

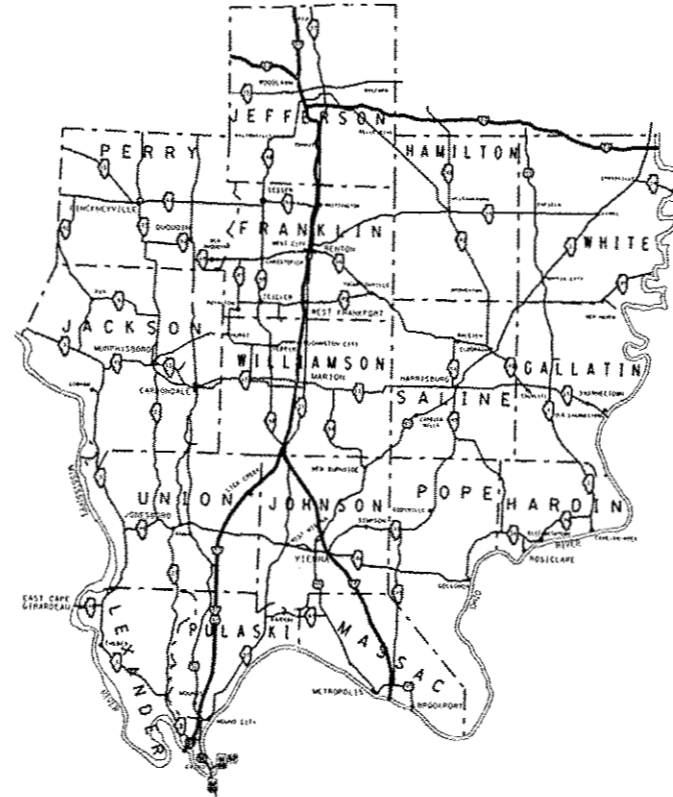
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D9 GUARDRAIL REPAIR FY18-1	VARIOUS	ILLINOIS	20	1
ILLINOIS			CONTRACT NO. 78573	

FOR INDEX OF SHEETS, SEE SHEET NO. 3  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5

**PROPOSED  
HIGHWAY PLANS**  
VARIOUS ROUTES  
SECTION D9 GUARDRAIL REPAIR FY18-1  
GUARDRAIL REPAIR  
VARIOUS COUNTIES

C-99-024-17



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

PROJECT ENGINEER : SUSAN POE  
PROJECT DESIGNER : JARED HARP

CONTRACT NO. 78573

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 15 20 17

Jeffrey A. Keiser  
REGION FIVE ENGINEER

Maureen M. Addis P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Maureen M. Addis 2  
DIRECTOR OF PROGRAM DEVELOPMENT

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



# INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SIGNATURE SHEET
3	INDEX OF SHEETS, STANDARDS
4	GENERAL NOTES
5 - 7	SUMMARY OF QUANTITIES
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15 -17	TRAFFIC BARRIER TERMINAL, TYPE 6A STANDARD INSTALLED PRIOR TO JANUARY 1, 2007
18 - 19	TRAFFIC BARRIER TERMINAL, TYPE 6B STANDARD INSTALLED PRIOR TO JANUARY 1, 2007
20	CRASH-CUSHION ATTENUATING TERMINAL (C-A-T)

# LIST OF STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND A FOOT
630001-11	STEEL PLATE BEAM GUARDRAIL
630006	NON-BLOCKED STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
631033-07	TRAFFIC BARRIER TERMINAL, TYPE 6B
635001-02	DELINEATORS
643001-02	SAND MODULE IMPACT ATTENUATORS
664001-02	CHAIN LINK FENCE
665001-02	WOVEN WIRE FENCE
701001-02	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF ROAD OPERATIONS, 2L, 2W, 15' TO 24N FROM PAVEMENT EDGE
701011-04	OFF ROAD OPERATIONS, 2L, 2W, DAY ONLY
701101-05	OFF ROAD OPERATIONS, MULTILANE, 15' TO 24N FROM PAVEMENT EDGE
701106-02	OFF ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS GREATER OR EQUAL TO 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TERM OPERATIONS
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY FOR SPEEDS GREATER OR EQUAL TO 45 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701456-04	PARTIAL EXIT RMAP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-07	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W AND 2W WITH NONTRAVERSABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-06	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS &amp; LIST OF STANDARDS</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\11\084EBIDINTEG.illinois.gov\PIWDD\Documents\DOT Offices\District 9\Projects\Geometric Data\guardrail.dgn	DRAWN	CHECKED -	REVISED -					VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	3
Default	PLOT SCALE = 100.0000' / 1in.	DATE -	REVISED -		CONTRACT NO. 78573			ILLINOIS FED. AID PROJECT				
	PLOT DATE = 2/21/2017	DATE -	REVISED -		SCALE:	SHEET OF SHEETS	STA. TO STA.					

# GENERAL NOTES

BEFORE ORDERING THE IMPACT ATTENUATORS, THE CONTRACTOR MUST CONTACT THE RESIDENT ENGINEER RECEIVE APPROVAL OF THE PROPOSED INSTALLATION.

ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT PLANS AND PROVISIONS.

THE LOCATIONS OF THE REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER.

GUARDRAIL WORK WILL INCLUDE ALIGNMENT AS NECESSARY TO RESTORE THE RAIL TO THE ORIGINAL CONDITIONS.

REMOVAL OF DAMAGED MATERIALS WILL INCLUDE DISMANTLING, LOADING, HAULING AND DISPOSAL. THE WORK SITE WILL BE LEFT IN A SAFE AND ORDERLY CONDITION.

THE LIMITS OF THE DAMAGED GUARDRAIL WILL BE MARKED WITH PAINT. THE REPLACEMENT PARTS AND THE QUANTITIES INDICATED ARE WITHIN THESE LIMITS AS MARKED.

REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME.

GUARDRAIL MARKERS SHALL BE ATTACED TO TERMINAL SECTIONS. ALL OTHER MARKERS SHALL BE PLACED AT THE DISCRETION OF THE ENGINEER.

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. (PHONE: 800 892-0123) OR FOR NON-MEMBER, THE UTILITY COMPANY DIRECTLY.

NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.

THE CONTRACTOR SHALL BE ADVISED THAT THE GUARDRAIL PAY ITEMS INCLUDED IN THE PLANS MAY BE USED TO REPLACE/REPAIR SPBGR AND TRAFFIC BARRIER TERMINALS FOR THE NEW MIDWEST STANDARD AS SHOWN ON THE HIGHWAY STANDARDS AS WELL AS SPBGR AND TRAFFIC BARRIER TERMINAL INSTALLED PRIOR TO JAN. 1, 2007 AS SHOWN IN THE PLAN DETAILS. NO ADDITONAL COMPENSATION WILL BE ALLOWED FOR UTILIZING THE CURRENT MIDWEST STANDARDS.

# COMMITMENTS

NONE

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES &amp; COMMITMENTS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
p:\11084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 9\Projects\Geometric\DRAWING\Geometrics\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	4	
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -			CONTRACT NO. 78573					
	PLOT DATE = 2/21/2017		REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO
						ILLINOIS FED. AID PROJECT					

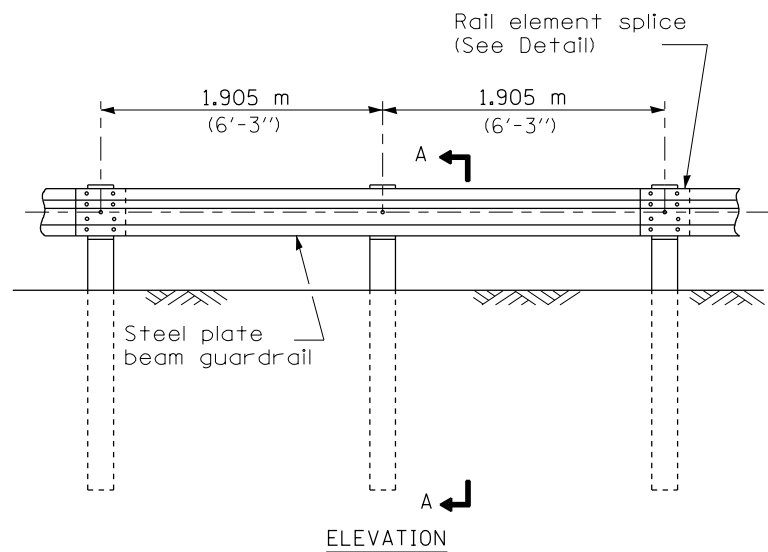
# SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	VARIOUS	VARIOUS	VARIOUS
				ROUTE:	VARIOUS	VARIOUS	VARIOUS
				FUNDING:	100% STATE	100% STATE	100% STATE
				LOCATION:	URBAN	URBAN	URBAN
					MCHD 0021	HIT AND RUN 0021	HIGH TENSION CABLE GUARDRAIL 0021
25000100	SEEDING, CLASS 1	ACRE	5.5		4	1	0.5
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	80		60	20	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	5		5		
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4		3	1	
64401300	HIGH TENSION CABLE MEDIAN BARRIER TERMINALS	EACH	3				3
67100100	MOBILIZATION	LSUM	1		0.75	0.15	0.10
X0325899	REPAIR HIGH TENSION CABLE (GIBALTAR)	FOOT	100				100
X0325900	REPAIR HIGH TENSION BARRIER TERMINAL (GIBALTAR)	EACH	2				2
X0325902	REMOVE AND REPLACE POSTS (GIBALTAR)	EACH	20				20
X0326201	REPAIR HIGH TENSION CABLE (TRINITY)	FOOT	100				100
X0326202	REPAIR POSTS (TRINITY)	EACH	20				20
X0326203	REPAIR HIGH TENSION CABLE SYSTEM END SECTION (TRINITY)	EACH	2				2



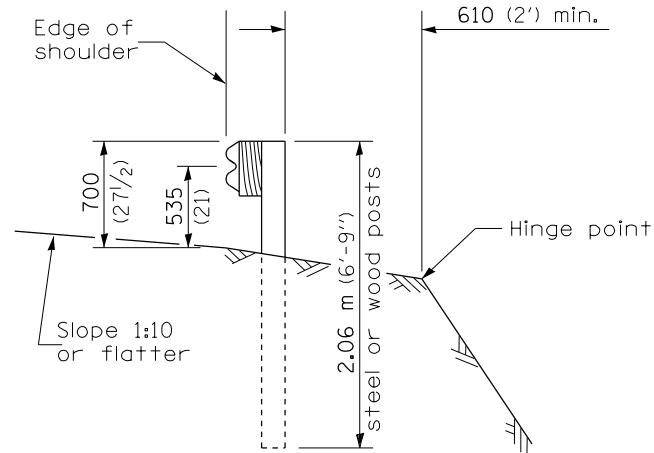
# SUMMARY OF QUANTITIES - CONT

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	VARIOUS	VARIOUS	VARIOUS
				ROUTE:	VARIOUS	VARIOUS	VARIOUS
				FUNDING:	100% STATE	100% STATE	100% STATE
				LOCATION:	URBAN	URBAN	URBAN
					MCHD	HIT AND RUN	HIGH TENSION CABLE GUARDRAIL
					0021	0021	0021
X6331110	STEEL POSTS, SPECIAL	EACH	2		2		
X6430210	REMOVE AND REINSTALL IMPACT ATTENUATORS	EACH	34		30	4	
X6640298	CHAIN LINK FENCE (SPECIAL)	FOOT	150		100	50	
X6650208	WOVEN WIRE FENCE REMOVAL AND REPLACEMENT	FOOT	100		100		
X7011834	TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	65		30	35	
X7011836	TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	68		30	35	3
Z0052410	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	22		10	12	
Z0052415	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	EACH	3		3		
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4		4		
Z0053210	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4		4		
Z0053220	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	4		4		

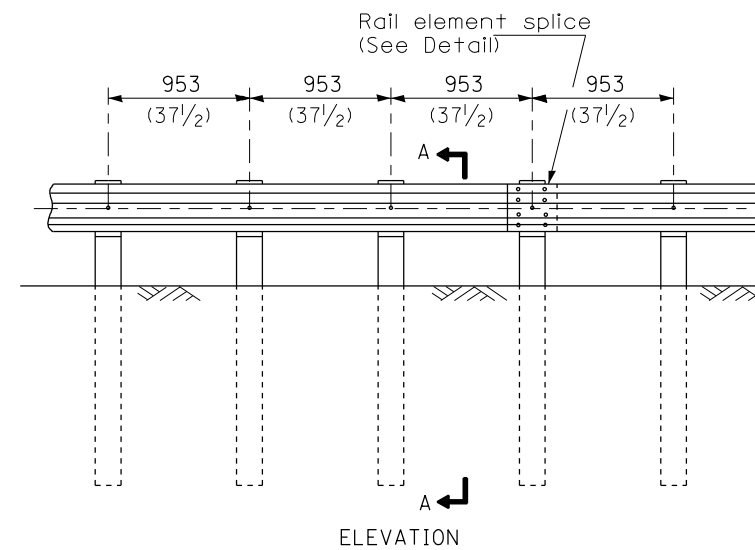


**TYPE A**

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

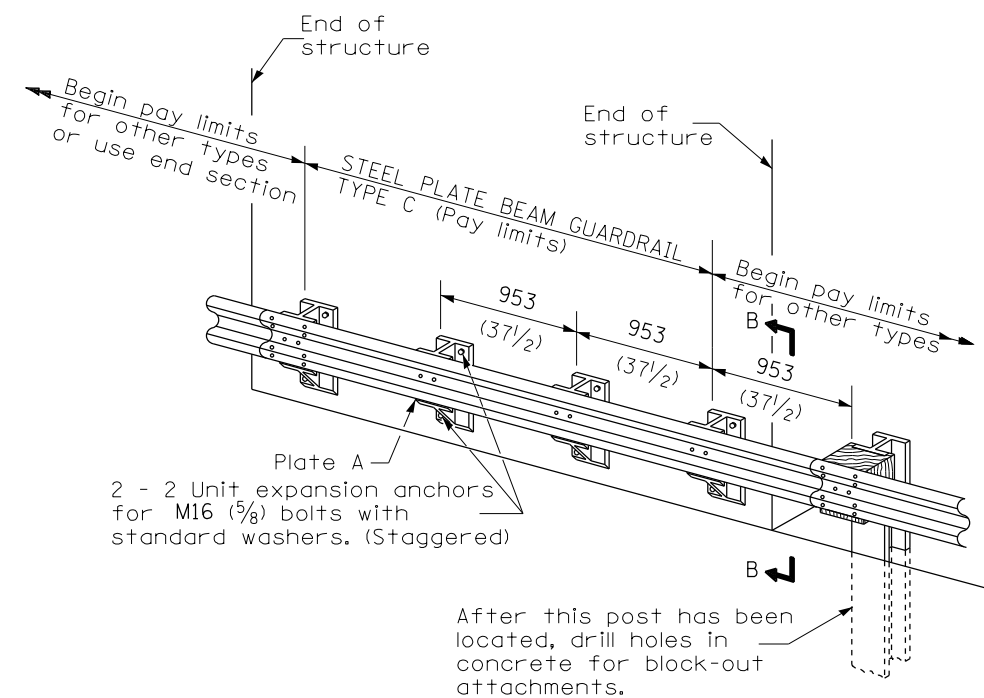


**SECTION A-A**



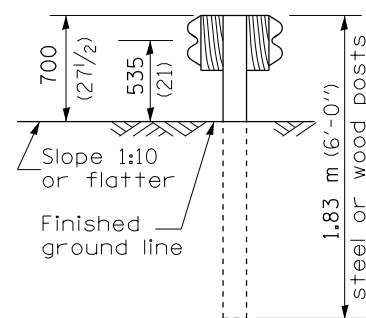
**TYPE B**

953 (37 1/2) Closed post spacing

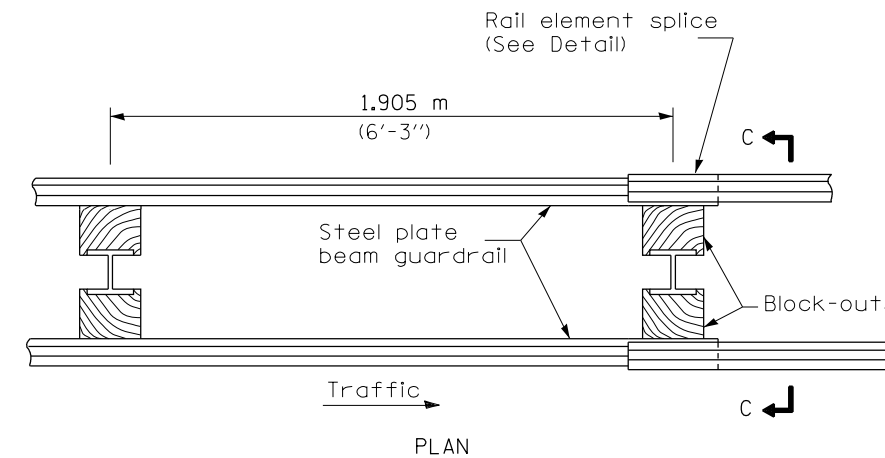


**TYPE C**

953 (37 1/2) Block-out spacing

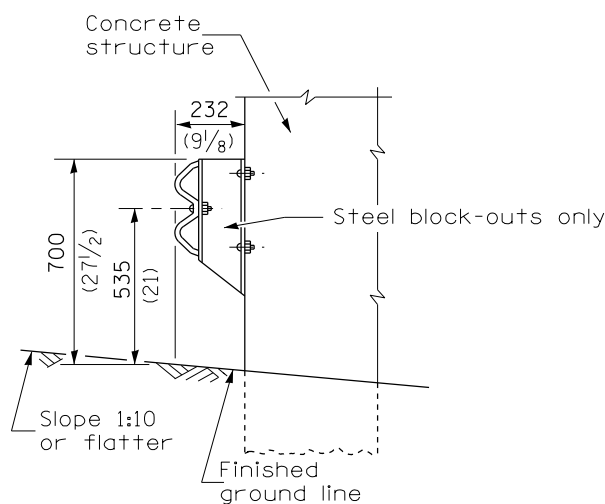


**SECTION C-C**



**TYPE D**

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



**SECTION B-B**

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL  
INSTALLED PRIOR TO JANUARY 1, 2007.

**GENERAL NOTES**

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

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

DATE	REVISIONS
4-1-06	Deleted plate washer F.
1-1-05	Rev. post in impervious material on sheet 4.

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 1 of 4)

**STANDARD 630001-06**

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -
p:\11\084EBID\INTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn		DRAWN -	REVISED -
Default	PLOT SCALE = 26.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 2/21/2017	DATE -	REVISED -

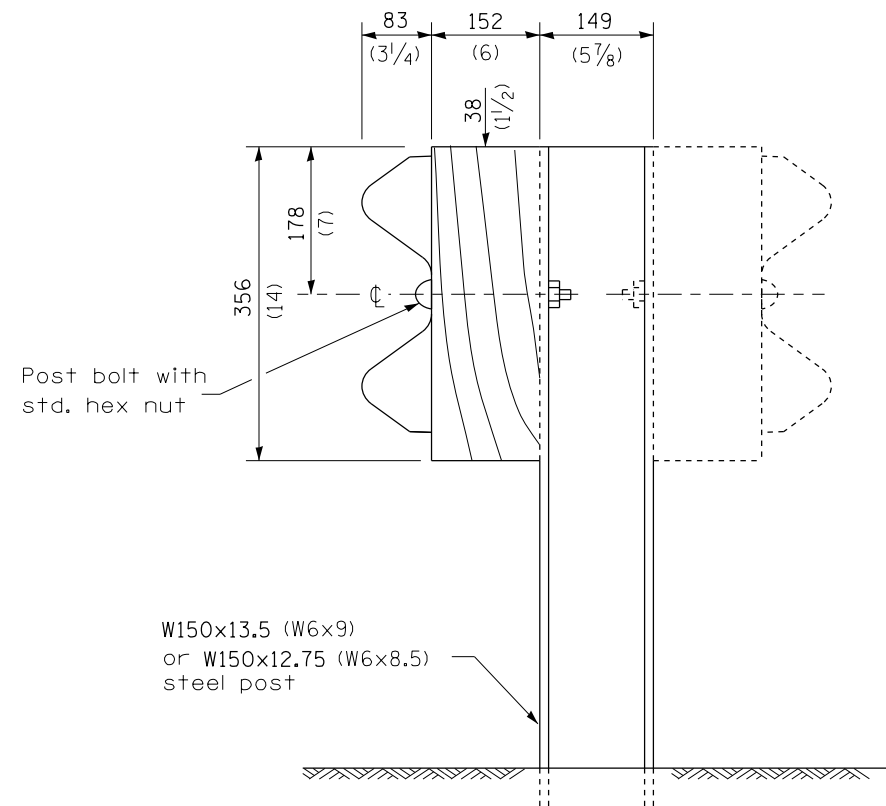
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STEEL PLATE BEAM GUARDRAIL STANDARD  
INSTALLED PRIOR TO JANUARY 1, 2007**

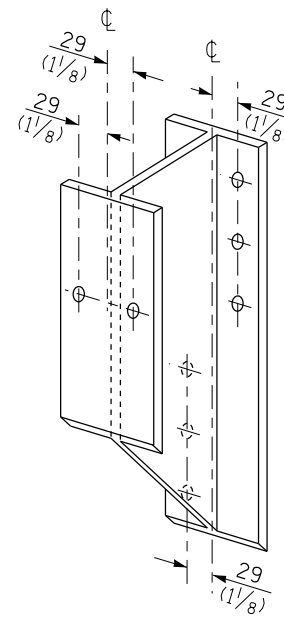
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	8
CONTRACT NO. 78573				
ILLINOIS FED. AID PROJECT				

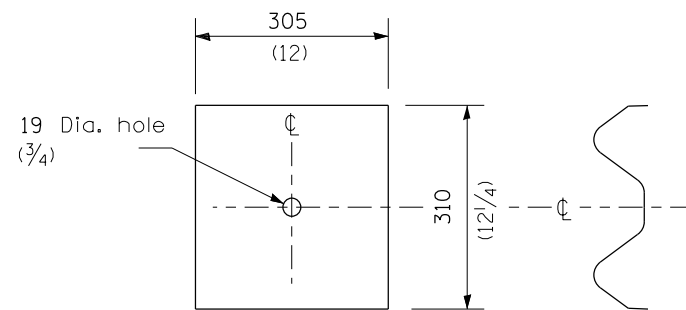




**STEEL POST CONSTRUCTION**



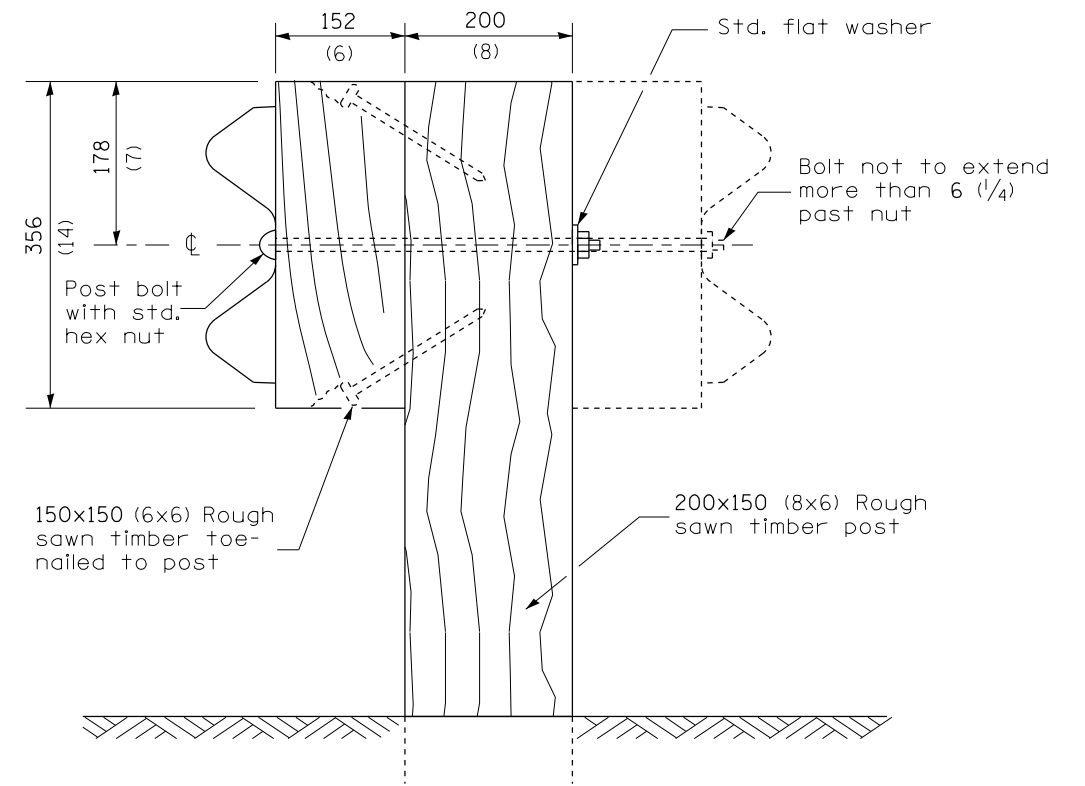
**STEEL BLOCK-OUT DETAIL**



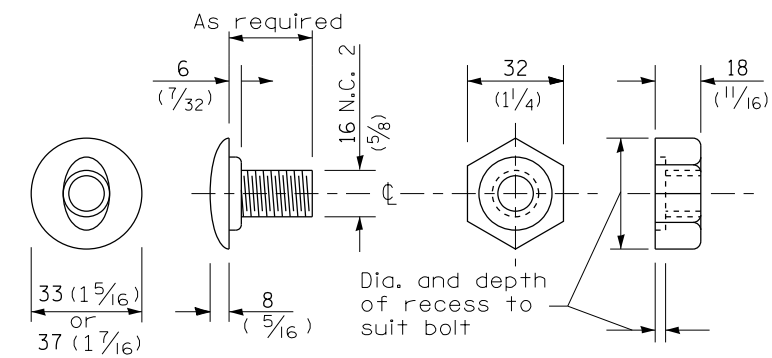
NOTE

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**



**WOOD POST CONSTRUCTION**



**POST OR SPLICE BOLT & NUT**

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

**STANDARD 630001-06**

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -
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Default	PLOT DATE = 2/21/2017	DATE -	REVISED -

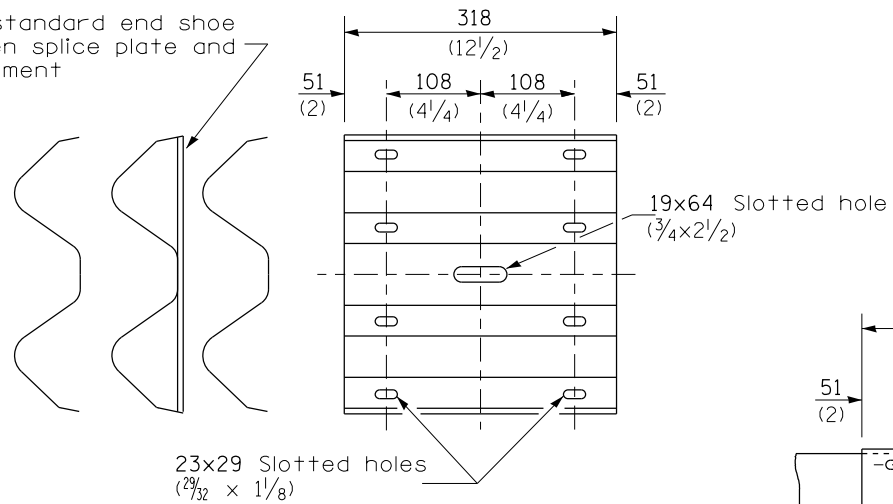
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STEEL PLATE BEAM GUARDRAIL STANDARD  
INSTALLED PRIOR TO JANUARY 1, 2007**

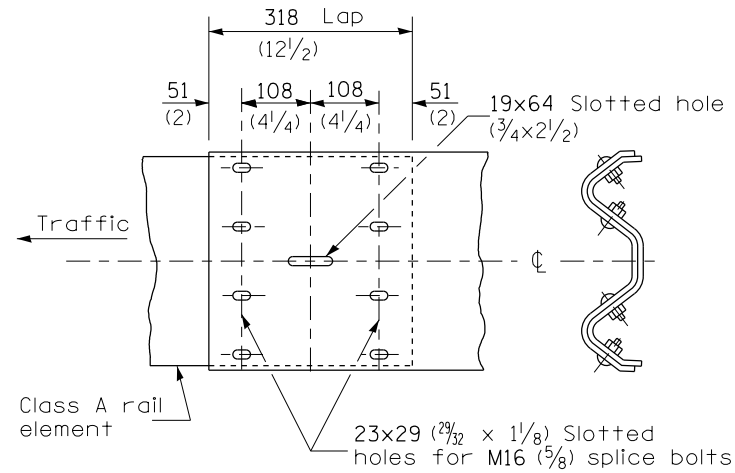
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	9
CONTRACT NO. 78573				
ILLINOIS FED. AID PROJECT				

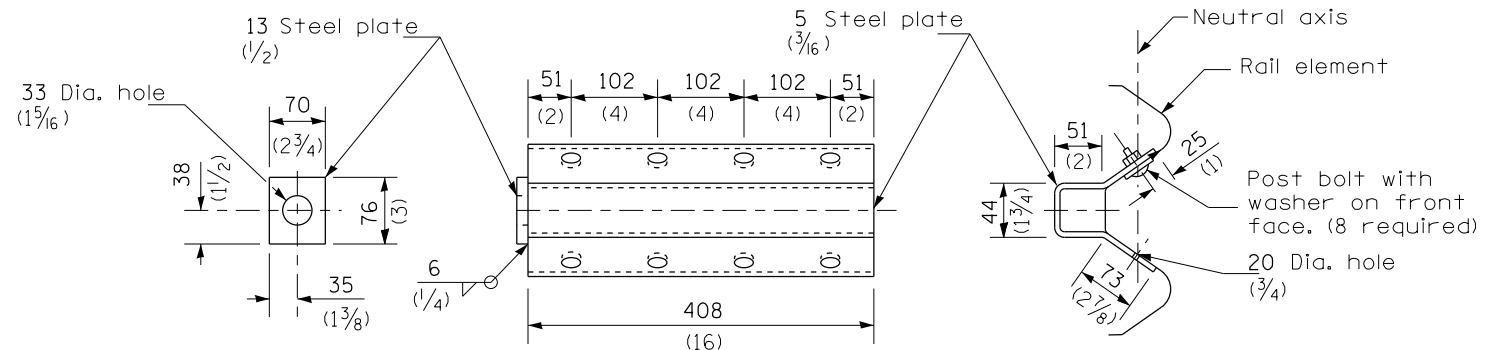
Place standard end shoe between splice plate and rail element



**SPLICE PLATE**

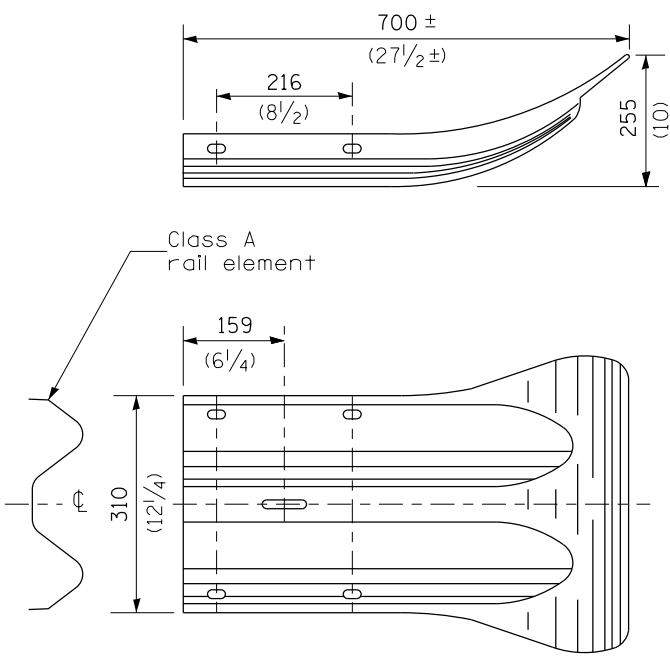


**RAIL ELEMENT SPLICE**

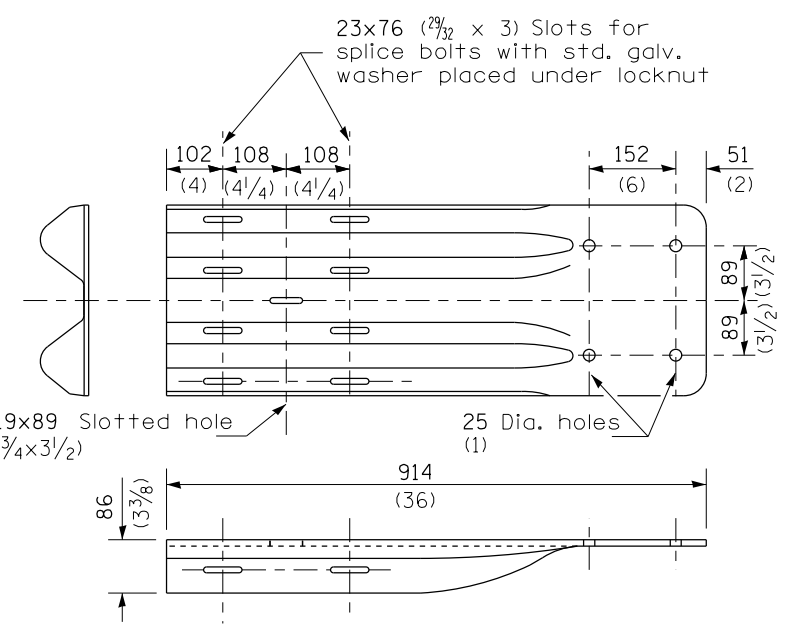


NOTE  
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

**ANCHOR PLATE T DETAILS**



**END SECTION**



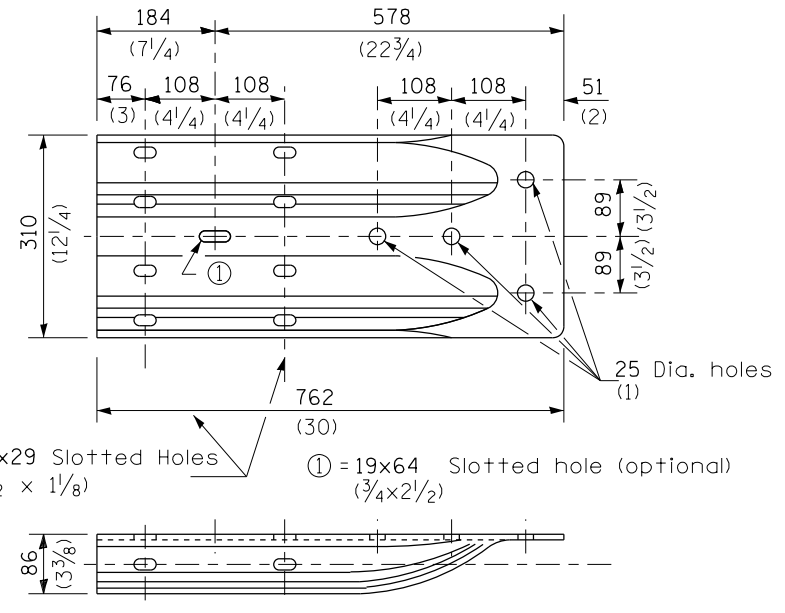
NOTE

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**

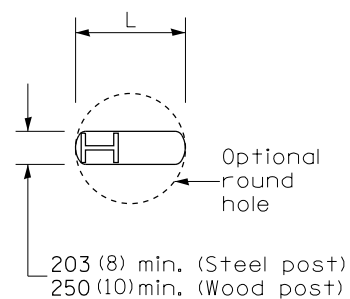
THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

**STEEL PLATE BEAM GUARDRAIL**

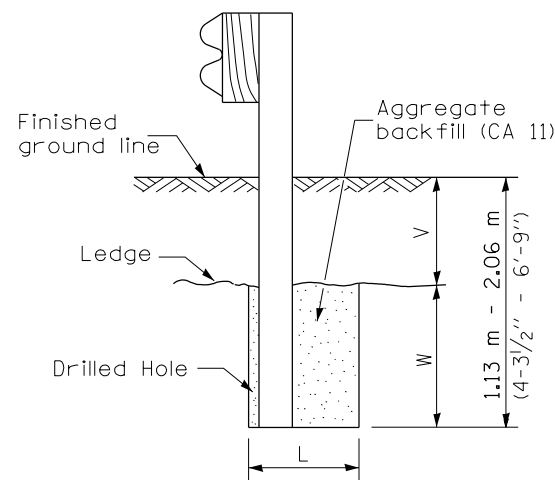
(Sheet 3 of 4)

**STANDARD 630001-06**

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STEEL PLATE BEAM GUARDRAIL STANDARD INSTALLED PRIOR TO JANUARY 1, 2007</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	10
PLOT SCALE = 26.0000' / in.		DATE -	REVISED -			CONTRACT NO. 78573				
Default						ILLINOIS FED. AID PROJECT				



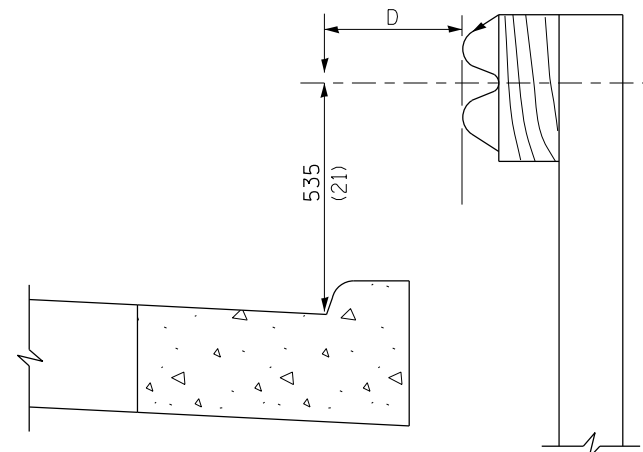
PLAN



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

ELEVATION

**FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED**

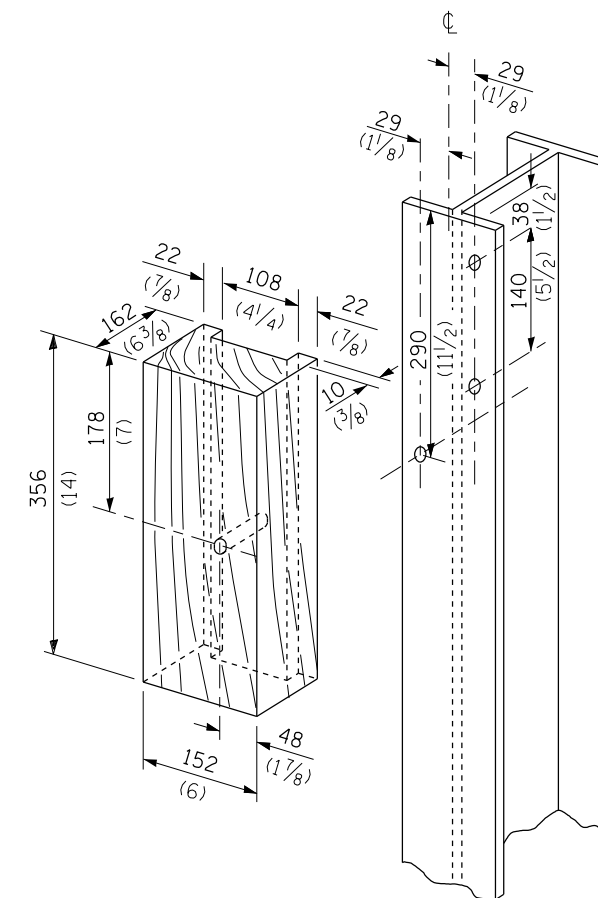


Note:

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.

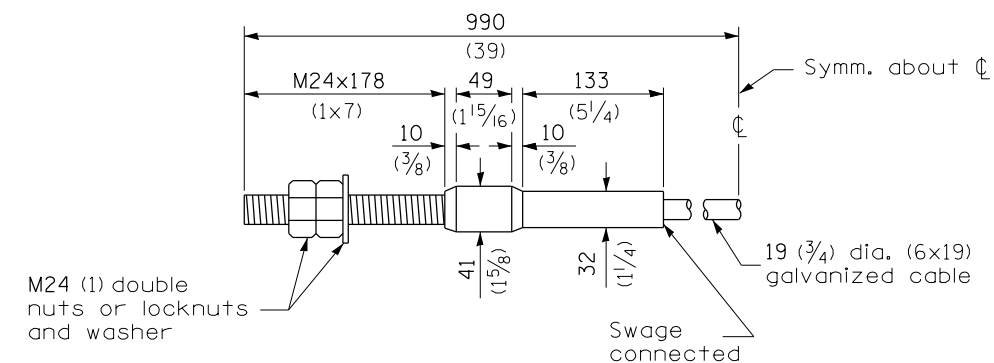
**GUARDRAIL PLACED BEHIND CURB**

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



**WOOD BLOCK-OUT AND STEEL POST DETAILS**

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.

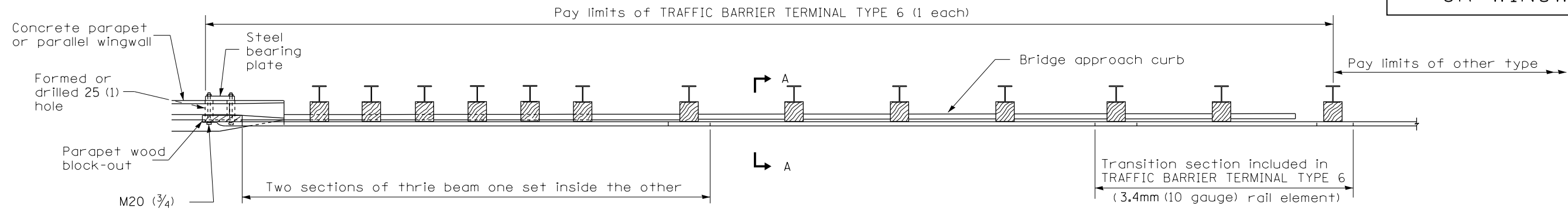
**STEEL PLATE BEAM GUARDRAIL**

(Sheet 4 of 4)

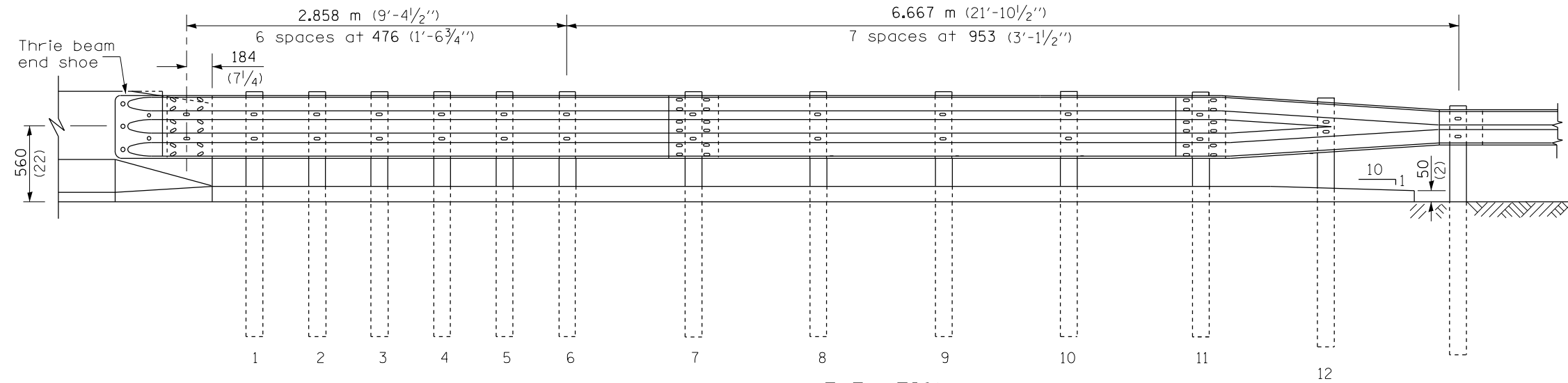
**STANDARD 630001-06**

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

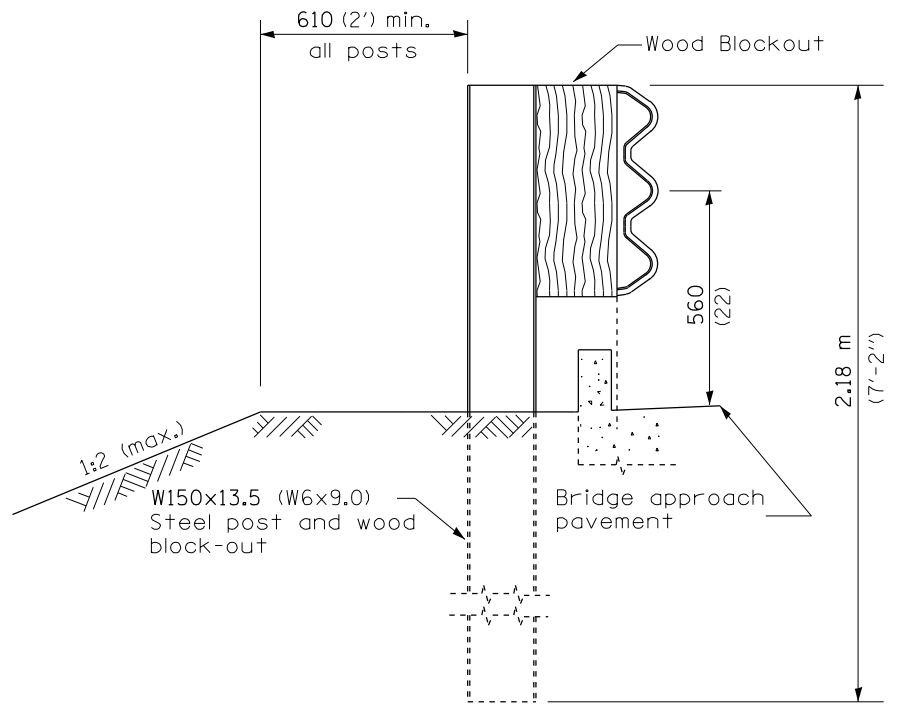
PARAPET  
OR WINGWALL



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.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL  
INSTALLED PRIOR TO JANUARY 1, 2007.

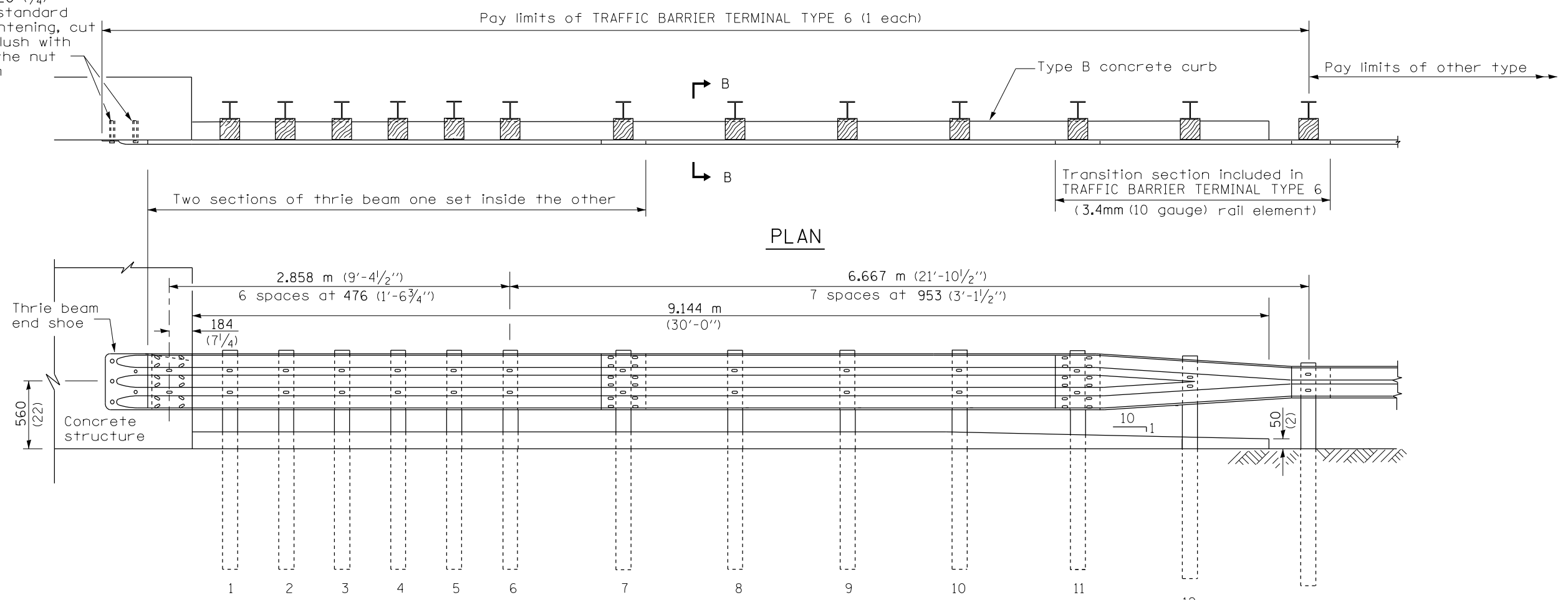
TRAFFIC BARRIER  
TERMINAL, TYPE 6

Sheet 1 of 3

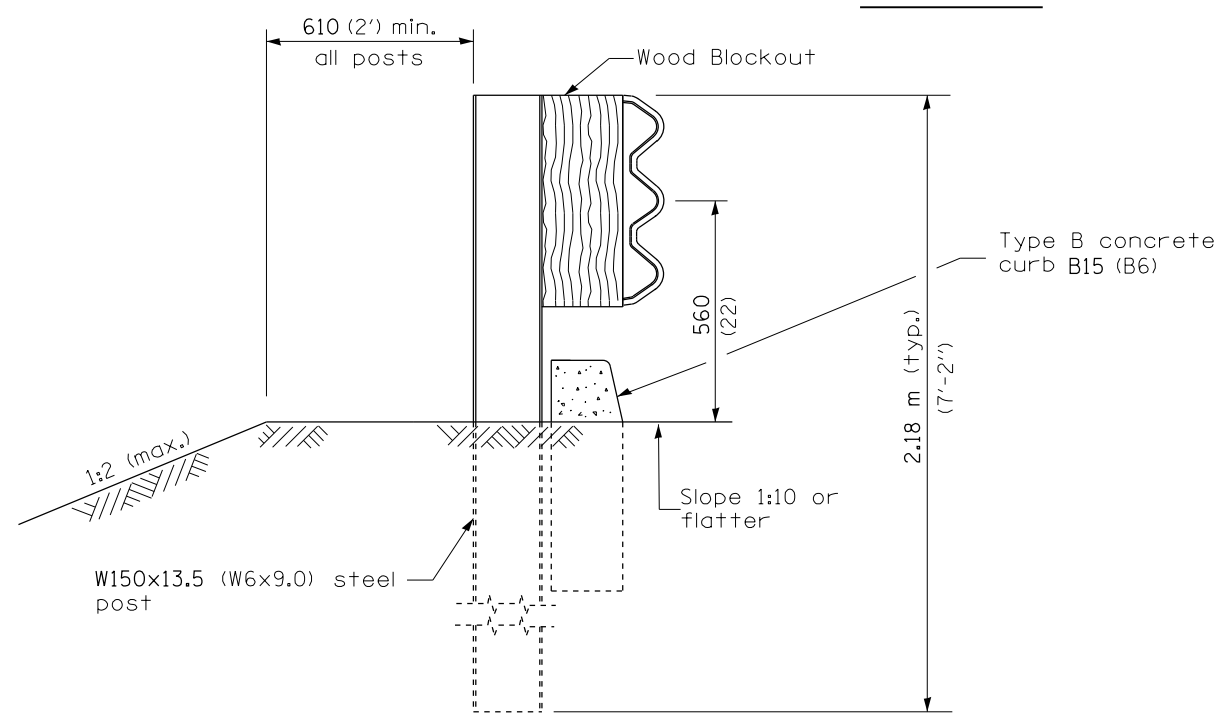
STANDARD 631031-05

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC BARRIER TERMINAL, TYPE 6 STANDARD INSTALLED PRIOR TO JANUARY 1, 2007</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
p:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	12	
PLOT SCALE = 26.0000' / in.		DATE -	REVISED -			CONTRACT NO. 78573					
Default						SCALE:	SHEET	OF	SHEETS	STA.	TO

5 Epoxy grouted M20 (3/4") anchor bolts with standard washers. After tightening, cut the anchor bolts flush with nuts, and damage the nut to prevent it from loosening.



ELEVATION



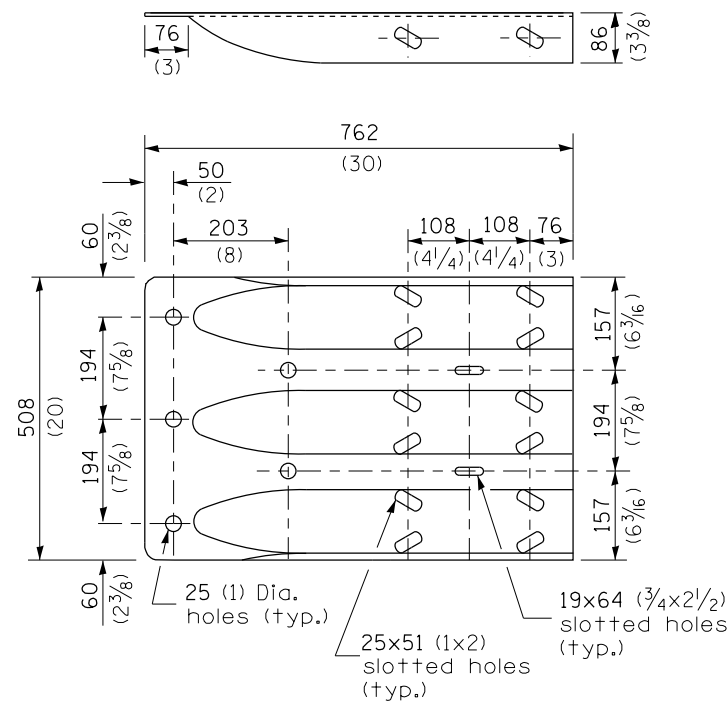
SECTION B-B

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

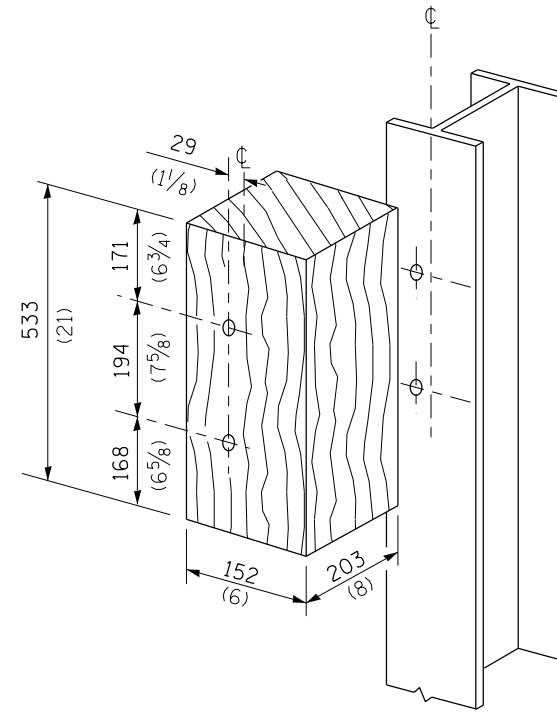
**TRAFFIC BARRIER TERMINAL, TYPE 6**  
Sheet 2 of 3

**STANDARD 631031-05**

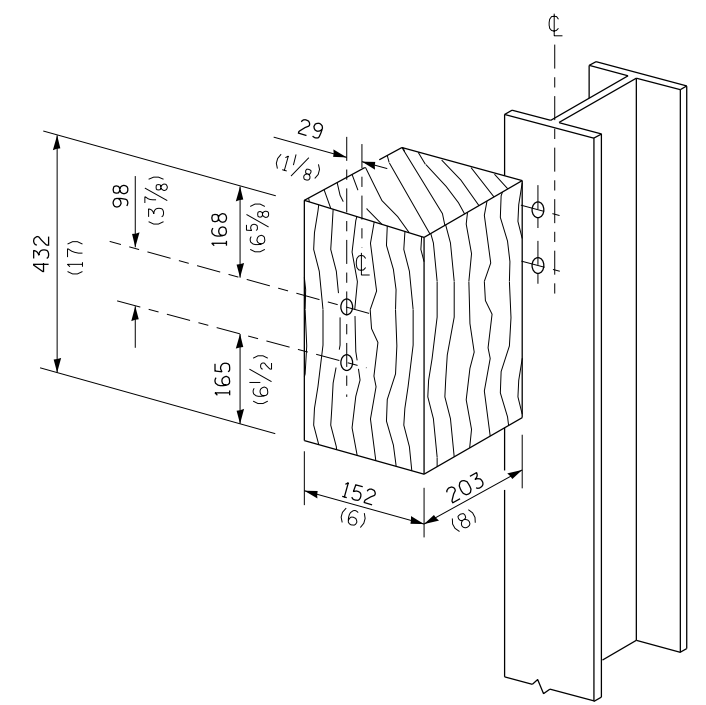
FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC BARRIER TERMINAL, TYPE 6 STANDARD INSTALLED PRIOR TO JANUARY 1, 2007</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	pw:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn	PLotted	REvised			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	13
	PLOT SCALE = 26.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 78573				
	PLOT DATE = 2/21/2017	DATE -	REVISED -	ILLINOIS FED. AID PROJECT						



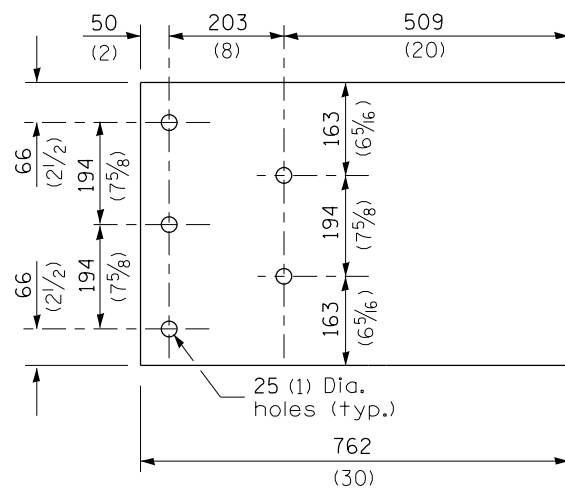
THRIE BEAM END SHOE DETAIL



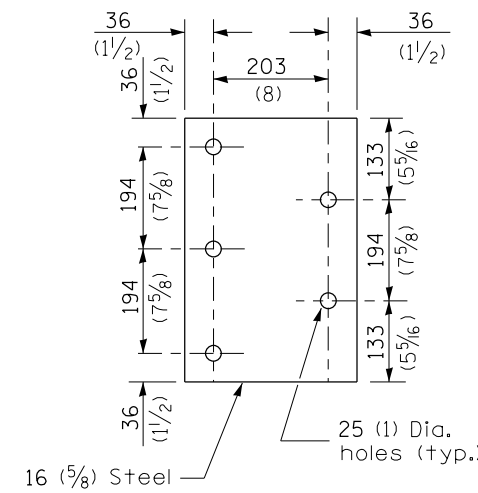
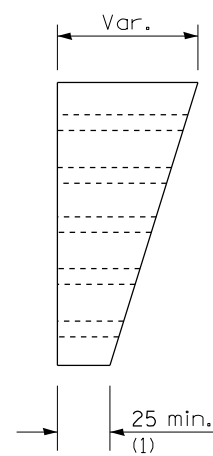
POSTS 1-11 WOOD BLOCKOUT DETAIL



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.)

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL  
INSTALLED PRIOR TO JANUARY 1, 2007.

TRAFFIC BARRIER  
TERMINAL, TYPE 6

Sheet 3 of 3

**STANDARD 631031-05**

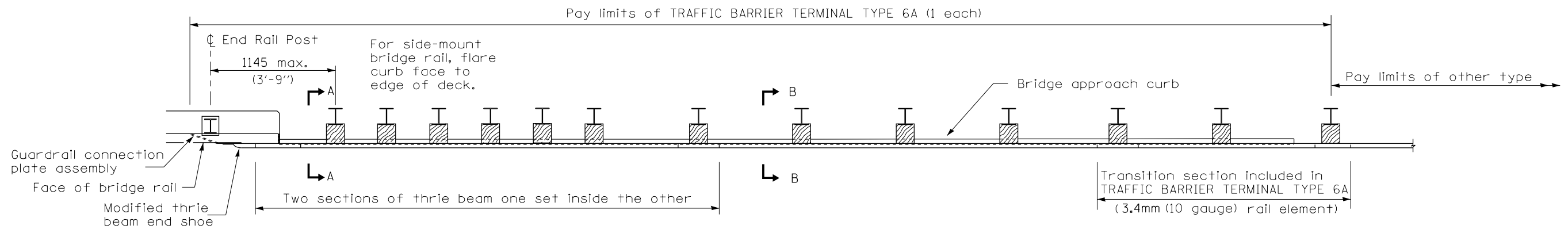
FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -
p:\11\084EBIDINTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn		CHECKED -	REVISED -
Default	PLOT DATE = 2/21/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

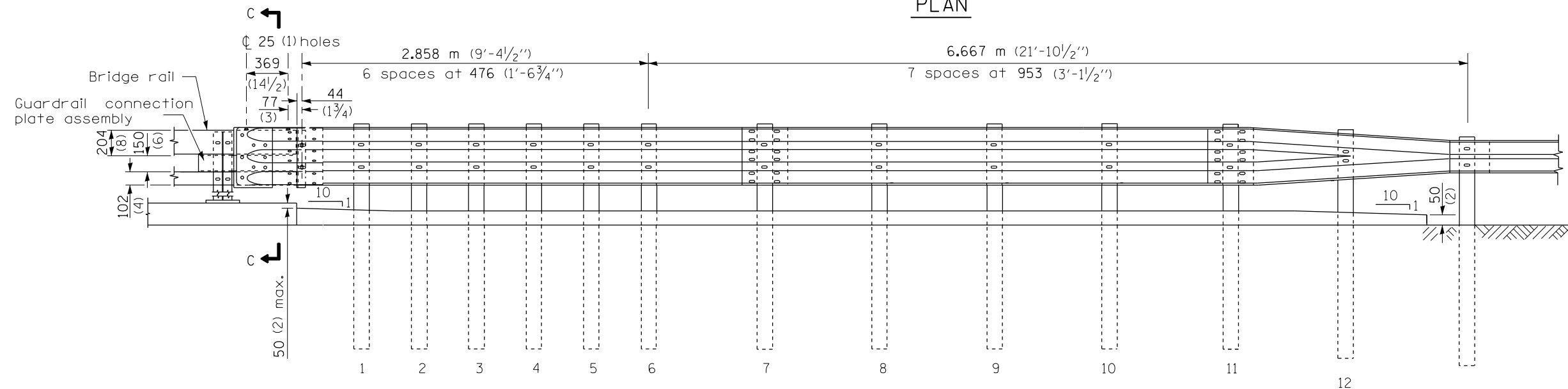
**TRAFFIC BARRIER TERMINAL, TYPE 6 STANDARD  
INSTALLED PRIOR TO JANUARY 1, 2007**

SCALE: SHEET OF SHEETS STA. TO STA.

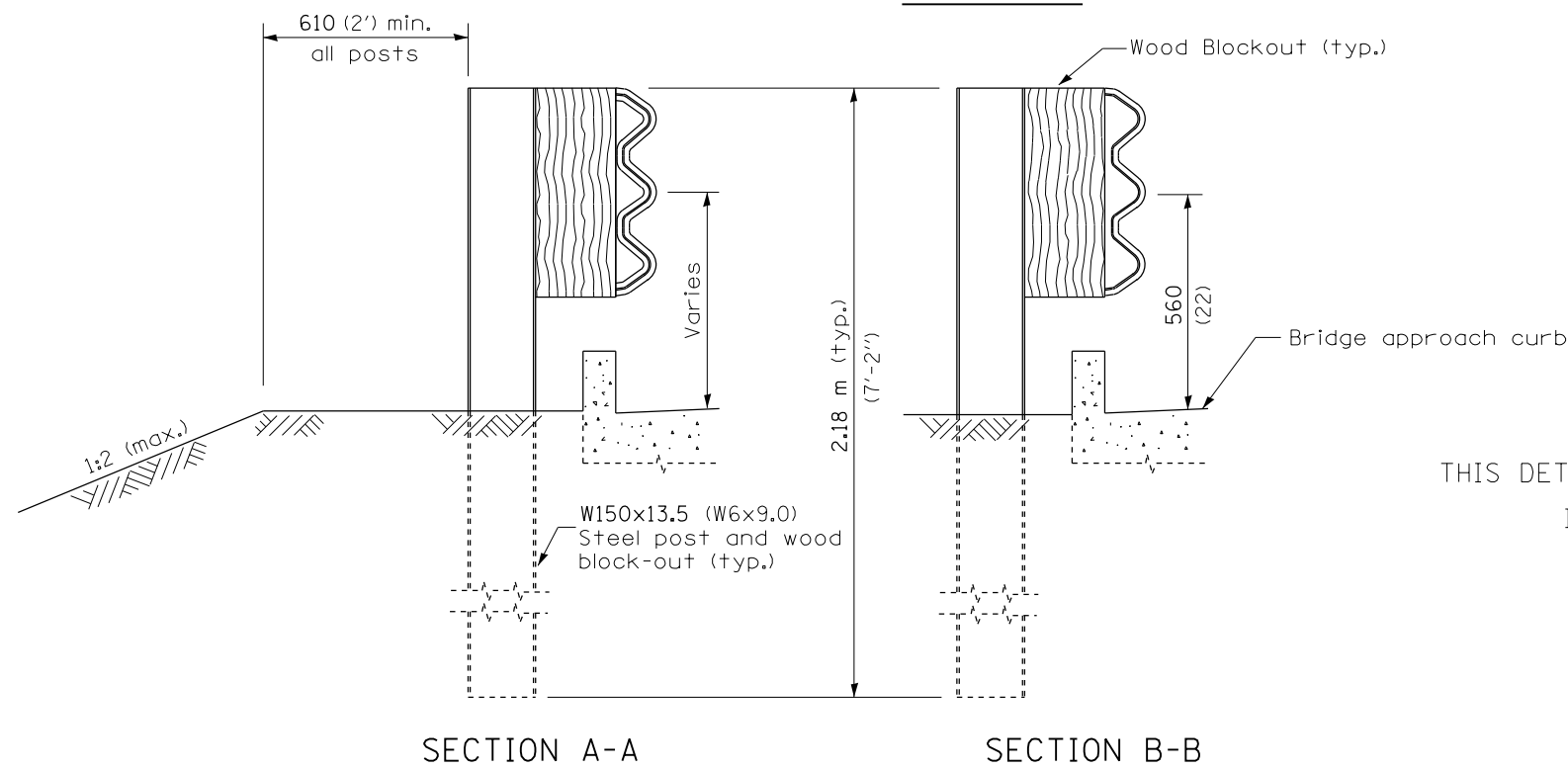
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	14
CONTRACT NO. 78573				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION



SECTION A-A

SECTION B-B

GENERAL NOTES

This standard shows attachment to curb mounted bridge rail. Attachment to side mounted bridge rail is similar.

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.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

DATE	REVISIONS
4-1-06	Added a General Note.
1-1-04	Revised bolts and bolt spacing in connection plate & wood blockouts.

TRAFFIC BARRIER TERMINAL, TYPE 6A

Sheet 1 of 3

STANDARD 631032-02

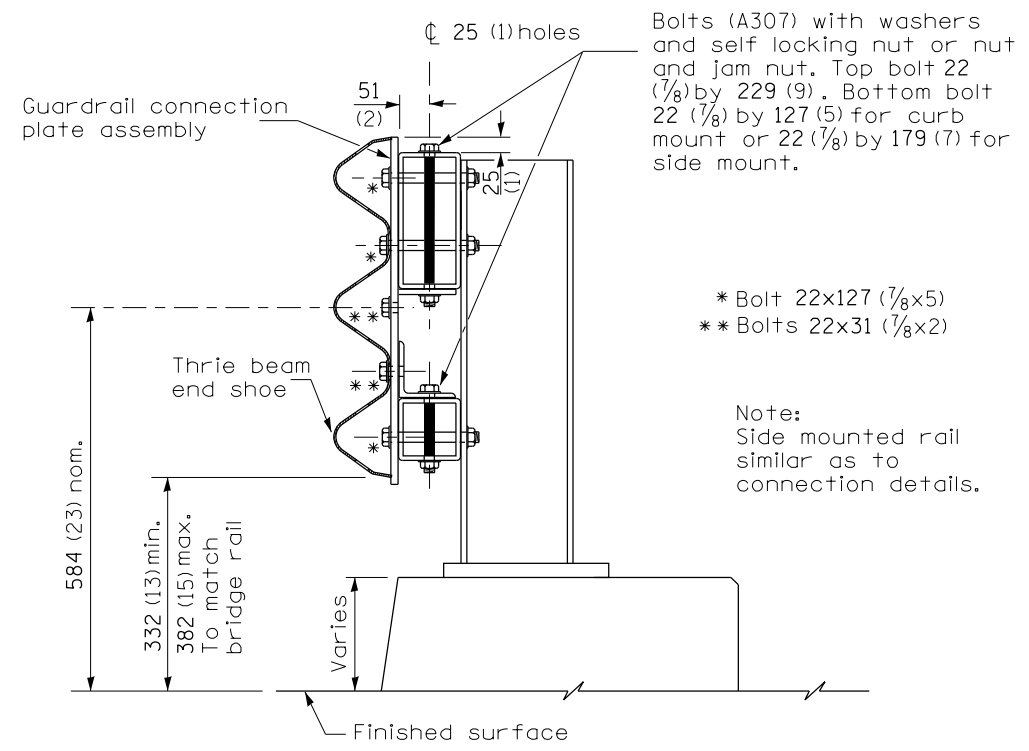
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Default	PLOT DATE = 2/21/2017	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

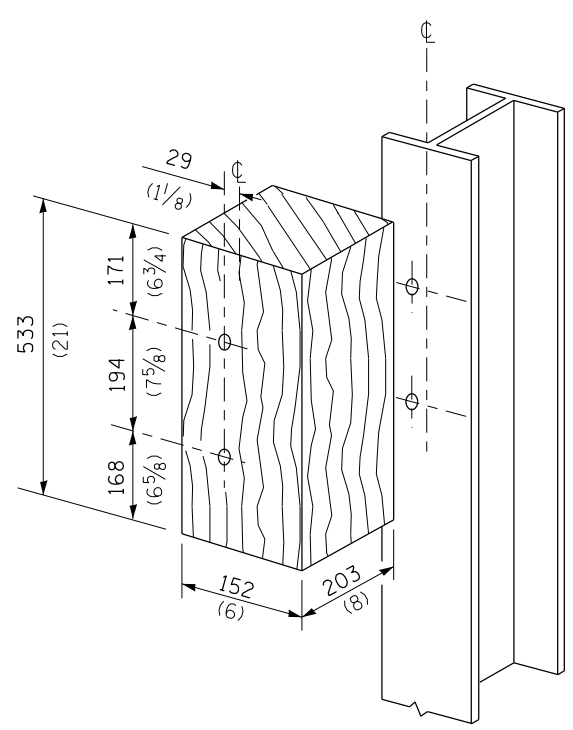
TRAFFIC BARRIER TERMINAL, TYPE 6A STANDARD  
INSTALLED PRIOR TO JANUARY 1, 2007

SCALE: SHEET OF SHEETS STA. TO STA.

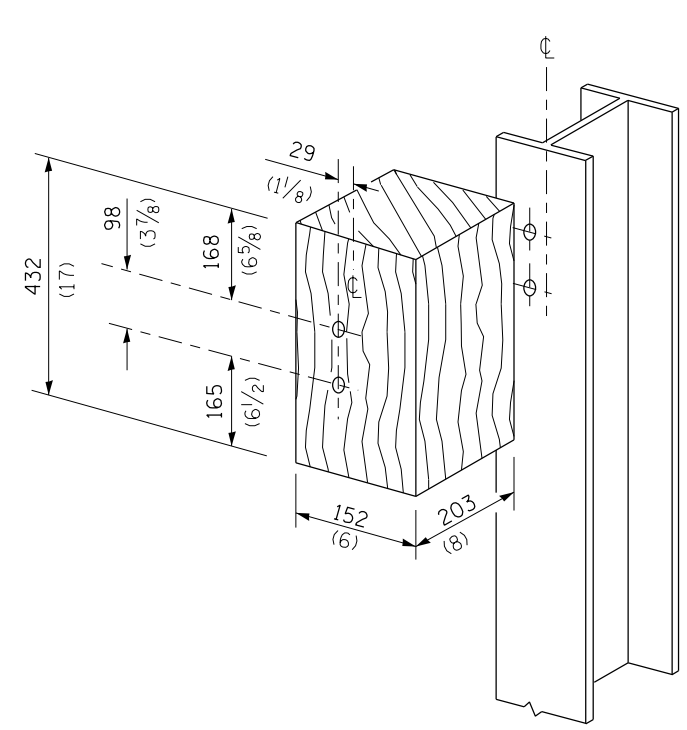
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	15
CONTRACT NO. 78573				
ILLINOIS FED. AID PROJECT				



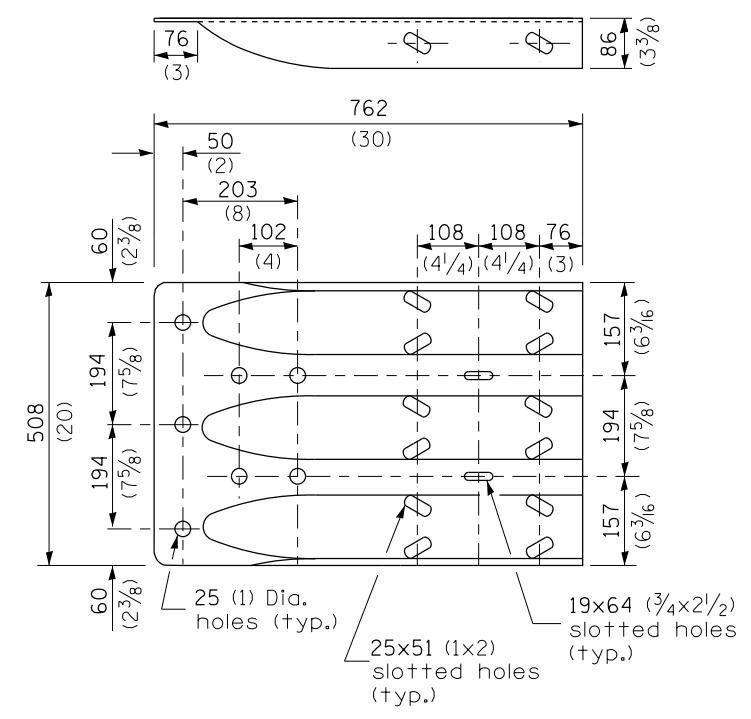
SECTION C-C



POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



MODIFIED THRIE BEAM END SHOE DETAIL

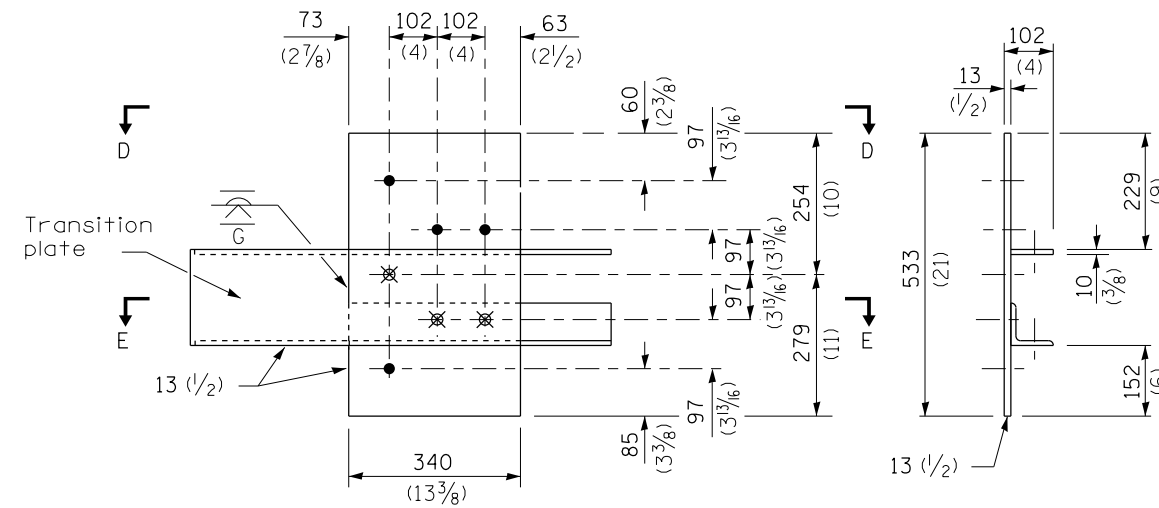
THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

**TRAFFIC BARRIER  
TERMINAL, TYPE 6A**  
Sheet 2 of 3

**STANDARD 631032-02**

FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC BARRIER TERMINAL, TYPE 6A STANDARD INSTALLED PRIOR TO JANUARY 1, 2007</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 9\Projects\Geometric\Drawings\Geometrics\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	16	
Default	PLOT SCALE = 26.0000' / in.	DATE -	REVISED -			CONTRACT NO. 78573			ILLINOIS FED. AID PROJECT		
	PLOT DATE = 2/21/2017					SCALE:	SHEET	OF	SHEETS	STA.	TO



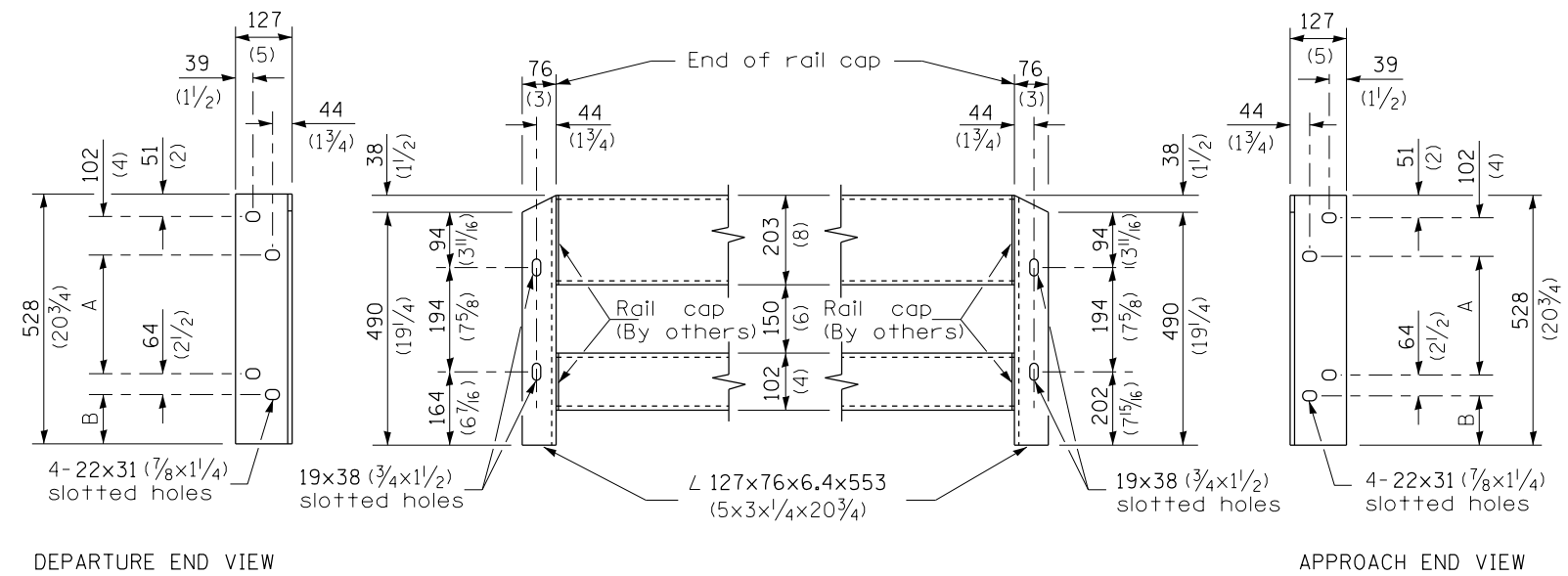
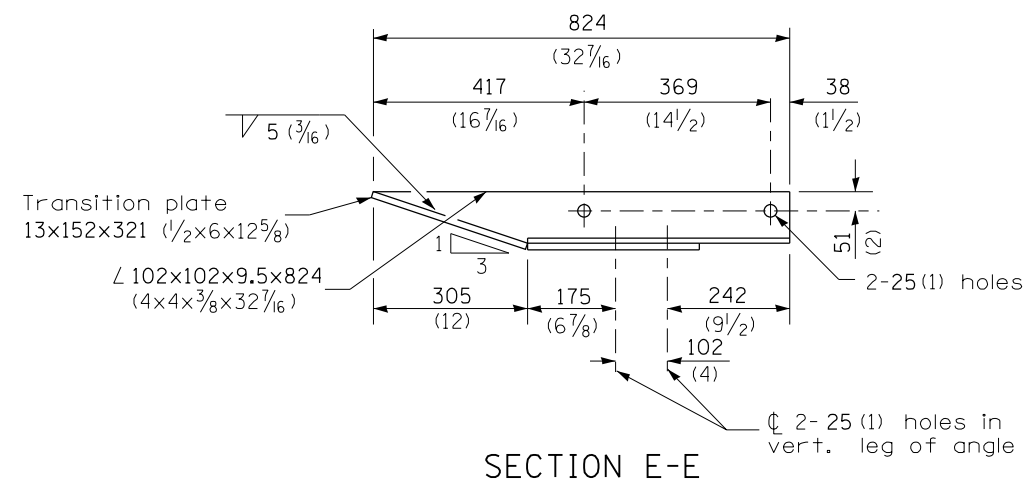
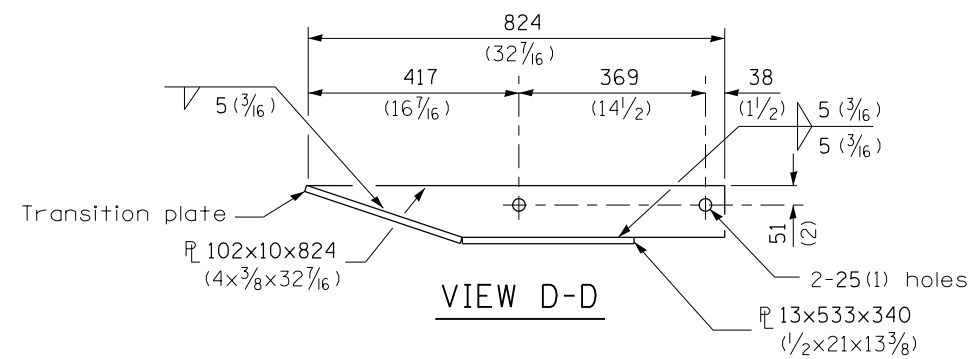


- $\phi$  4-25 (1) holes for 22 (7/8) H.S. bolts and nuts
- ⊗ Drill and tap 3 holes for 22 (7/8) H.S. bolts.

**LEGEND**

Dimensions	A	B
For Curb Mounted Rail	222 (8 3/4)	89 (3 1/2)
For Side Mounted Rail	247 (9 3/4)	64 (2 1/2)

**GUARDRAIL CONNECTION PLATE ASSEMBLY DETAILS**  
(Mirror for opposite end)



**CONNECTION ANGLES**

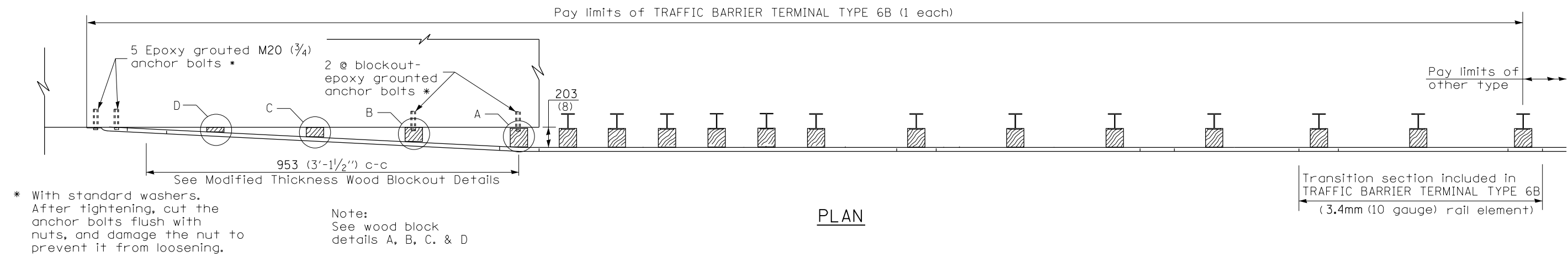
(Install angles to rail caps using 19 (5/8) washers and self-locking nuts or nuts and jam nuts, to be provided by others)

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

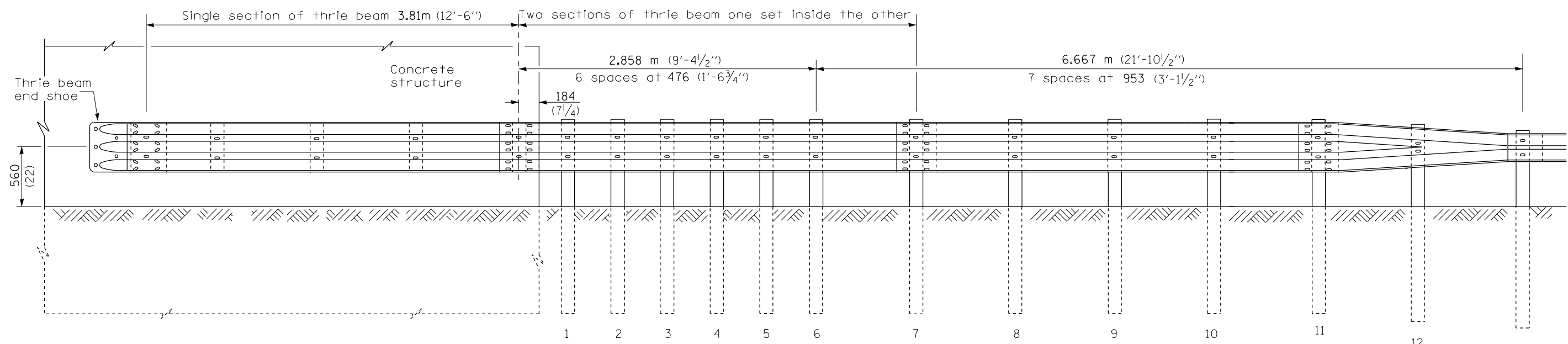
**TRAFFIC BARRIER TERMINAL, TYPE 6A**  
Sheet 3 of 3

**STANDARD 631032-02**

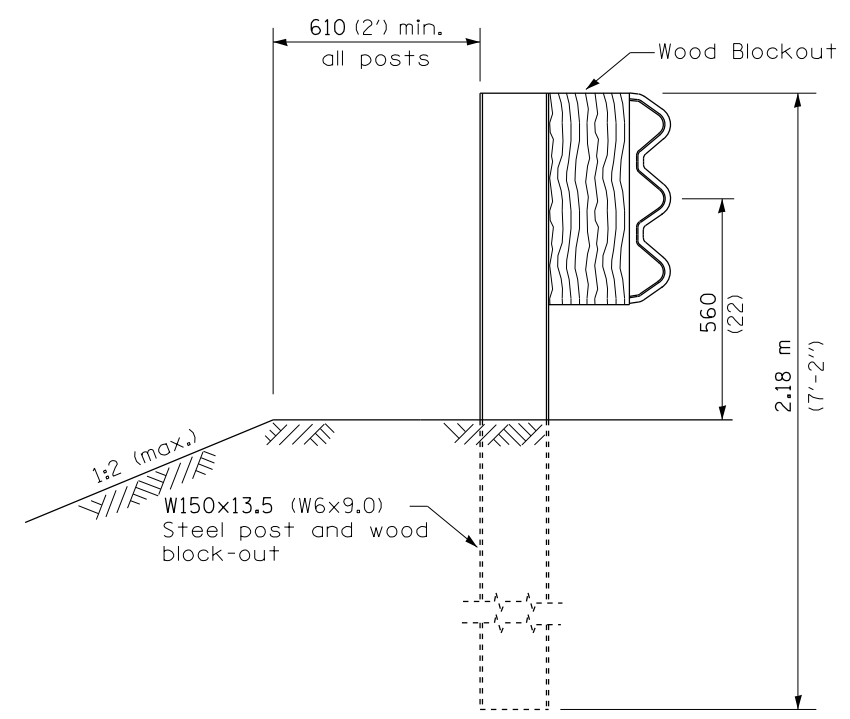
FILE NAME =	USER NAME = harpja	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC BARRIER TERMINAL, TYPE 6A STANDARD INSTALLED PRIOR TO JANUARY 1, 2007</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL\084EBIDINTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 9\Projects\Geometrics\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	17	
PLOT SCALE = 26.0000' / in.		DATE -	REVISED -			CONTRACT NO. 78573					
Default						ILLINOIS FED. AID PROJECT					



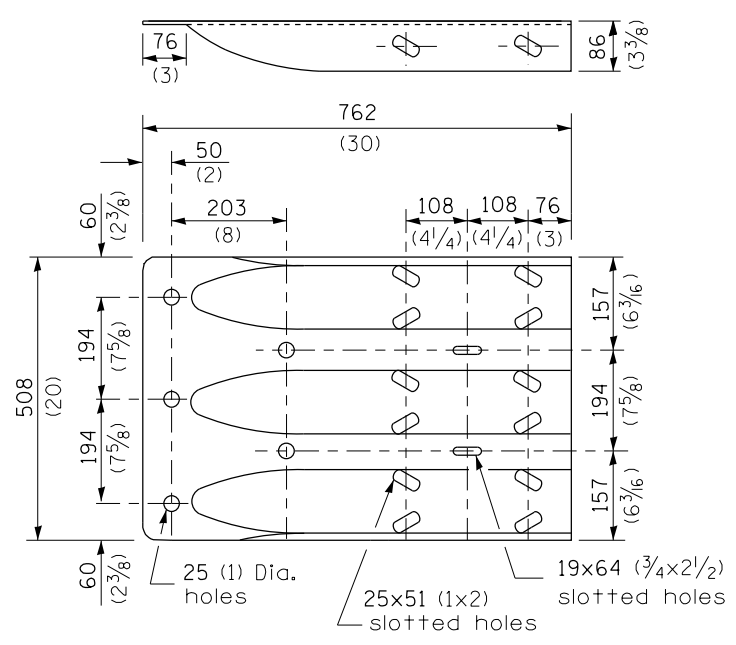
PLAN



ELEVATION



SECTION A-A



THRIE BEAM END SHOE DETAIL

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL INSTALLED PRIOR TO JANUARY 1, 2007.

GENERAL NOTES

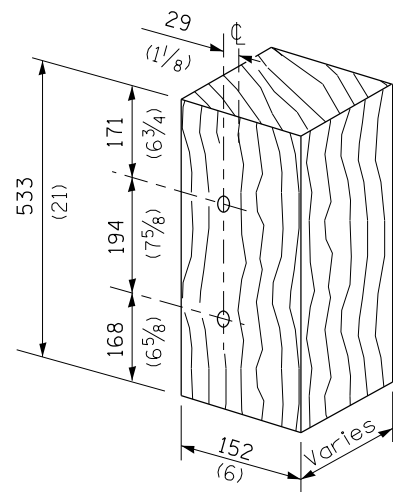
- See Standard 630001 for details of guardrail not shown.
- Thrie beam rail shall be bolted to block-out at all posts.
- All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
- All dimensions are in millimeters (inches) unless otherwise shown.

TRAFFIC BARRIER TERMINAL, TYPE 6B

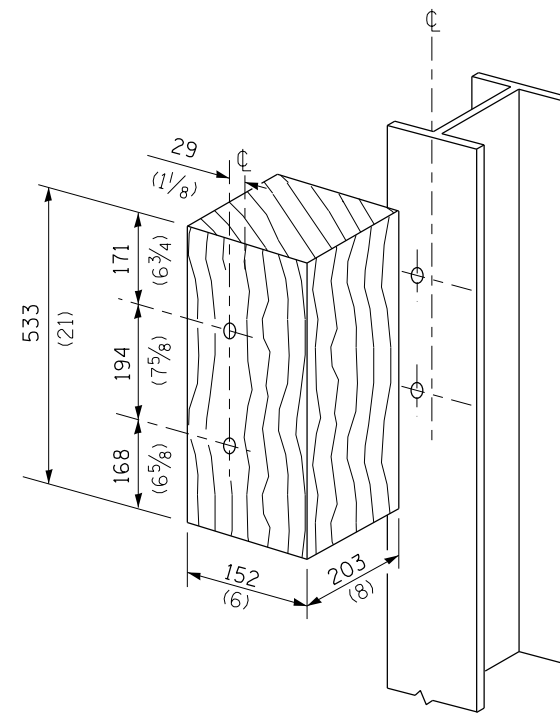
Sheet 1 of 2

STANDARD 631033-01

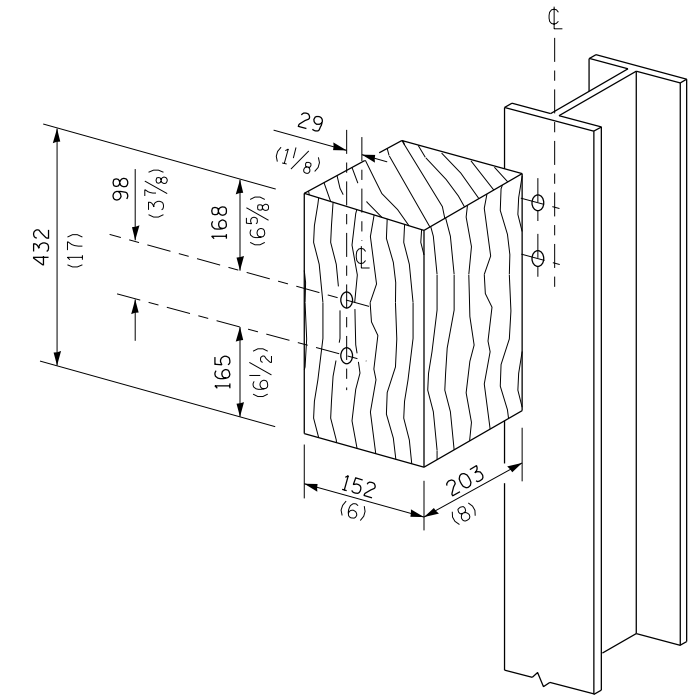
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pw:\IL\084EBIDINTEG.illinois.gov\PI\DOT\Documents\DOT Offices\District 9\Projects\Geometric\Drawings\guardrail.dgn		CHECKED -	REVISED -			VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	18	
Default		DATE -	REVISED -			CONTRACT NO. 78573					
	PLOT SCALE = 26.0000' / in.					ILLINOIS FED. AID PROJECT					



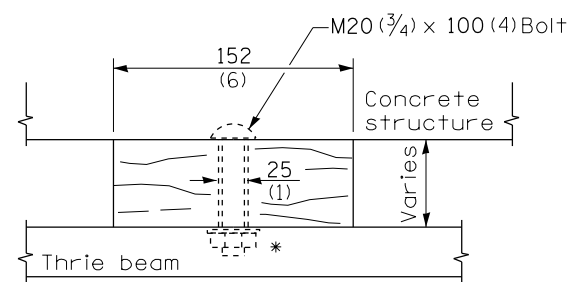
MODIFIED THICKNESS WOOD BLOCKOUT DETAIL



POSTS 1-11 WOOD BLOCKOUT DETAIL

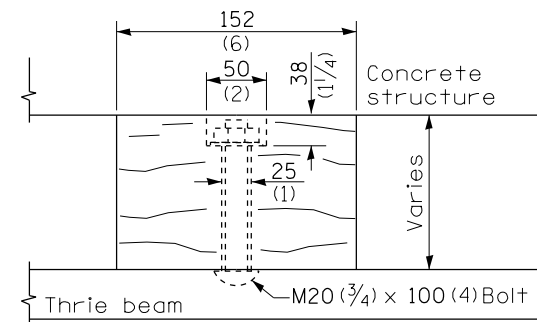


POST 12 WOOD BLOCKOUT DETAIL

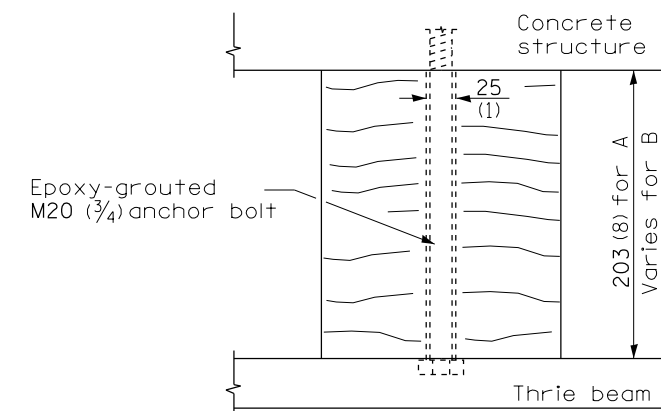


WOOD BLOCKOUT D

Bolt to thrie beam with M20 (3/4) by 100 (4) bolt, washer & nut. Reverse direction of insertion. \*



WOOD BLOCKOUT C



WOOD BLOCKOUT A & B

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL  
INSTALLED PRIOR TO JANUARY 1, 2007.

TRAFFIC BARRIER  
TERMINAL, TYPE 6B

Sheet 2 of 2

**STANDARD 631033-01**

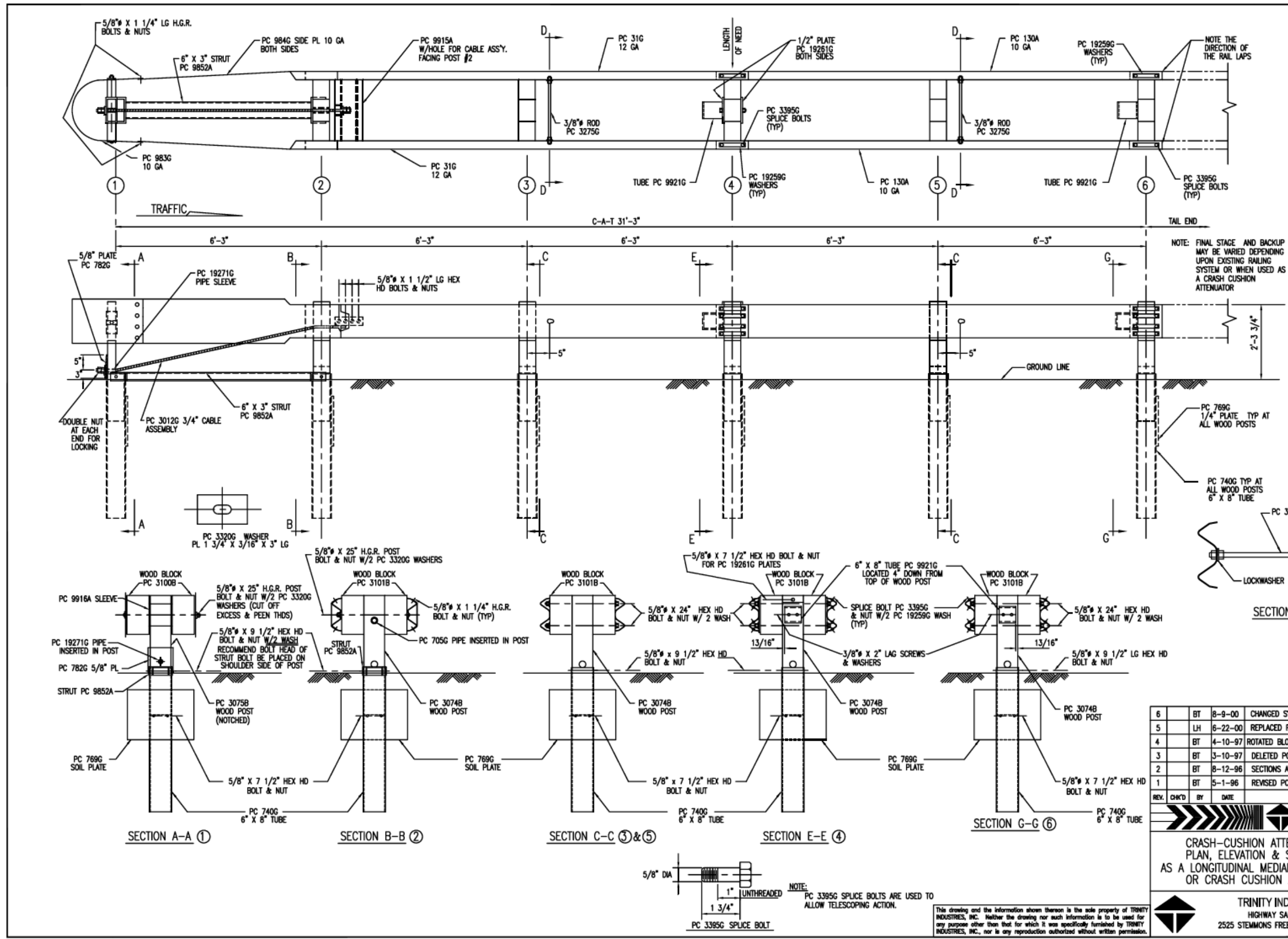
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Default	PLOT SCALE = 26.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 2/21/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC BARRIER TERMINAL, TYPE 6B STANDARD  
INSTALLED PRIOR TO JANUARY 1, 2007**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D9 GUARDRAIL REPAIR FY18-1	VARIOUS	20	19
CONTRACT NO. 78573				
ILLINOIS FED. AID PROJECT				



C-A-T BILL OF MATERIAL		
PRODUCT CODE	QTY	DESCRIPTION
31G	2	12/12'6/0 CAT (GUARDRAIL)
130A	2	10/12'8/5'10'6/8/SP CAT (GUARDRAIL)
705G	1	2" x 5 1/2" PIPE
740G	6	4'6" TUBE SLEEVE
769G	6	1/4 x 18 x 24 SOIL PLATE
782G	1	5/8" x 8" x 8" BEARING PLATE
983G	1	10/NOSE PLATE/CAT/ROLLED
984G	2	10/SIDE PLATE CAT
3012G	1	CABLE 3/4 x 8'0/DBL SWG
3074B	5	WD 3'6" POST #2, 3, 4, 5, 6 CAT
3075B	1	WD 3'6" POST #1 CAT
3100B	2	WD BLOCK 1'2 #1 CAT
3101B	10	WD BLOCK 1'2 #2-6 CAT
3255G	4	3/8" FLAT WASHER
3263G	4	3/8" x 2" LAG SCREW
3275G	2	3/8" x 24 1/2" RESTRAINT ROD
3300G	20	5/8" FLAT WASHER
3320G	4	3/16" x 1 3/4" x 3" RECT WASHER
3340G	85	5/8" G.R. NUT
3360G	16	5/8" x 1 1/4" G.R. BOLT
3380G	8	5/8" x 1 1/2" HEX BOLT
3395G	32	5/8" x 1 3/4" HEX BOLT CAT
3478G	13	5/8" x 7 1/2" HEX BOLT
3497G	6	5/8" x 9 1/2" HEX BOLT
3650G	2	5/8" x 25" G.R. BOLT
3900G	2	1" FLAT WASHER
3910G	4	1" HEX NUT
4252G	8	3/8" HEX NUT
4258G	4	3/8" LOCK WASHER
4640G	8	5/8" x 24" HEX BOLT
9852A	1	CHANNEL STRUT x 6'-6"
9915A	1	SPACER CHANNEL CAT
9916A	1	10/BENT PLATE SLEEVE
9921G	2	6" SLEEVE 6 x 8
19259G	32	3/16" x 2" x 10" PLATE WASHER
19261G	2	1/2 x 3 x 7 POST PLATE
19271G	1	1" x 2 1/2" PIPE SLEEVE CAT

REV.	CHKD	BY	DATE	REMARKS
6	BT		8-9-00	CHANGED SYSTEM HEIGHT, WAS 2'-3"
5	LH		6-22-00	REPLACED PC 766 WITH PC 769, CHANGED TITLE BLOCK
4	BT		4-10-97	ROTATED BLOCK PC 9921 90° AT POST 4 & 6
3	BT		3-10-97	DELETED PC 3072, 3073, 4470, CHG QTY 3074 & 3478
2	BT		8-12-96	SECTIONS A-A & B-B, CORRECTED PIPE SLEEVE PC No
1	BT		5-1-96	REVISED PC No 31G & 130A

**C-A-T**

CRASH-CUSHION ATTENUATING TERMINAL  
PLAN, ELEVATION & SECTIONS FOR USE  
AS A LONGITUDINAL MEDIAN BARRIER TERMINAL  
OR CRASH CUSHION ATTENUATOR

DRAWN	BT
CHECKED	EN
SCALE	N.T.S.
DATE	7-15-94
ENG. FILE #	SS245-01E
SHT. No.	E1 OF 1
DRAWING NO.	SS-245
REV.	6

TRINITY INDUSTRIES, INC.  
HIGHWAY SAFETY PRODUCTS  
2525 STEMMONS FREEWAY, DALLAS, TX 75207