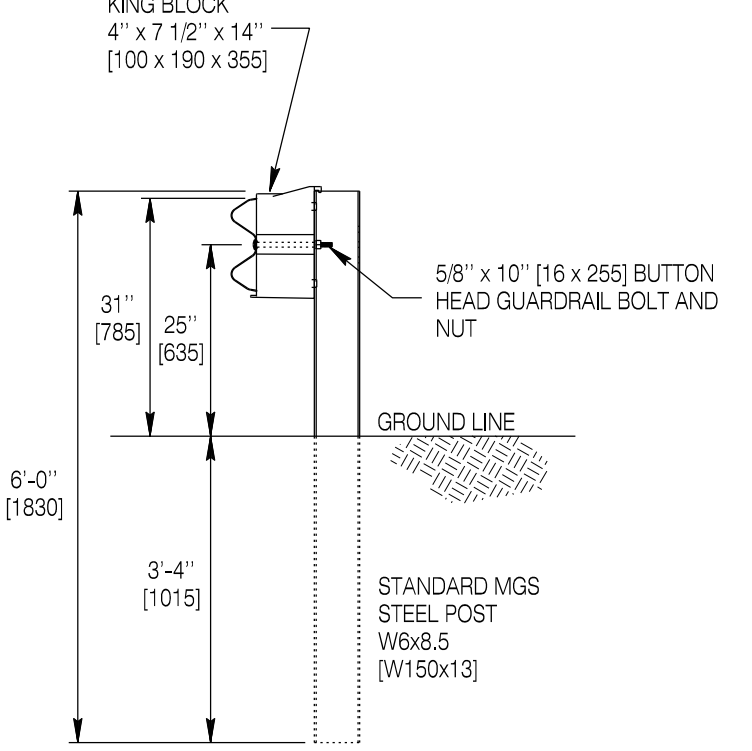
**END VIEW FRONT VIEW**  
**POST 0**



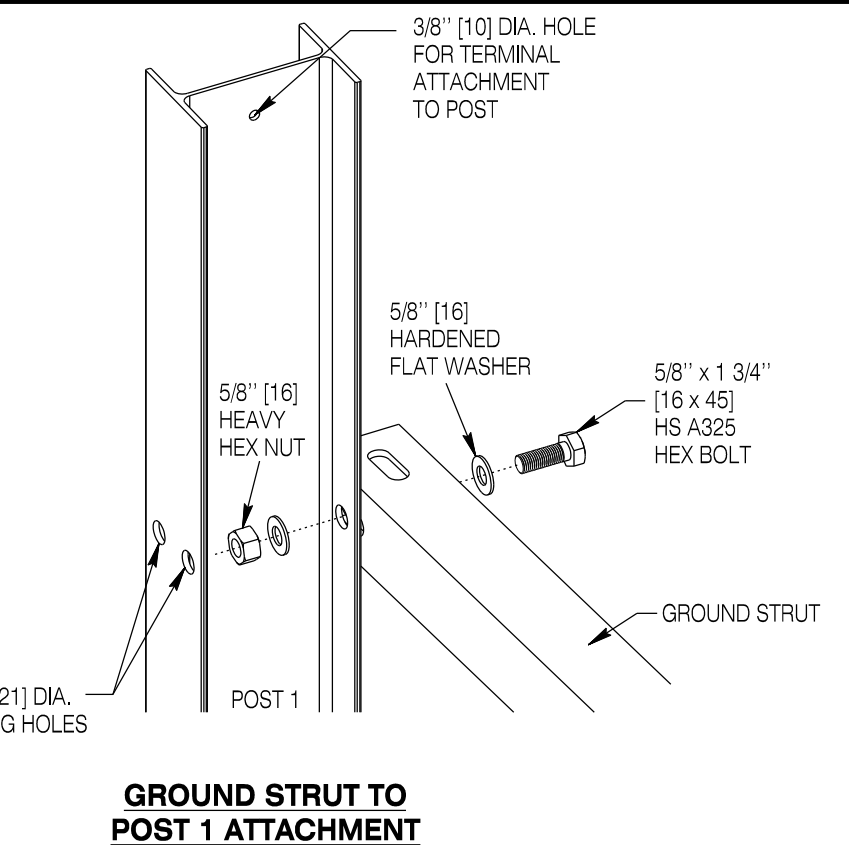
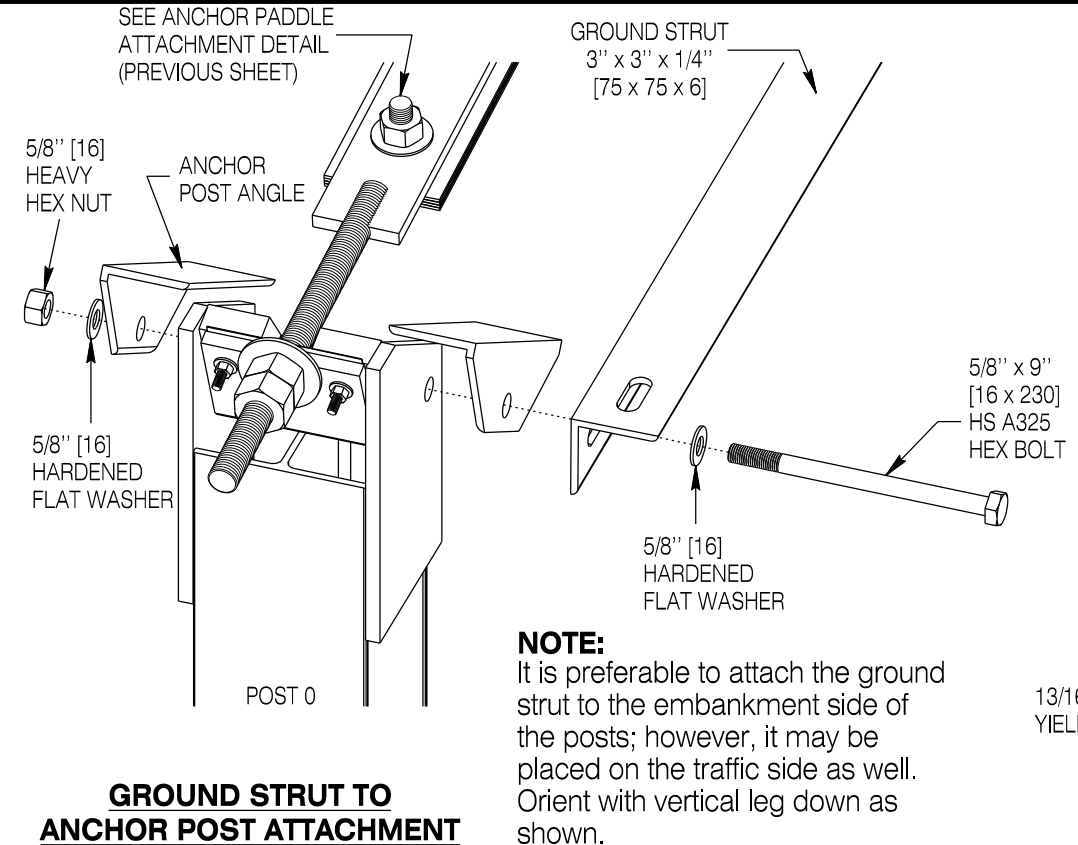
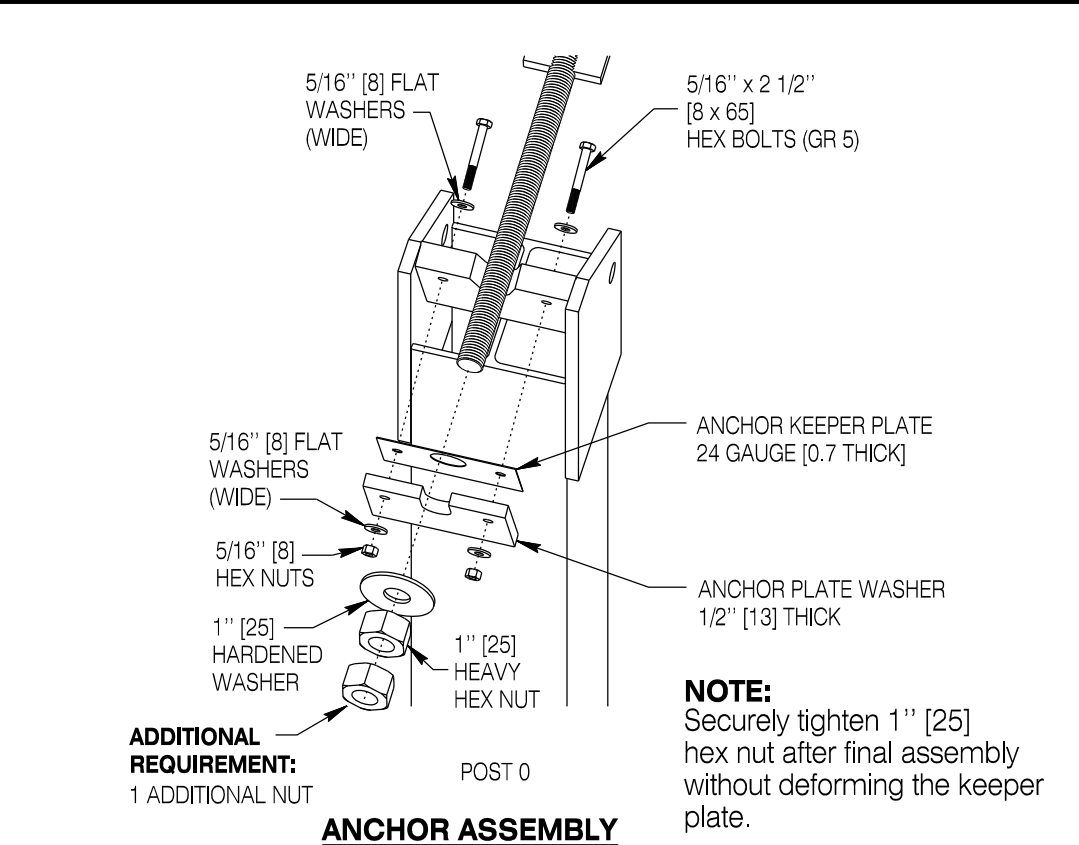
**END VIEW ROTATED VIEW**  
**POST 1**



**POST 2**



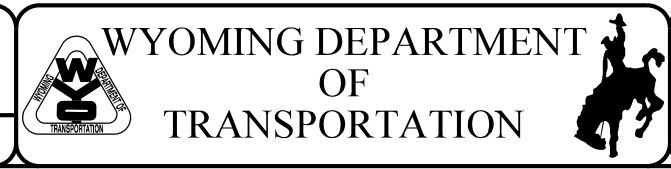
**POST 3 THRU 8**



Designed by: WBW  
Drawn by: RCS  
Checked by: WBW  
Previous Dwg. No.  
606-2

**TERMINAL TYPE I (OPTION 2 - SOFTSTOP, SHEET 2 OF 2)**

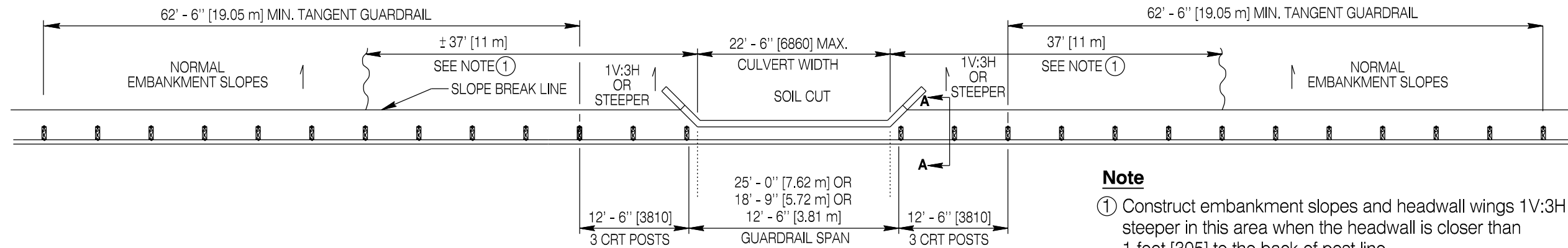
Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



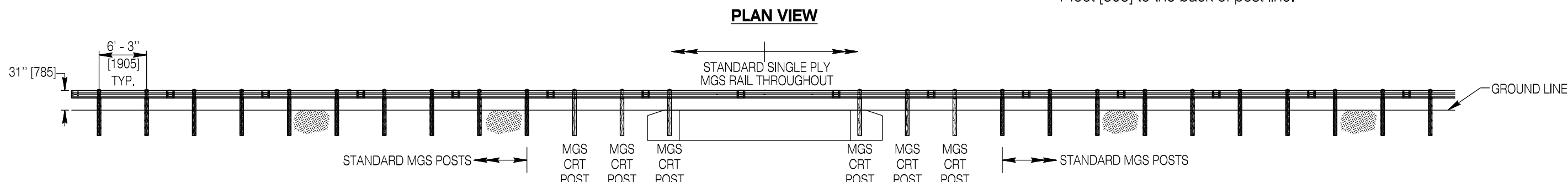
STANDARD PLAN NUMBER  
**606-2A**  
SHEET 13 of 16  
Issued by: ENGINEERING SERVICES  
Date Issued: JULY 2018

**MGS GUARDRAIL**

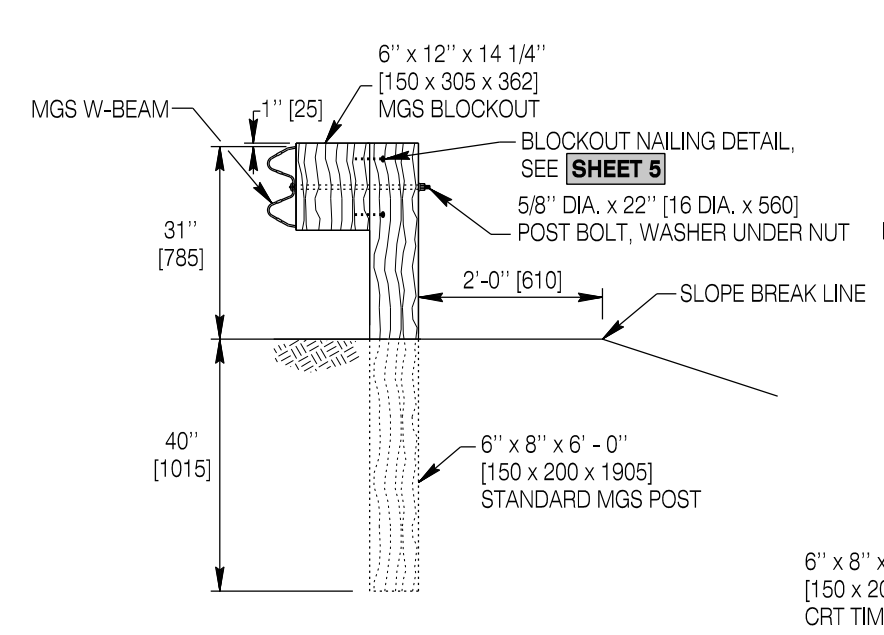
STANDARD PLAN



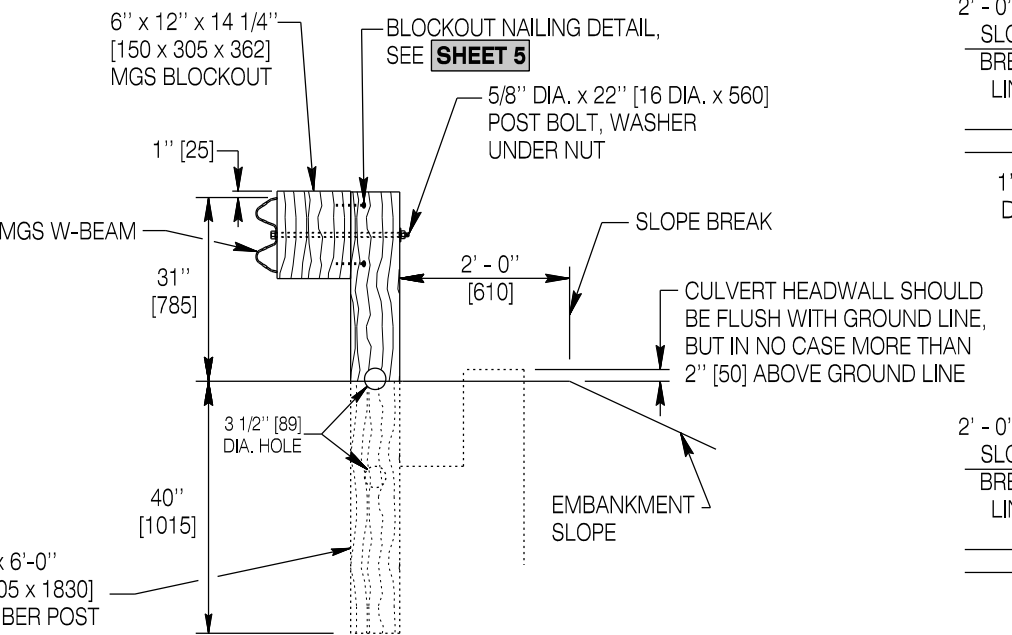
**Note**  
 ① Construct embankment slopes and headwall wings 1V:3H or steeper in this area when the headwall is closer than 1 foot [305] to the back of post line.



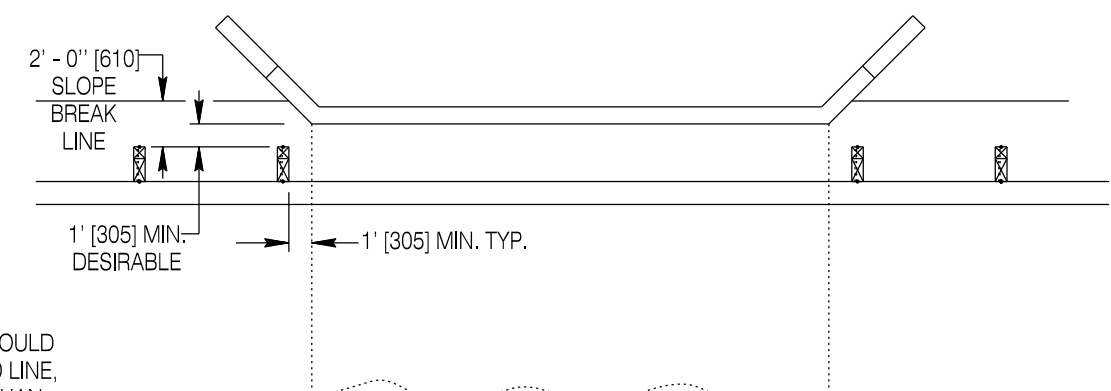
**ELEVATION VIEW**



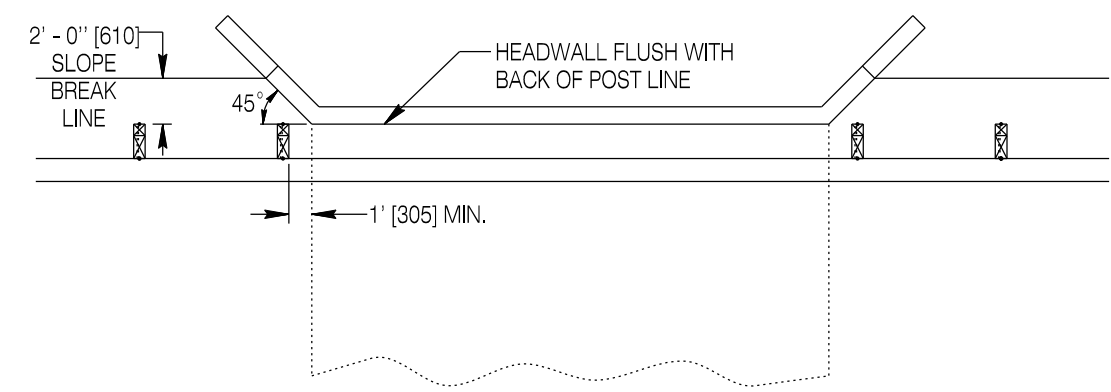
**STANDARD MGS POST**



**SECTION A-A CRT POSTS TYP.**



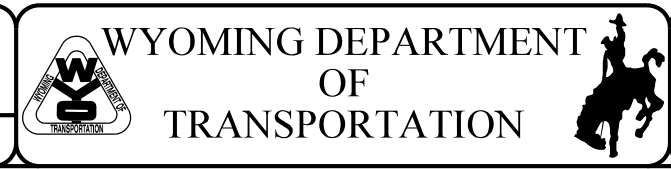
**PREFERRED HEADWALL TO GUARDRAIL SEPARATION**



**MINIMUM HEADWALL TO GUARDRAIL SEPARATION**

Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

MGS LONG SPAN

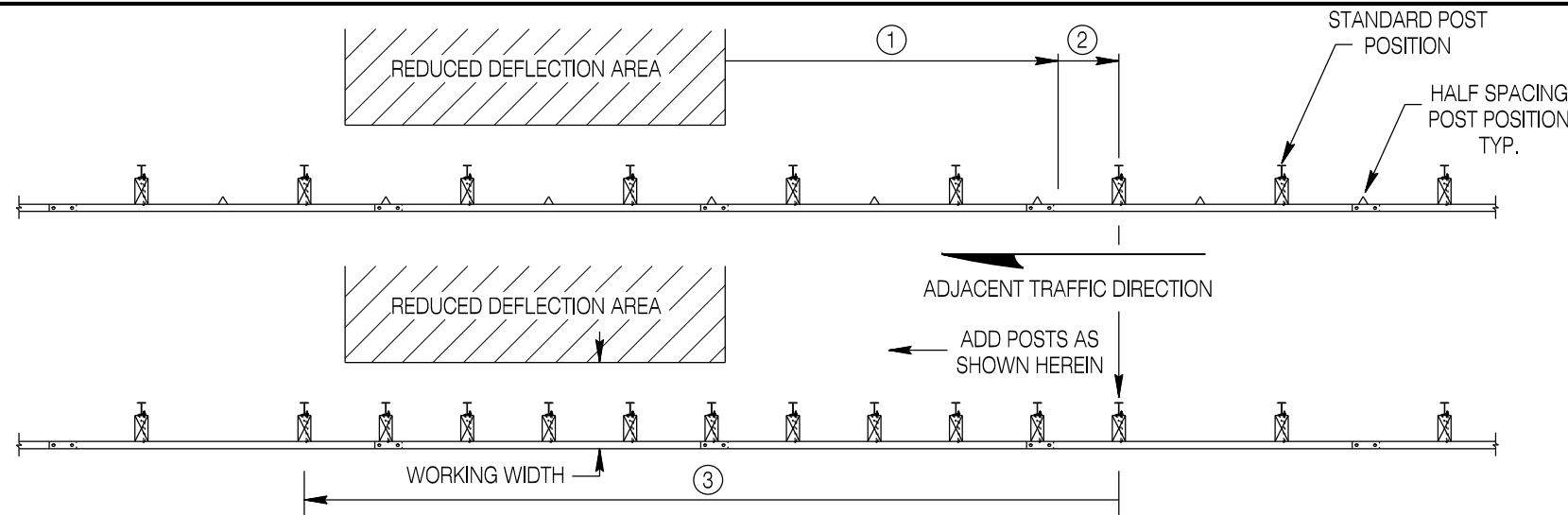


MGS GUARDRAIL

STANDARD PLAN NUMBER  
**606-2A**  
 SHEET 14 of 16  
 Issued by: ENGINEERING SERVICES  
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Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.

STANDARD PLAN



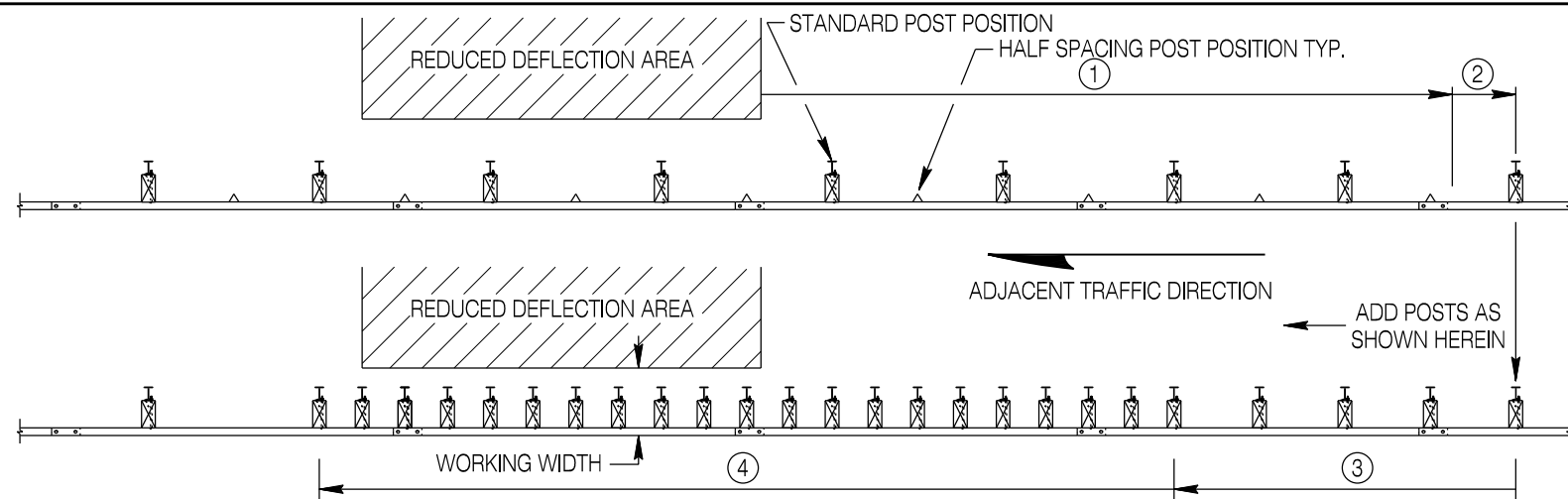
**PROVIDE ADDITIONAL POSTS AT THE POST SPACING SPECIFIED BELOW:**

- ① Measure 12'-6" [3810] upstream of the area where the reduced deflection is desired.
- ② Continue upstream until reaching the next standard post location or a half post position location.
- ③ Provide spaces downstream from this position at half post spacing (3'-1 1/2" [950]). Continue with half post spaces until past the area of reduced deflection, before resuming standard spacing.

**GENERAL NOTE:**

Use standard 6' - 0" [1830] long posts, wood or steel unless specified otherwise.

**MGS HALF POST SPACING - PROVIDES A WORKING WIDTH DOWN TO 4'-0" [1220]**



**PROVIDE ADDITIONAL POSTS AT THE POST SPACING SPECIFIED BELOW:**

- ① Measure 25 feet [7620] upstream of the area where the reduced deflection is desired.
- ② Continue upstream until reaching the next standard post location or a half post position location.
- ③ Provide 4 spaces downstream from this position at half post spacing (3'-1 1/2" [950]).
- ④ Provide spaces downstream of this position at quarter post spacing (18 3/4" [475]). Continue with quarter post spacing until past the area of reduced deflection, before resuming standard spacing.

**GENERAL NOTE:**

Use standard 6' - 0" [1830] long posts, wood or steel unless specified otherwise. Factory punch holes at quarter post spacing in rail.

**MGS QUARTER POST SPACING - PROVIDES A WORKING WIDTH DOWN TO 3'-0" [915]**

**GENERAL NOTE:**

- ① Requirements on SHEET 5 apply herein except where in conflict with these details.

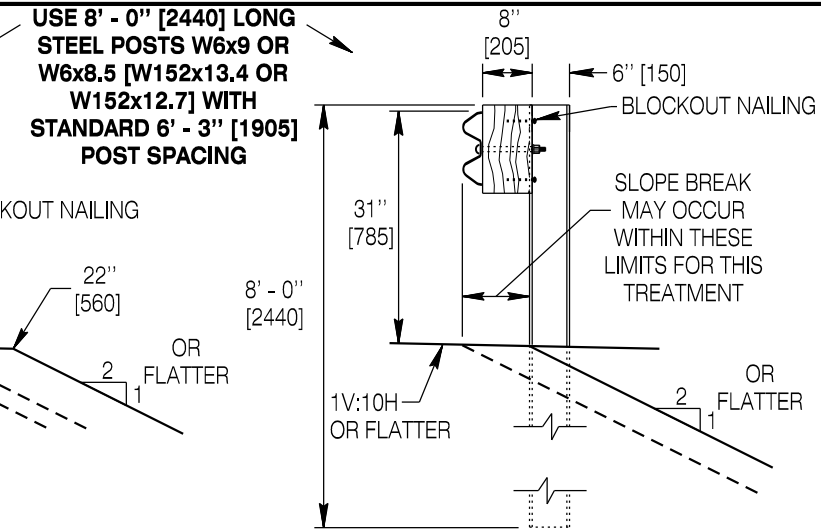
Designed by: WBW  
 Drawn by: RCS  
 Checked by: WBW  
 Previous Dwg. No. 606-2

MGS HALF POST SPACING, MGS QUARTER POST SPACING,  
 MGS LONG POST-CONSTRICTED SLOPE GRADING, MGS 8" [205] BLOCKS

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



WYOMING DEPARTMENT  
 OF  
 TRANSPORTATION



**SLOPE BREAK OCCURS -6" [-150] TO 22" [560] FROM BACK OF POST**

Use 8' - 0" [2440] Steel Posts and 12" [305] Blockouts.

**SLOPE BREAK OCCURS IN FRONT OF POST**

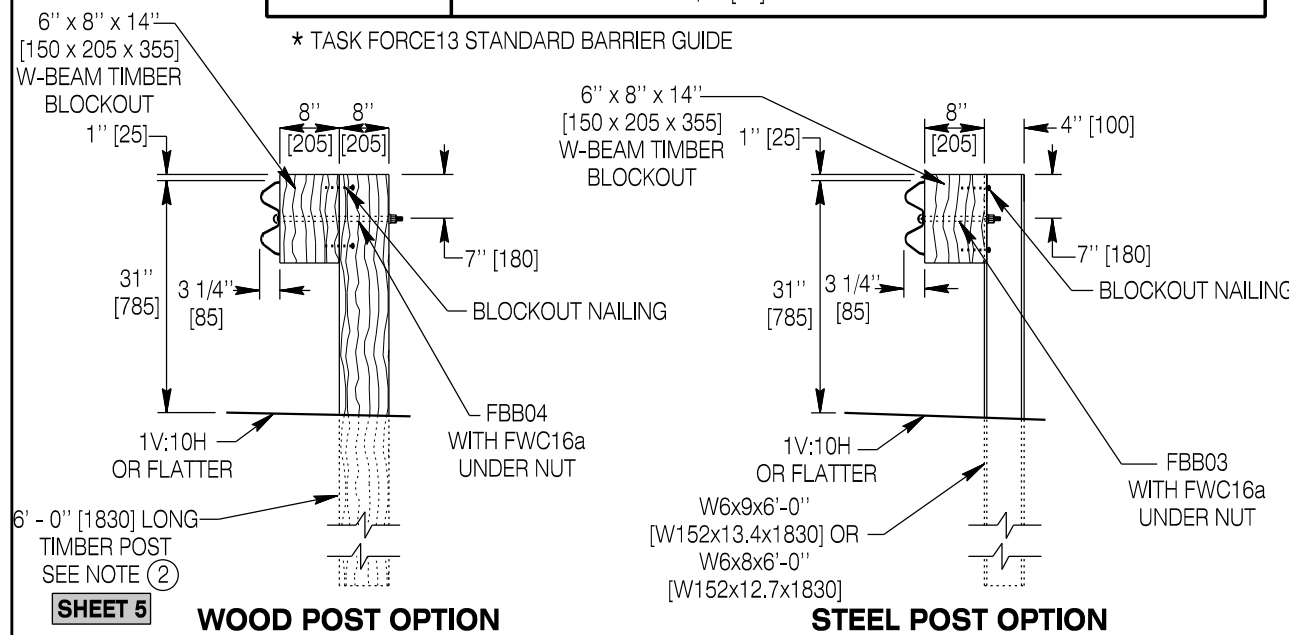
Use 8' - 0" [2440] Steel Posts and 8" [205] Blockouts. Do not place post so the rail face is beyond the slope break line.

**MGS LONG POST - CONSTRICTED SLOPE GRADING**

For locations where the slope break point is less than 22" [560] behind the guardrail posts.

STANDARD GUARDRAIL BOLTS	
*DESIGNATOR	
FBB03	5/8" x 10" [16 x 255] BUTTON HEAD GUARDRAIL BOLT WITH WASHER UNDER NUT
FBB04	5/8" x 18" [16 x 455] BUTTON HEAD GUARDRAIL BOLT WITH WASHER UNDER NUT
FWC16a	ROUND WASHER FOR 5/8" [16] GUARDRAIL BOLT

\* TASK FORCE13 STANDARD BARRIER GUIDE



**WOOD POST OPTION**

**STEEL POST OPTION**

**MGS 8" [205] BLOCKS**

To be used only when specified on narrow roadways where 12" [305] blockouts will not fit!

STANDARD PLAN NUMBER

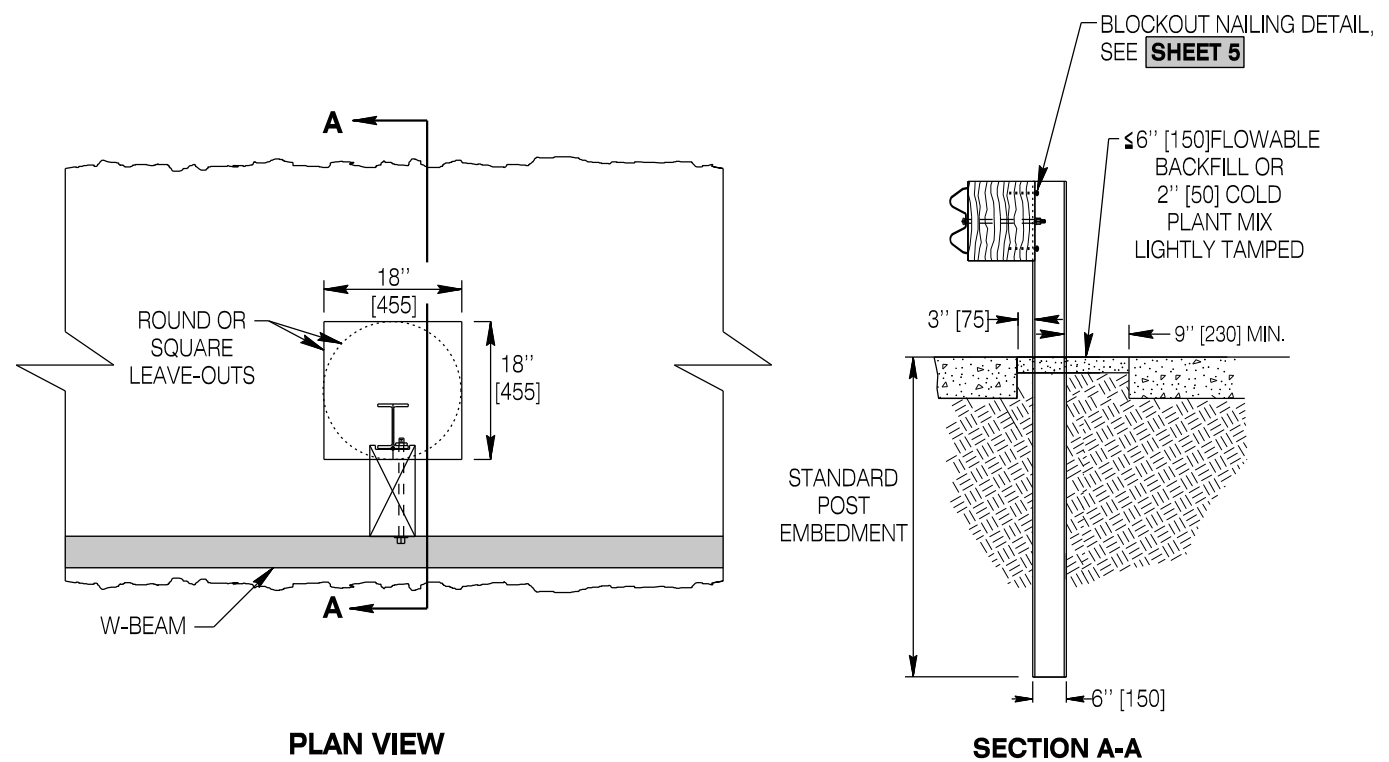
**606-2A**

SHEET 15 of 16

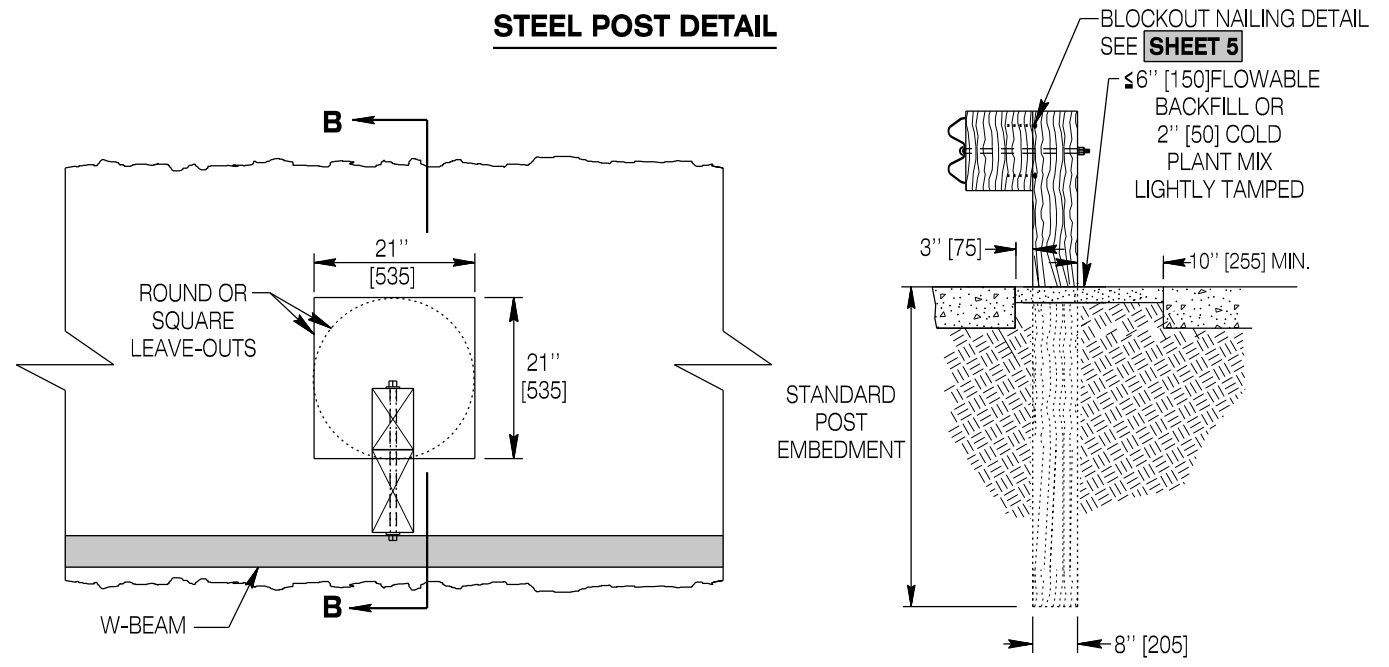
Issued by: ENGINEERING SERVICES  
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**MGS GUARDRAIL**

STANDARD PLAN

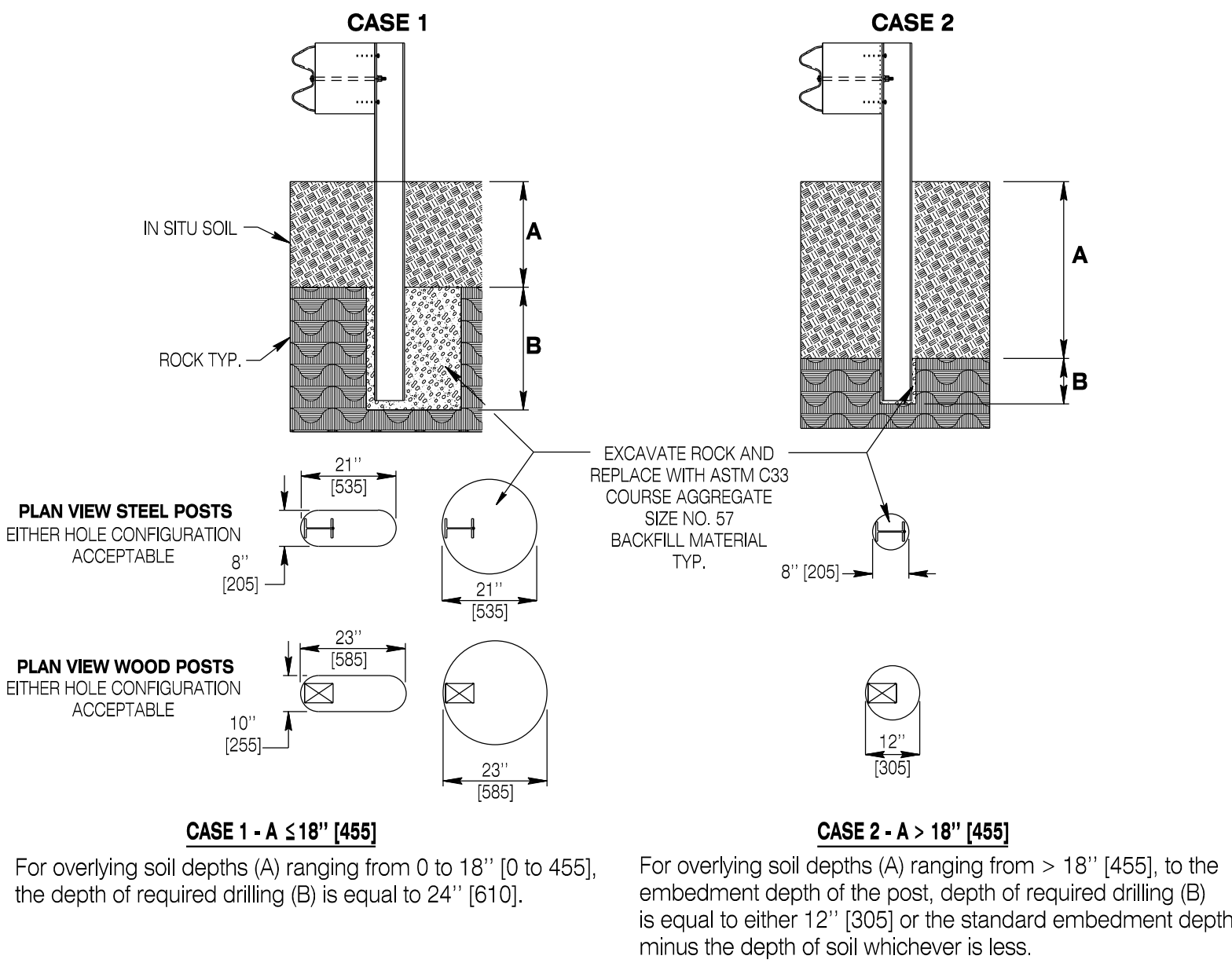


**PLAN VIEW**  
**STEEL POST DETAIL**



**PLAN VIEW**  
**WOOD POST DETAIL**

**POST PLACEMENT IN ASPHALT OR CONCRETE PAVEMENTS**



**PLAN VIEW STEEL POSTS**  
EITHER HOLE CONFIGURATION ACCEPTABLE

**PLAN VIEW WOOD POSTS**  
EITHER HOLE CONFIGURATION ACCEPTABLE

**CASE 1 - A ≤ 18" [455]**

For overlying soil depths (A) ranging from 0 to 18" [0 to 455], the depth of required drilling (B) is equal to 24" [610].

**CASE 2 - A > 18" [455]**

For overlying soil depths (A) ranging from > 18" [455], to the embedment depth of the post, depth of required drilling (B) is equal to either 12" [305] or the standard embedment depth minus the depth of soil whichever is less.

**POSTS IN ROCK**

Designed by: WBW
Drawn by: RCS
Checked by: WBW
Previous Dwg. No. 606-2

**POST PLACEMENT IN PAVEMENTS AND ROCK**

Note: Units shown in brackets [ ] are metric and are in millimeters (mm) unless other units are shown.



**MGS GUARDRAIL**  
**STANDARD PLAN**

STANDARD PLAN NUMBER
<b>606-2A</b>
SHEET 16 of 16
Issued by: ENGINEERING SERVICES
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