STATE OF ILLINOIS

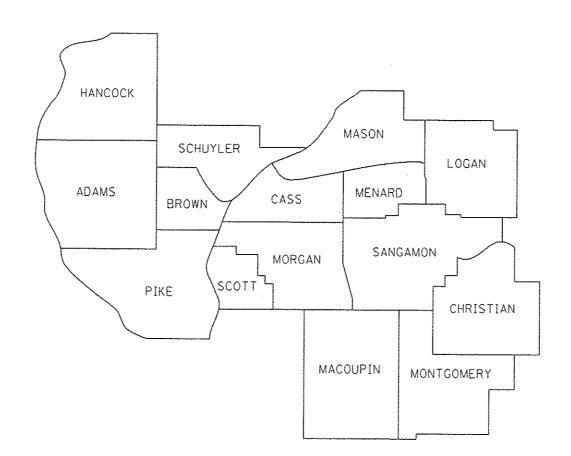
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION D6 CABLE / GUARDRAIL 2015-1
SAFETY ITEM REPAIR
VARIOUS COUNTIES IN D6

C-96-019-15



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*** D6 CABLE/GUARDRAIL 2015-1

D-96-019-16



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED CAROLA 24 20 14

R. J. Z. J. J. J.

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

SO20 15

ENGINEER OF DESIGN AND ENVIRONMENT

DIRECTOR OF HIGHWAYS CHIEF ENGINEER

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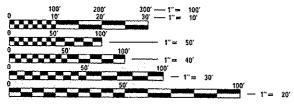
INDEX OF SHEETS

- 1 COVERSHEET
- GENERAL NOTES
- 3-5 SUMMARY OF QUANTITIES
- 6-16 PRE-MGS HIGHWAY STANDARDS
- 17 CABLE GUARD MARKER DETAIL

FOR LIST OF STANDARDS, SEE SHEET NO. 2

NOTE:

SECTION D6 CABLE / GUARDRAIL 2015-1 CONSISTS OF REPAIR OF DAMAGED GUARDRAIL AND OTHER ITEM AS DIRECTED BY THE ENGINEER ON VARIOUS ROUTES IN IDOT DISTRICT SIX UNDER STATE JURISDICTION



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

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

PROJECT ENGINEER
TEAM ENGINEER

VINCE MADONIA 217–785–9046 JAY EDWARDS 217–785–5321

CONTRACT NO. 72H46

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HIGHWAY STANDARDS

STANDARD NO.	TITLE
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL. TYPE 5
631031-13	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
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' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701101-04	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W. SHORT TIME OPERATIONS
701400-08	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-09	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701421-07	LANE CLOSURE. MULTILANE. DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
701422-07	LANE CLOSURE, MULTILANE, FOR SPEEDS > 45 MPH TO 55 MPH
701426-07	LANE CLOSURE, MULTILANE. INTERMITTENT OR MOVING OPERATION, FOR SPEEDS \geq 45 MPH
701427-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS < 40 MPH
701456-03	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-06	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-07	URBAN LANE CLOSURE, MULTILANE. 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-10	URBAN LANE CLOSURE, MULTILANE. 2W WITH MOUNTABLE MEDIAN
701701-09	URBAN LANE CLOSURE. MULTILANE INTERSECTION
701901-04	TRAFFIC CONTROL DEVICES

ADD:

701428

Traffic Control Setup and Removal Freeway/Expressway

GENERAL NOTES

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

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

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

	DISTRICT SIX	
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EXAMINED.	October 10	20 14
PROJECT II	MPLEMENTATION ENGINE	ER
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PROGRAM	DEVELOPMENT ENGINEER	1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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SCALES	SHEET	OF	SHEETS	STA.	TO STA,		ILLINOIS FEO. A	IO PROJECT	•
					••• 06	CABLE/GUARDRA	IL 2015-1		

CONSTRUCTION CODE 100% STATE 6-00481-0000

		***	ROADWAY
CODE	ITEM	UNIT	0021
		tenderskessabet	
3000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	275
53000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	150
?			
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	1
67100085	TOACCIC BARRIED TERMINAL TYPE 6	EACH	1
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	CALM	1
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	12
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1
63200310	GUARDRAIL REMOVAL	FOOT	750
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE). TEST LEVEL 3	EACH	1
64401300	HIGH TENSION CABLE MEDIAN BARRIER TERMINALS	EACH	1
66400105	CHAIN LINK FENCE, 4'	FDOT	250
66500105	WOVEN WIRE FENCE, 4'	FOOT	250
67100100	MOBILIZATION	L SUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	3

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	SUMMARY OF QUANTATIES				
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TA.		ILLINOIS FEE	D. AID PROJECT		
			CONTRACT	NO. 7	2H46
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	F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.

CONSTRUCTION CODE
100% STATE
6-00481-0000

CODE	ITEM	UNIT	ROADWAY 0021
CODE	114.00	UNIT	0021
78200410	GUARDRAIL MARKERS, TYPE A	EACH	250
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	25
Z0008759	CALL OUT	EACH	22
Z0008760	EMERGENCY WORK CALL OUT	EACH	21
Z0052000	REPAIR STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	600
Z0052410	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	37
Z0052415	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	EACH	1
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL. TYPE 2	EACH	1
Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	1
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
X0325231	CABLE GUARD MARKER	EACH	250
x0325899	REPAIR HIGH TENSION CABLE (GIBRALTAR)	FOOT	700
×0325900	REPAIR HIGH TENSION BARRIER TERMINAL (GIBRALTAR)	EACH	3
x0325901	REPAIR POSTS (GIBRALTAR)	EACH	115

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CONSTRUCTION CODE 100% STATE 6-00481-0000

		ROADWAY
ITEM	UNIT	0021
REMOVE AND REPLACE POSTS (G[BRALTAR)	EACH	100
REPAIR HIGH TENSION CABLE (NU-CABLE)	FOOT	125
REPAIR POSTS (NU-CABLE)	EACH	50
REMOVE AND REPLACE POSTS (NU-CABLE)	EACH	65
REPAIR HIGH TENSION BARRIER TERMINAL (NU-CABLE)	EACH	3
REMOVE AND REPLACE IMPACT ATTENUATOR SAND MODULE	EACH	20
TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	15
TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	30
	REMOVE AND REPLACE POSTS (GIBRALTAR) REPAIR HIGH TENSION CABLE (NU-CABLE) REPAIR POSTS (NU-CABLE) REMOVE AND REPLACE POSTS (NU-CABLE) REPAIR HIGH TENSION BARRIER TERMINAL (NU-CABLE) REMOVE AND REPLACE IMPACT ATTENUATOR SAND MODULE TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	REMOVE AND REPLACE POSTS (GIBRALTAR) REPAIR HIGH TENSION CABLE (NU-CABLE) REPAIR POSTS (NU-CABLE) REMOVE AND REPLACE POSTS (NU-CABLE) REPAIR HIGH TENSION BARRIER TERMINAL (NU-CABLE) REPAIR HIGH TENSION BARRIER TERMINAL (NU-CABLE) EACH TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK EACH

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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SUMMARY OF QUANTATIES

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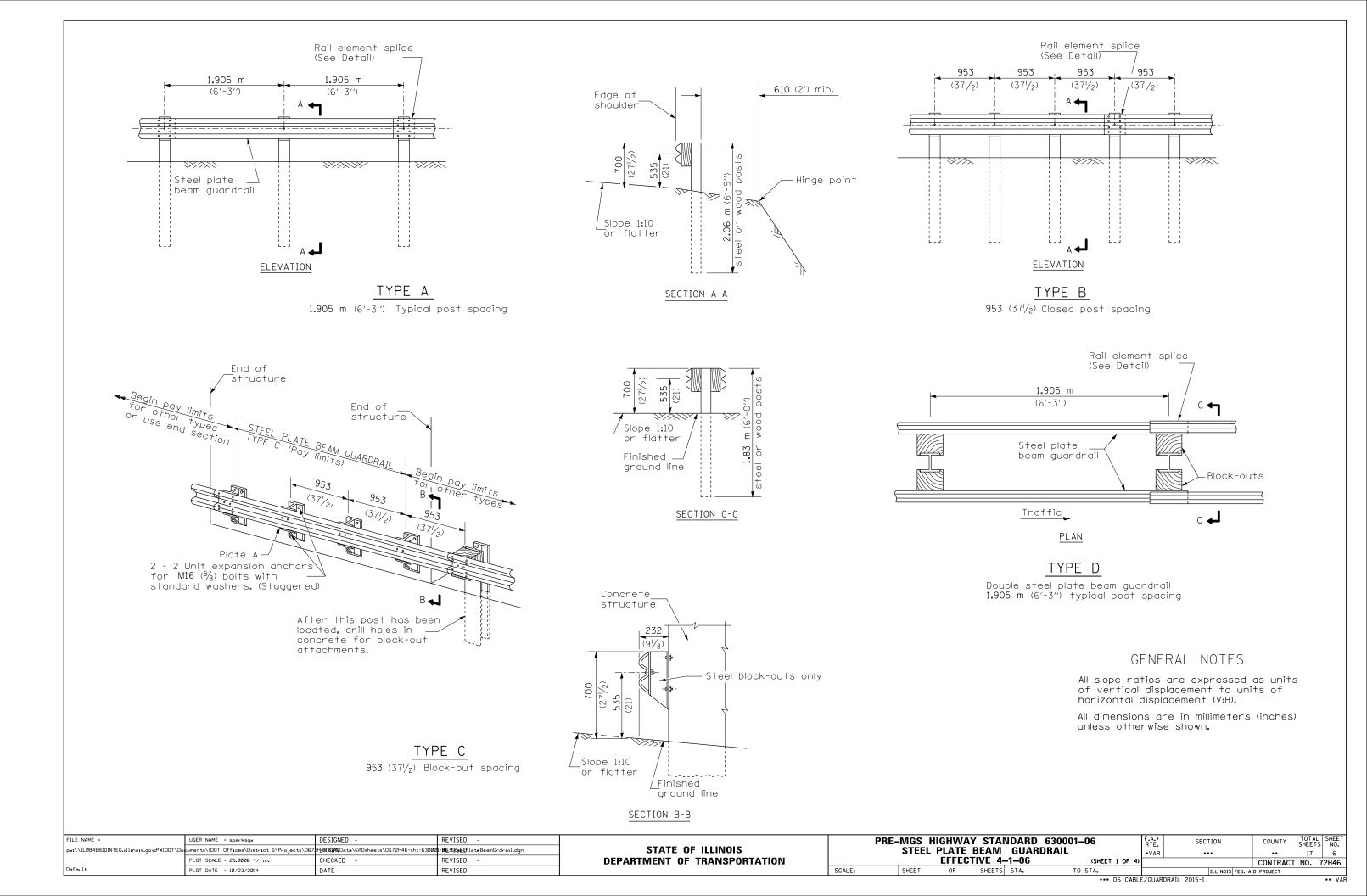
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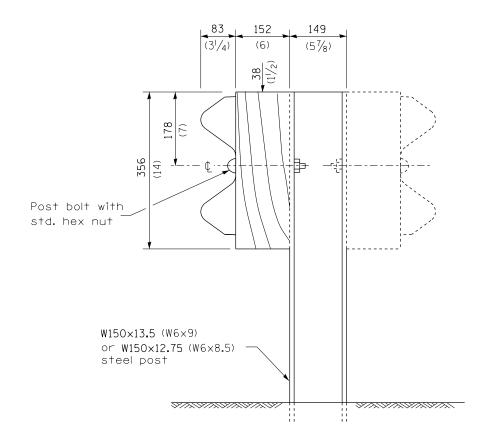
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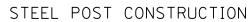
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TO STA, --- D6 CABLE/GUARDRAIL 2015-1







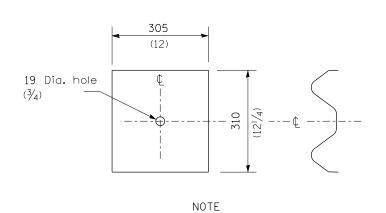
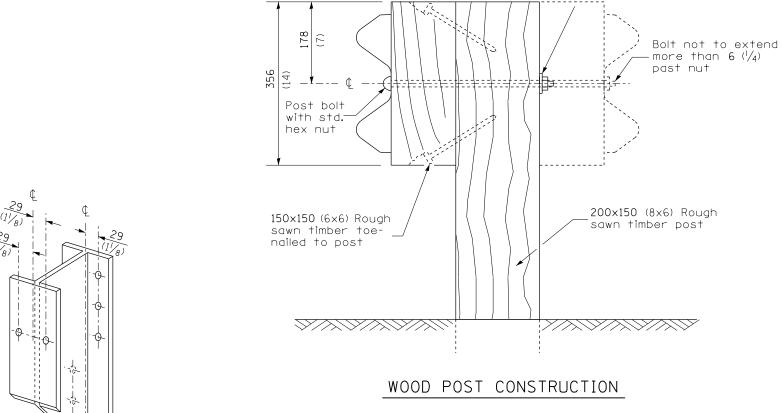


Plate A shall be placed between rail element and block-out at nonsplice mounting points only when steel block-outs are used.

PLATE A

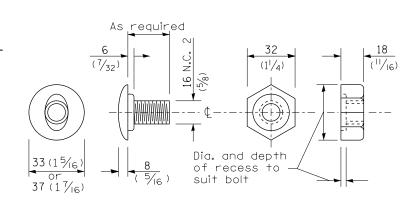


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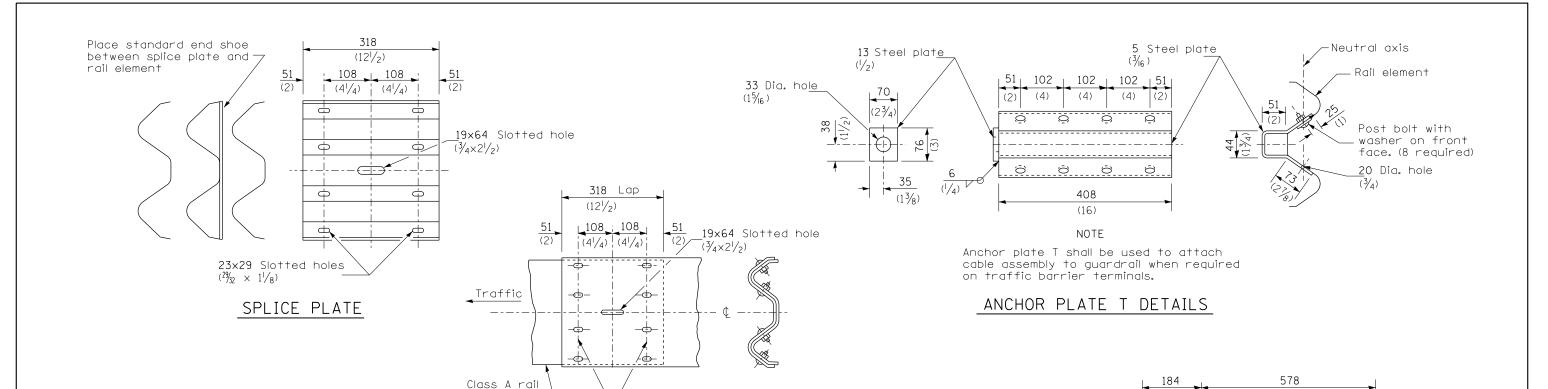
– Std. flat washer



POST OR SPLICE BOLT & NUT

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STEEL BLOCK-OUT DETAIL



 23×29 ($^{29}\!\!/_{32}$ \times $1^{1}\!/_{8}$) Slotted holes for M16 ($^{5}\!\!/_{8}$) splice bolts

 $(7^{1}/_{4})$

 θ

23×29 Slotted Holes

 $(2\%_{32} \times 1\frac{1}{8})$

76 108 108

Ф

762 (30)

(3) (4 / 4) (4 / 4)

 $(22\frac{3}{4})$

 $(\frac{3}{4} \times 2^{1/2})$

ALTERNATE END SHOE

108 108

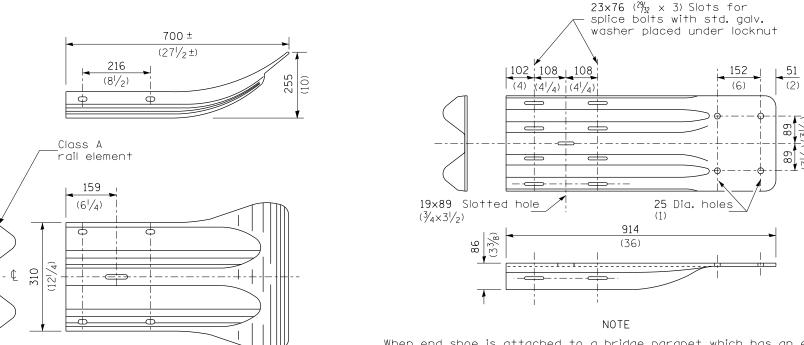
(4/4) (4/4)

(1) = 19x64 Slotted hole (optional)

51 (2)

_25 Dia. holes

RAIL ELEMENT SPLICE



element

END SECTION

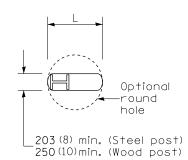
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

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.

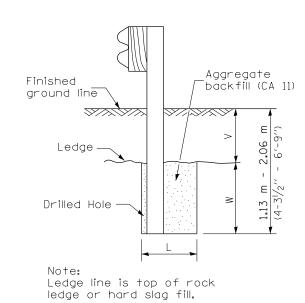
Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE

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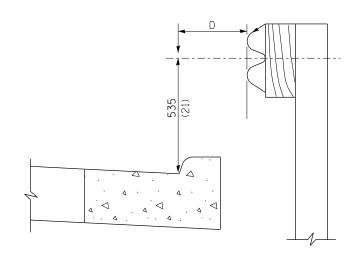


PLAN



ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

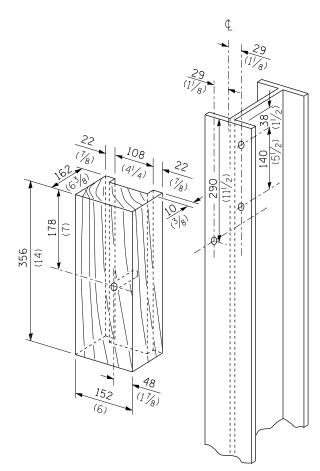


Note: If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

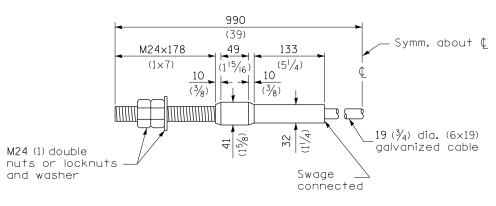
GUARDRAIL PLACED BEHIND CURB

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

V	W	L	L							
V	VV	Steel Post	Wood Post							
0 - 460	610	530	580							
(0 - 18)	(24)	(21)	(23)							
>460 - 825	305	203	250							
(>18 - 41.5)	(12)	(8)	(10)							
>825 - 1.13 m	305 - 0	203	250							
(>41.5 - 53.5)	(12 - 0)		(10)							



WOOD BLOCK-OUT AND STEEL POST DETAILS

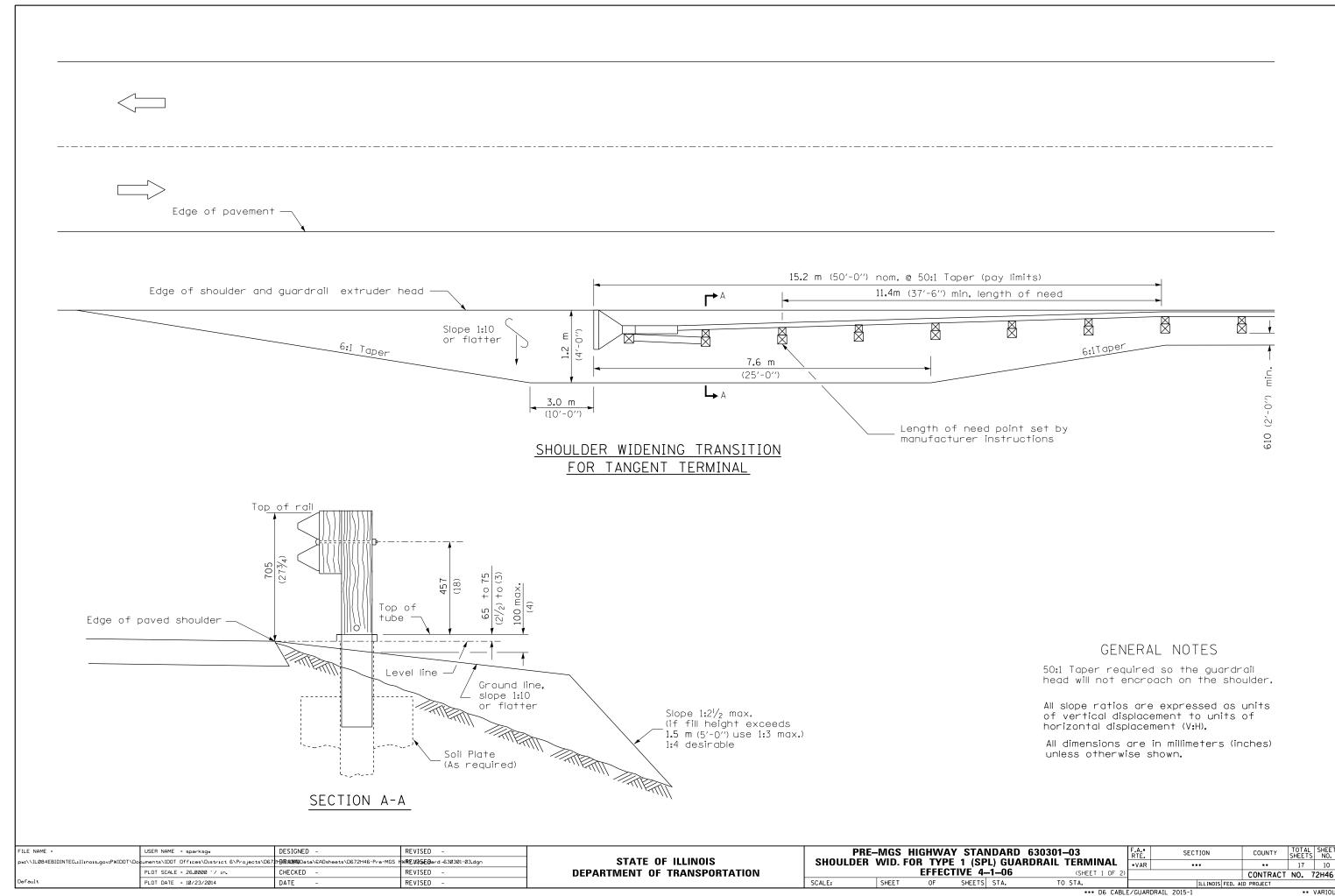


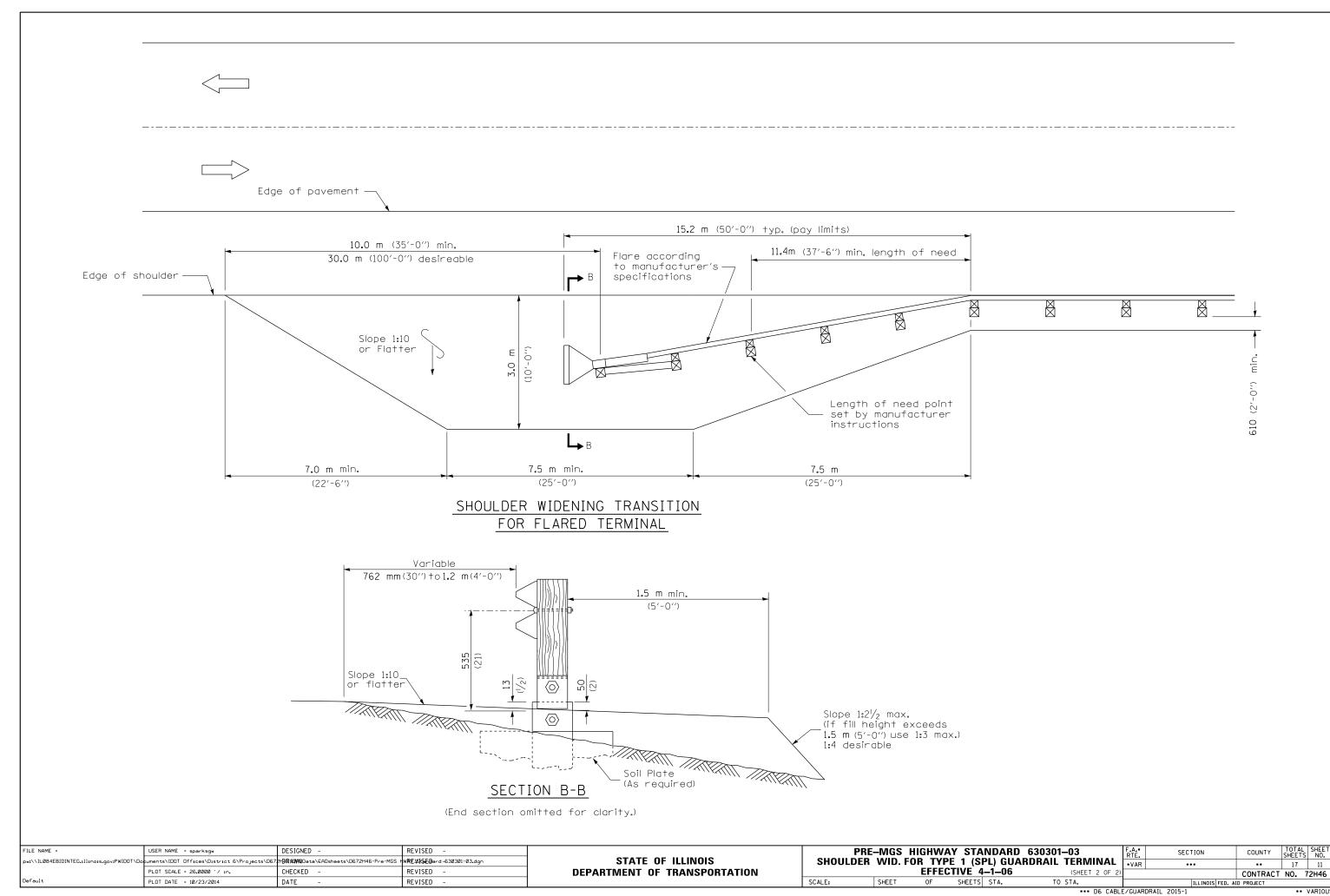
CABLE ASSEMBLY

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

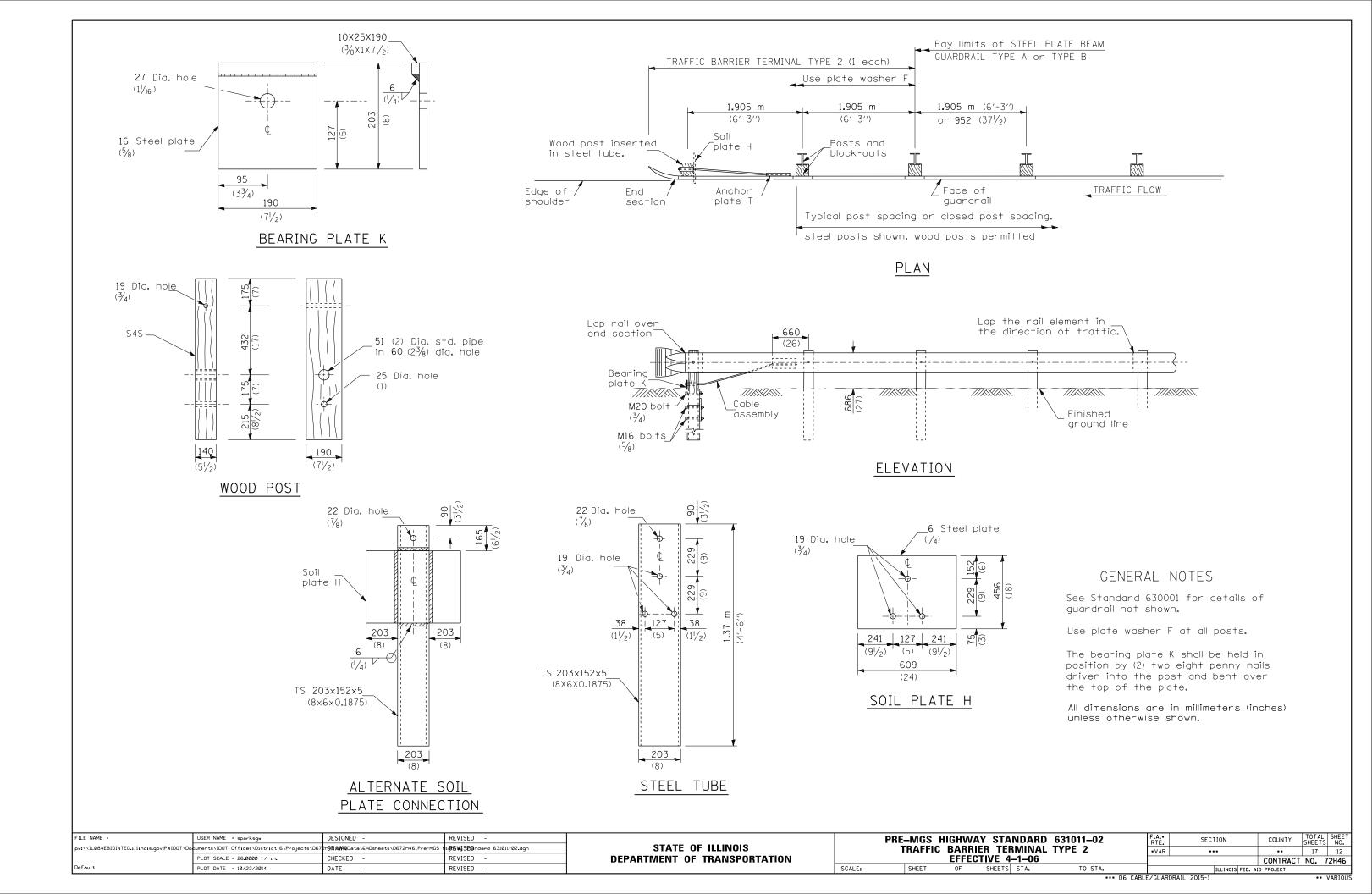
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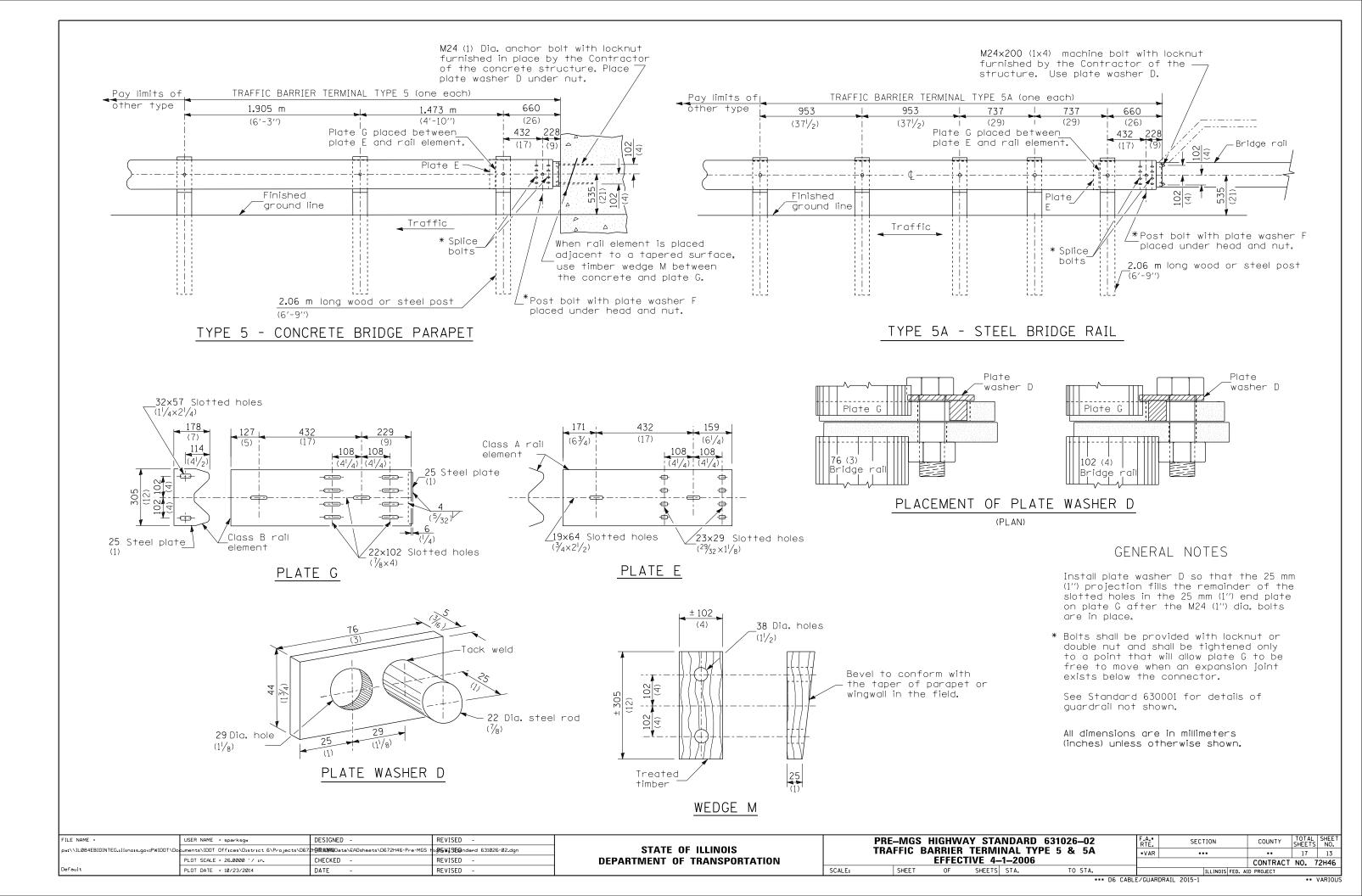
••• D6 CABLE/GUARDRAIL 2015-1

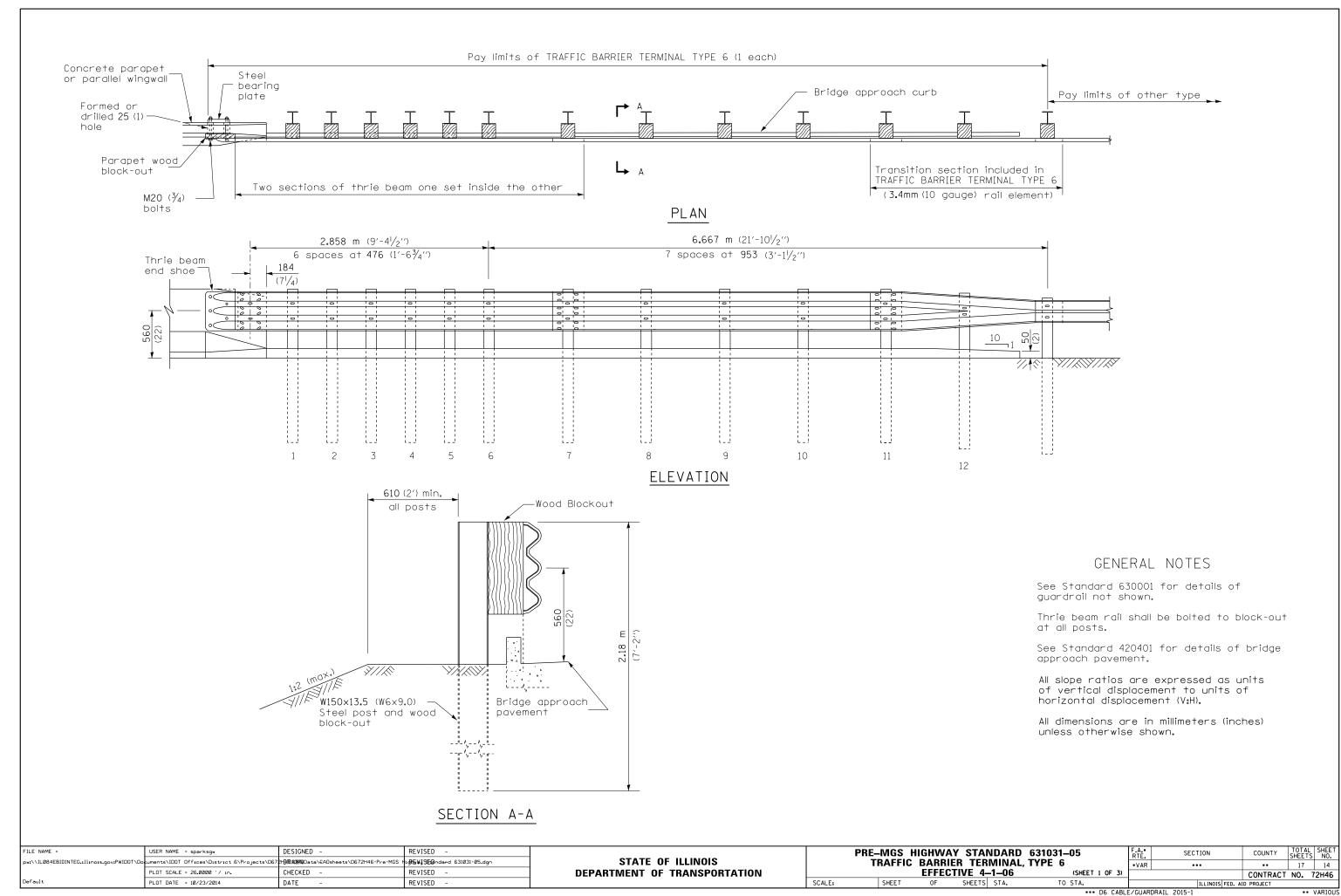


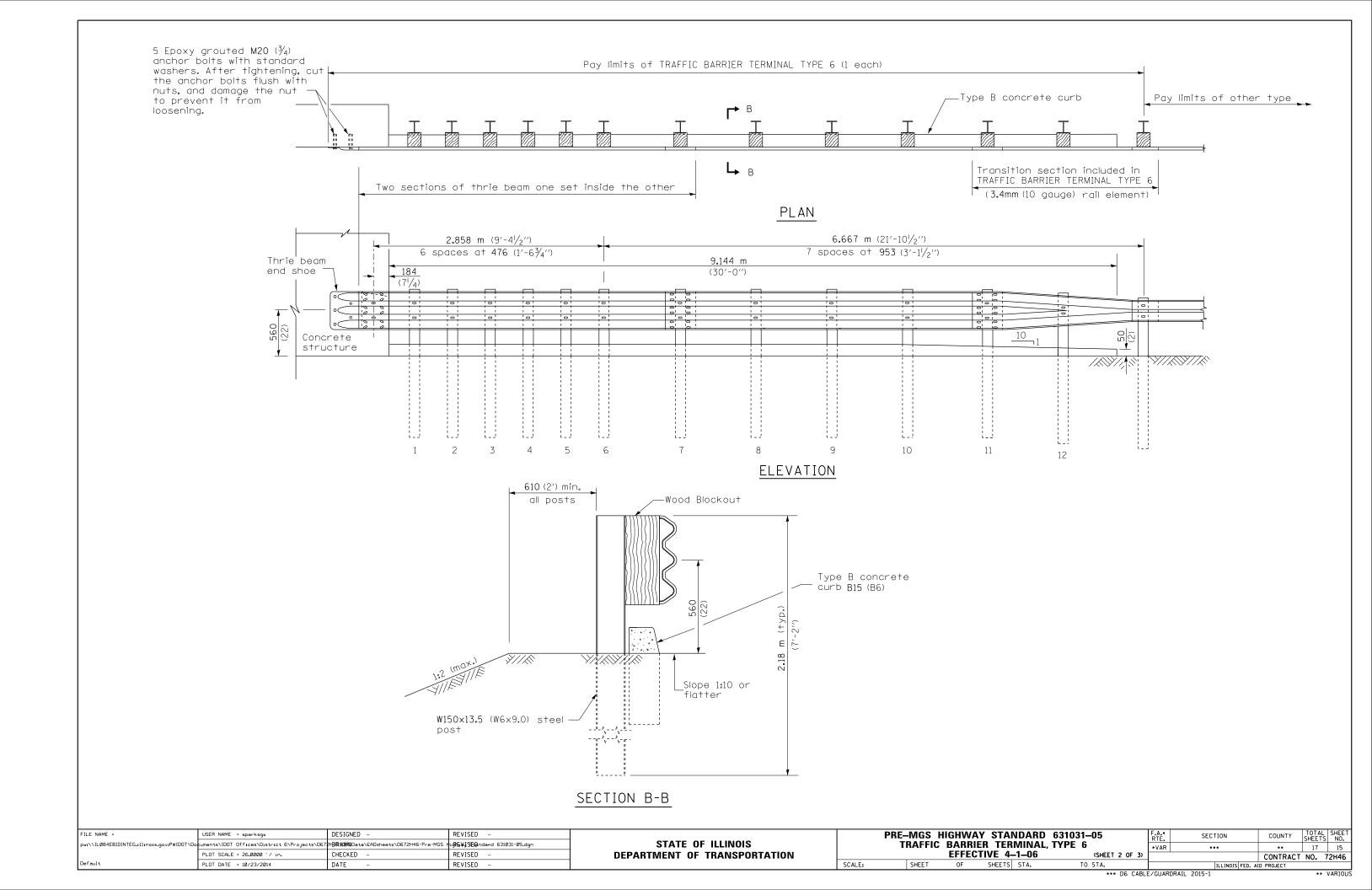


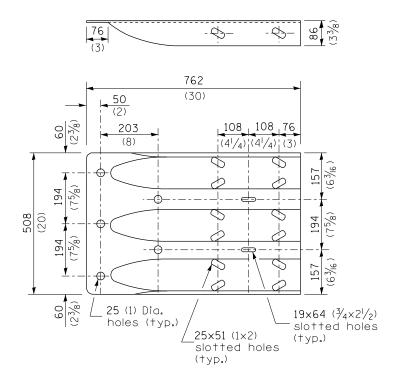
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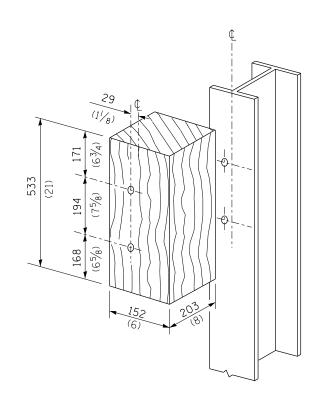




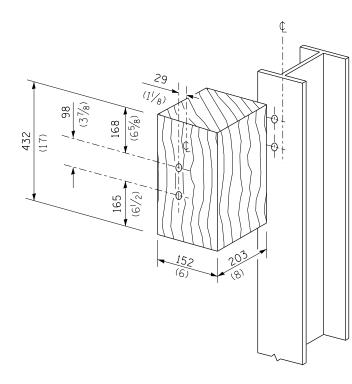




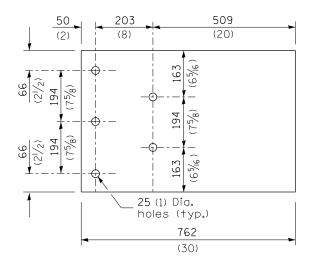
THRIE BEAM END SHOE DETAIL

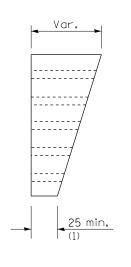


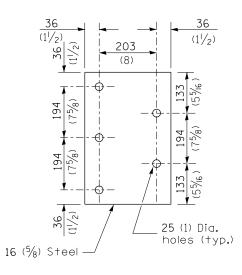
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL







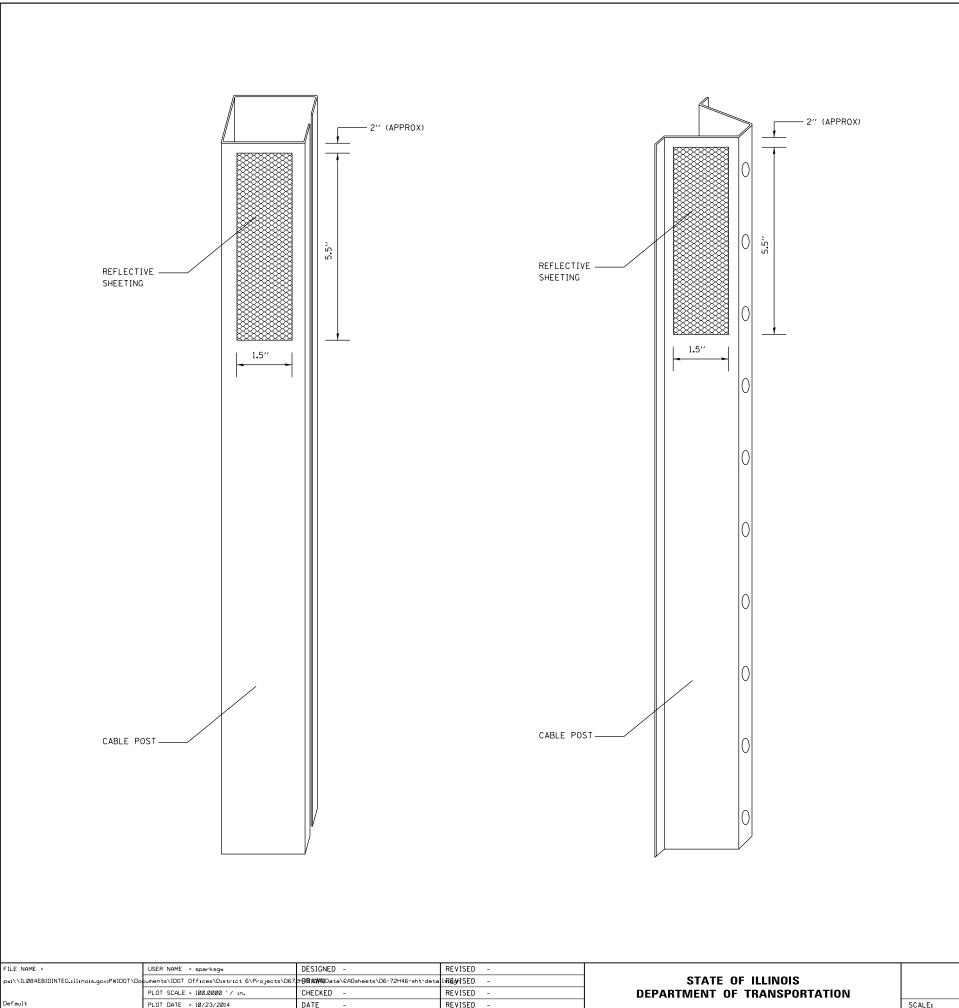
PARAPET WOOD BLOCK-OUT DETAIL

PARAPET STEEL BEARING PLATE DETAIL

(5 each individual $125 \times 125 \times 16$ ($5 \times 5 \times \frac{5}{8}$) steel plates with centered 25 (1) holes may be substituted for the plate shown.)

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•							••• D6 CABLE/GUARDRAIL 2015-1						•• VARIOUS

•• VARIOUS



NOTES:

MATERIAL: THE MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 1090 AND 1091 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION REQUIREMENTS: THE REFLECTIVE SHEETING SHALL BE INSTALLED DIRECTLY ON THE CABLE POSTS. THE REFLECTIVE SHEETING SHALL BE INSTALLED AS SHOWN IN THE PLANS, ON EVERY OTHER POST (IN ORDER TO PROVIDE A SPACING OF 40°). THE SURFACE OF THE POST SHALL BE CLEANED OF ALL CONTAMINANTS PRIOR TO THE INSTALLATION OF THE REFLECTIVE SHEETING. THE SURFACE SHALL BE CLEANED USING A 5-8 PERCENT PHOSPHORIC ACID SOLUTION AND RINSED WITH CLEAN WATER OR AS RECOMMENDED BY THE MANUFACTURER OF THE REFLECTIVE SHEETING AND AS APPROVED BY THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR CABLE GUARD MARKER.