

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-085GRR	VARIOUS	23	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 62A34		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED
HIGHWAY PLANS**

**ROUTE: VARIOUS EXPRESSWAYS AND ARTERIAL
HIGHWAYS – NORTHERN PART, DISTRICT ONE
GUARDRAIL REPAIR
SECTION: 2014-085GRR
COUNTY: VARIOUS
D-91-143-15**



**SEE LOCATION MAPS
SHEETS 4 THRU 8**

C.U.A.N.
CHICAGO UTILITY ALERT NETWORK
1-312-744-7000

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

PROJECT ENGINEER: J. ALAIN MIDY (847) 221-3056
PROJECT MANAGER: ISSAM RAYYAN (847) 705-4178

CONTRACT NO. 62A34

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Oct 23 2014*

John F. ...
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Jan 30 2015
John D. Baranzelli PE, Inc.
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 2015
Omur Osman PE, Inc.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

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- 20-22. T6 TERMINAL FOR USE WITH 21" HIGH SPBGR (BM-22)
23. TRAFFIC CONTROL DETAIL FOR SHOULDER CLOSURE AND
PARTIAL RAMP CLOSURES (TC-17)

LIST OF STATE STANDARDS

- | | |
|-------------------|---|
| 630001-10 | STEEL PLATE BEAM GUARDRAIL |
| 630301-06 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631006-08 | TRAFFIC BARRIER TERMINAL, TYPE 1B |
| 631011-09 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 631026-06 | TRAFFIC BARRIER TERMINAL, TYPE 5 |
| 631031-13 | TRAFFIC BARRIER TERMINAL, TYPE 6 |
| 631036 | TRAFFIC BARRIER TERMINAL, TYPE 8 |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS |
| 701006-05 | OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701011-04 | OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY |
| 701101-04 | OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE |
| 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 |
| 701401-09 | LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701406-09 | LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY |
| 701411-09 | LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEED ≥ 45 MPH |
| 701501-06 | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED |
| 701606-10 | URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN |
| 701701-09 | URBAN LANE CLOSURE, MULTILANE INTERSECTION |
| 701801-05 | LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE |
| 701901-04 | TRAFFIC CONTROL DEVICES |
| 720011-01 | METAL POSTS FOR SIGNS, MARKERS & DELINEATORS |

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 OR "CUAN" AT (312) 744-700 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT QUANTITY SHEET.

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.

NO MATERIAL SHOULD BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.

ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE HEREWITH ATTACHED.

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

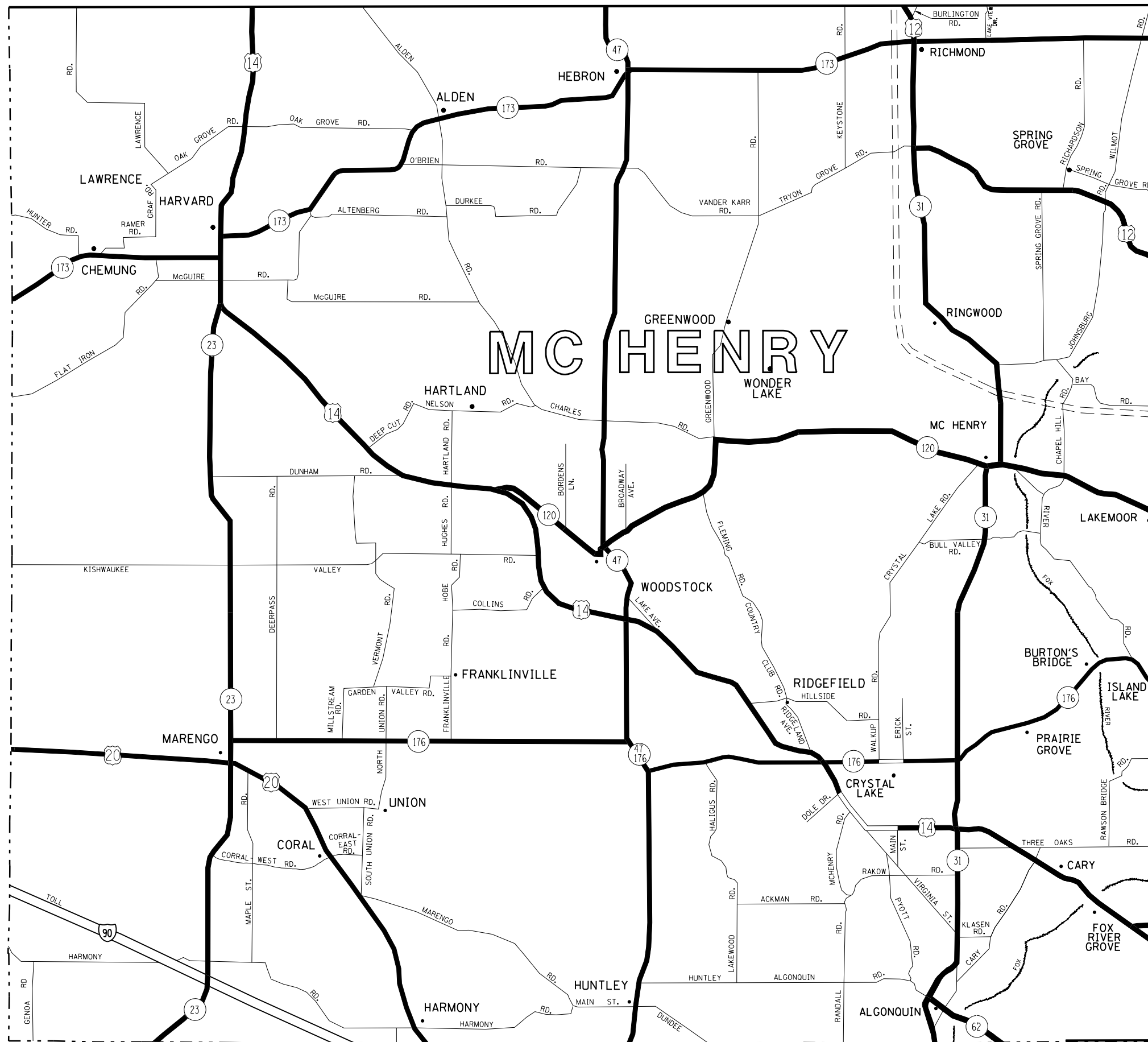
REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME.

GUARDRAIL MARKERS SHALL NOT BE ATTACHED TO TERMINAL SECTIONS.

THE CONTRACTOR SHALL TELEPHONE THE IDOT BUREAU OF TRAFFIC OPERATIONS, ELECTRICAL MAINTENANCE SECTION AT 708-524-2145 TO REQUEST THE LOCATE FOR INDEGROUND ELECTRICAL AND/OR FIBER CABLE PRIOR TO ANY DIGGING AS PER THE CONTRACT.

REMOVAL OF EXISTING TERMINAL SECTIONS INCLUDED IN COST OF NEW TERMINAL SECTIONS

FILE NAME: c:\pwork\pilot\osbornnp\0417925\01	USER NAME: osbornnp	DESIGNED: -	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE: 10/28/2014	DATE: -	REVISED: -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
CONTRACT NO. 62A34											



DISTRICT NO. 1

STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
 FUTURE HIGHWAYS
 VARIOUS AGENCIES HIGHWAYS

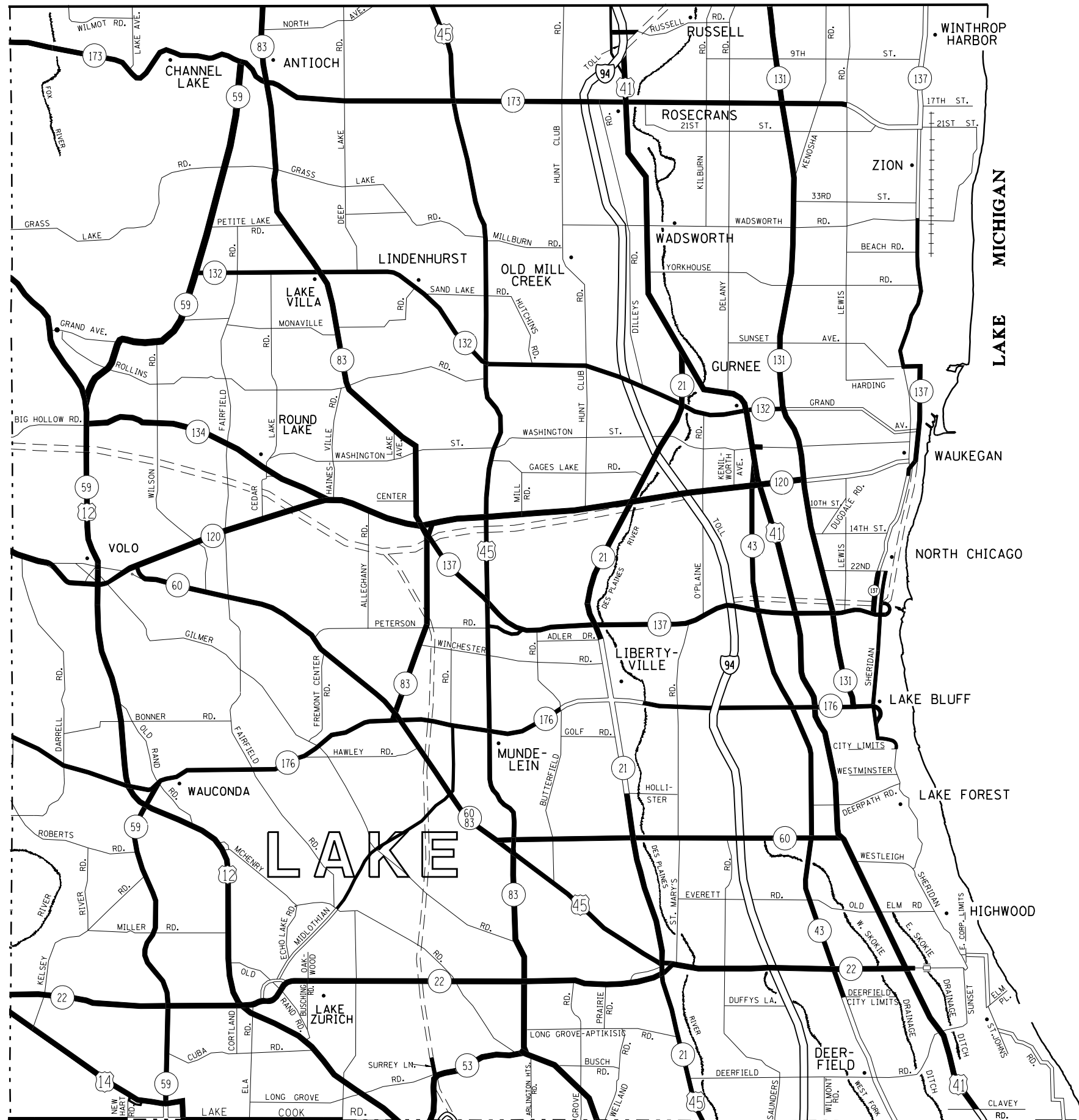
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	PLOT DATE = 10/28/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP
McHENRY COUNTY**

SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-085GRR	VARIOUS	23	5
CONTRACT NO. 62A34				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



DISTRICT NO. 1

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION**
- FUTURE HIGHWAYS**
- VARIOUS AGENCIES HIGHWAYS**

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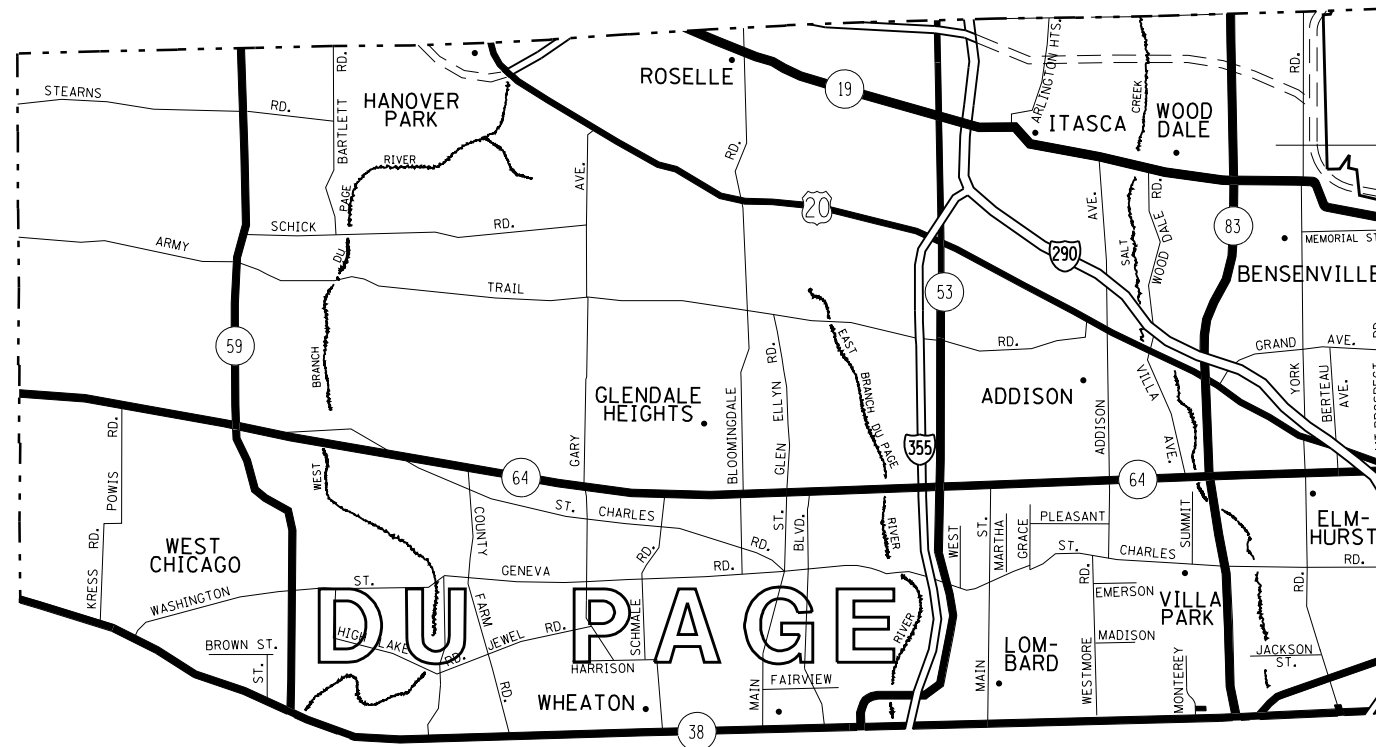
DESIGNED -
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 DATE -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP
 LAKE COUNTY**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-085GRR	VARIOUS	23	6
CONTRACT NO. 62A34				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



DISTRICT NO. 1

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
- FUTURE HIGHWAYS
- VARIOUS AGENCIES HIGHWAYS

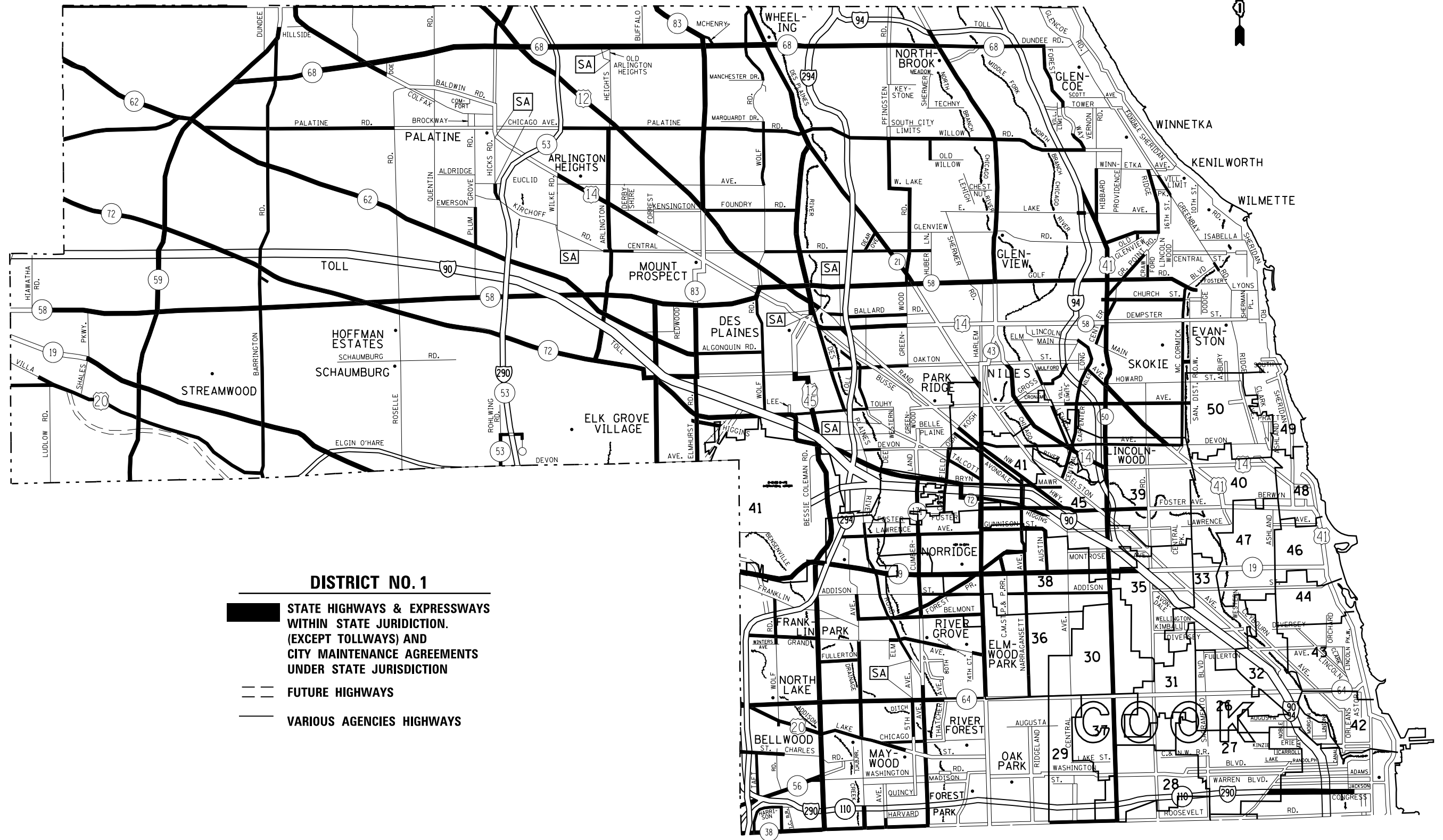
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	PLOT DATE = 10/28/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP DuPAGE COUNTY
NORTH OF AND INCLUDING IL RTE 38**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

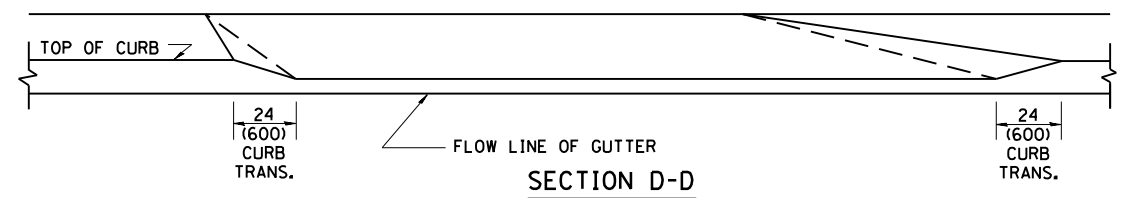
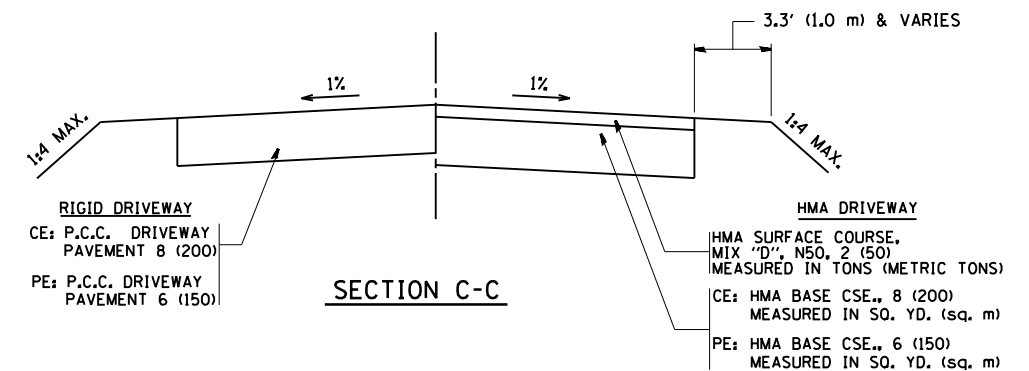
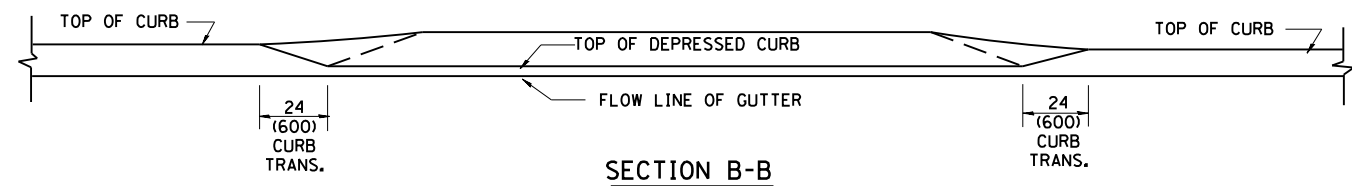
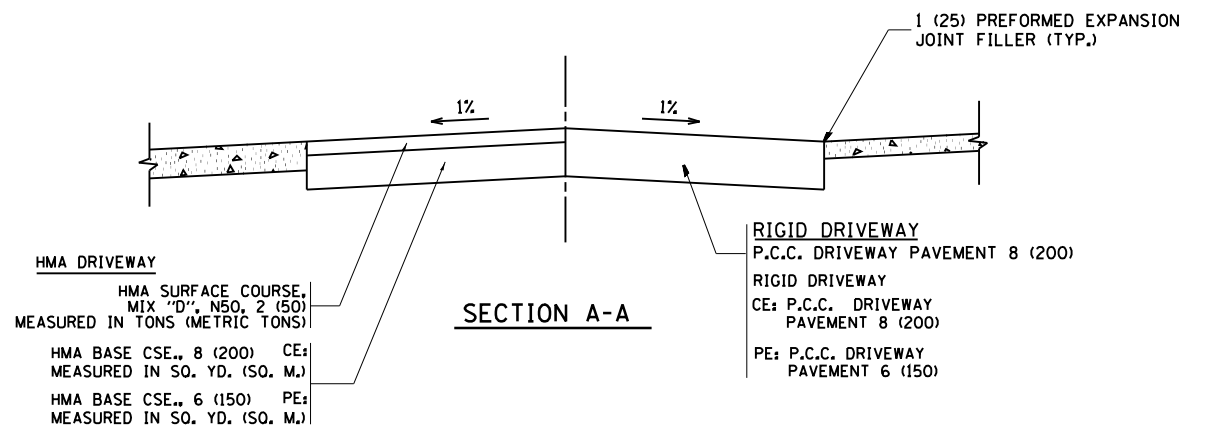
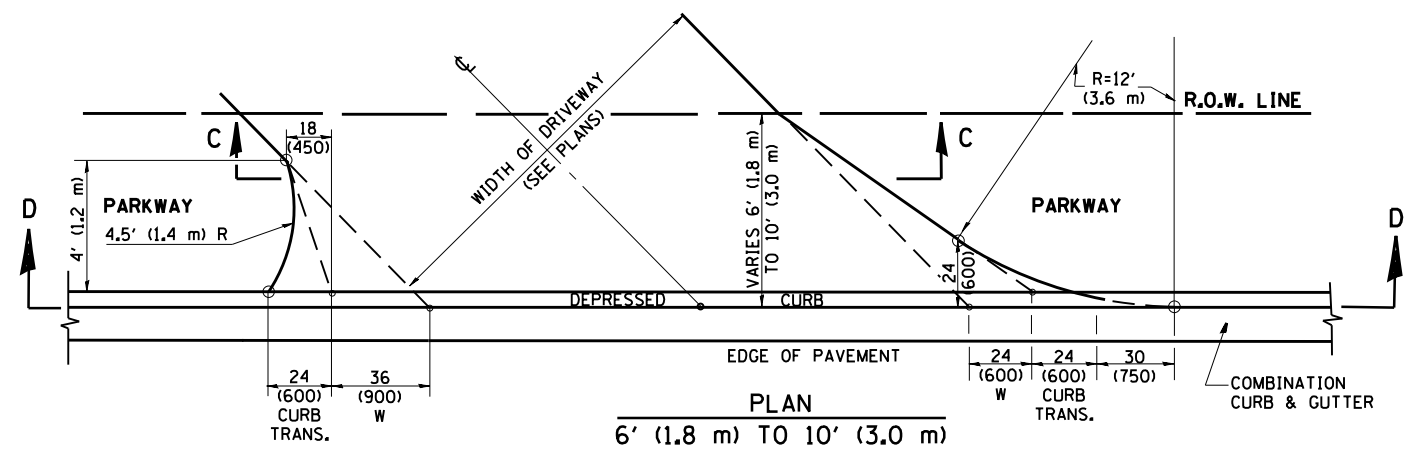
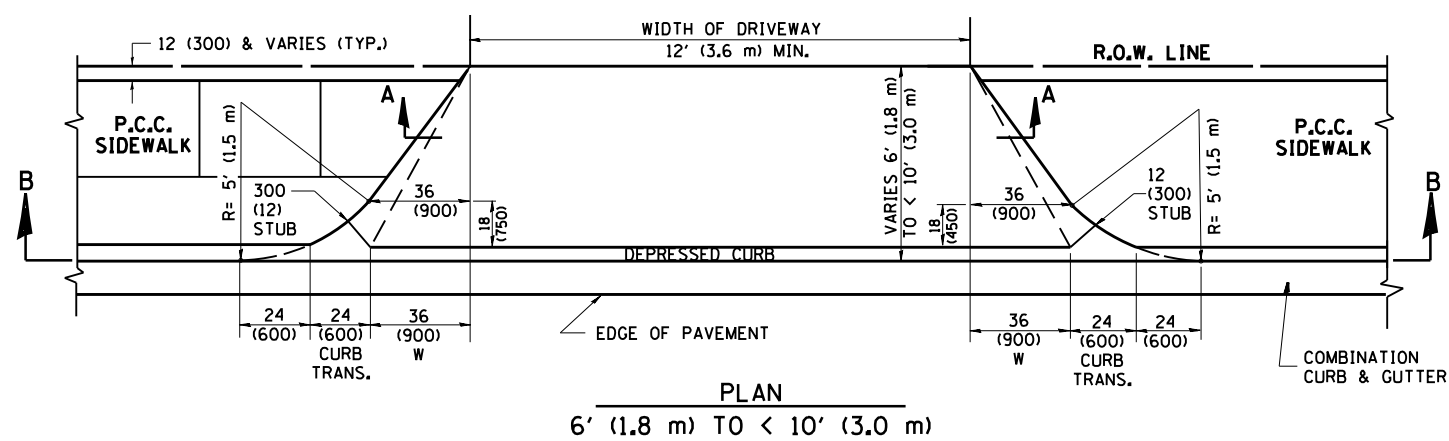
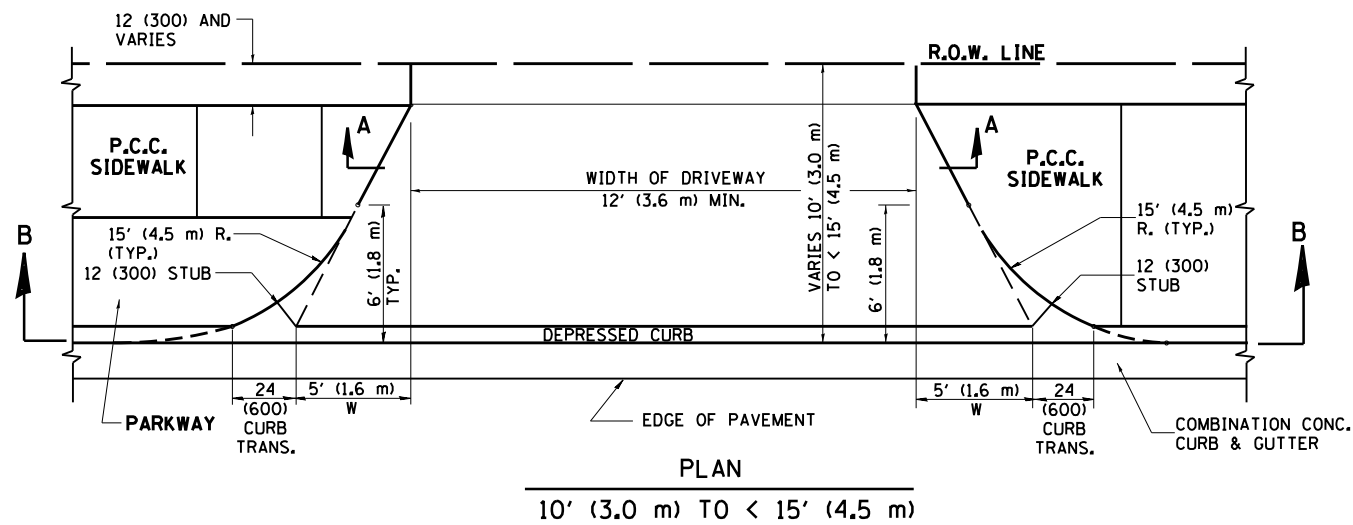
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VAR.	2014-085GRR	VARIOUS	23	8
			CONTRACT NO. 62A34	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



DISTRICT NO. 1

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
- FUTURE HIGHWAYS
- VARIOUS AGENCIES HIGHWAYS

FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL REPAIR LOCATION MAP COOK COUNTY NORTH OF AND INCLUDING IL. RTE 38	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		DATE -	REVISED -			SCALE:		SHEET NO. OF SHEETS STA. TO STA.			
				FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT					



GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

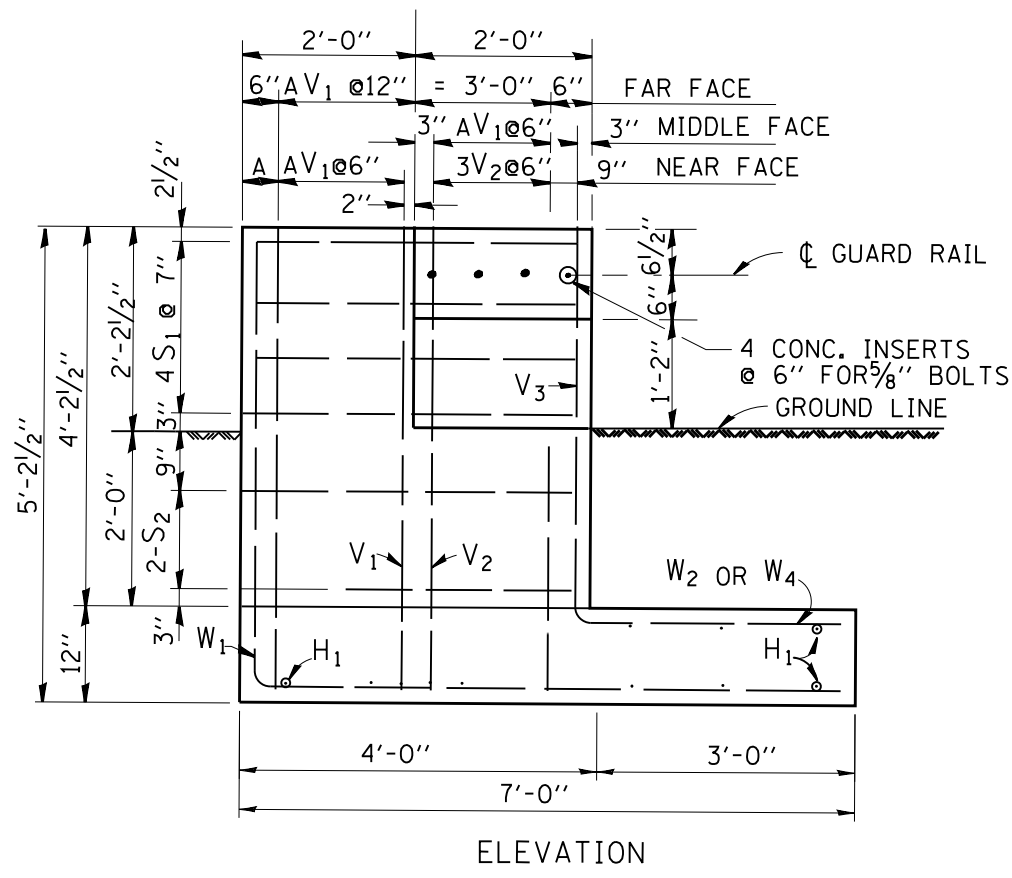
"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

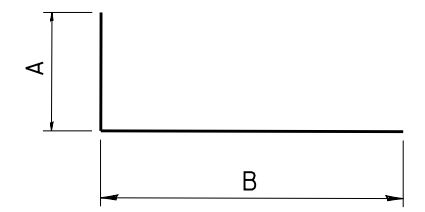
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

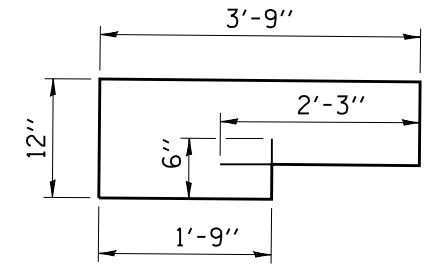
DRIVEWAY DETAILS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)			2014-085GRR	VARIOUS	23	10
SCALE: NONE		BD400-02 (BD-02)		CONTRACT NO. 62A34		
SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



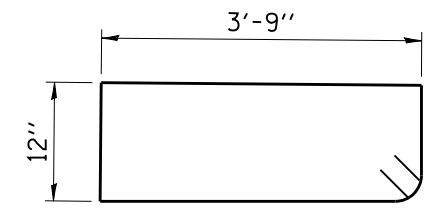
ELEVATION



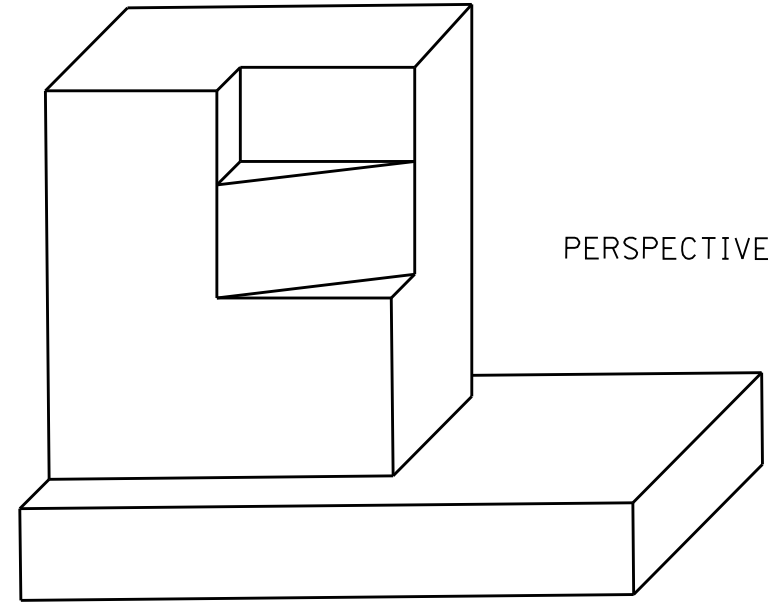
BAR	A	B	A+B
V ₁	4'-8"	6"	5'-2"
V ₂	2'-6"	6"	3'-0"
W ₁	4'-8"	6'-6"	11'-2"
W ₂	2'-0"	3'-0"	5'-0"
W ₄	4'-2"	3'-0"	7'-2"



S₁ BAR

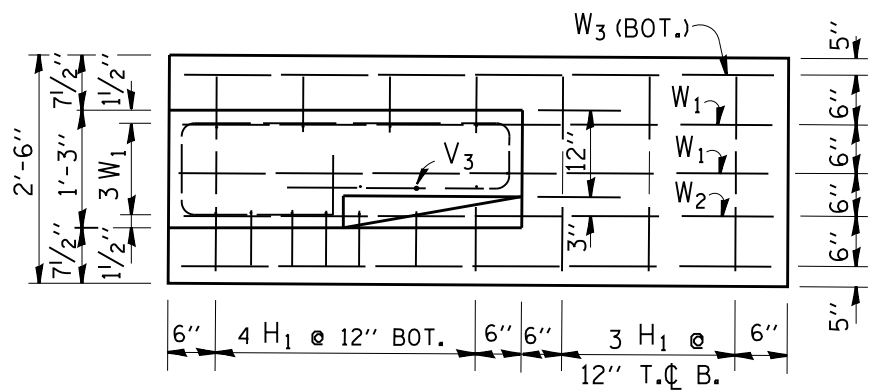


S₂ BAR



PERSPECTIVE VIEW

NOTES: CLASS X CONCRETE SHALL BE USED THROUGHOUT REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED

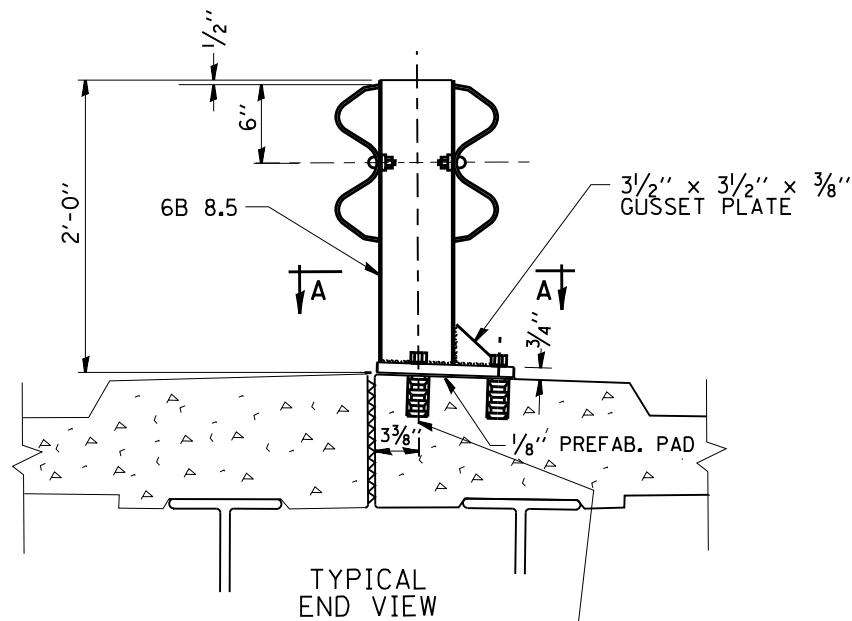


FOOTING PLAN

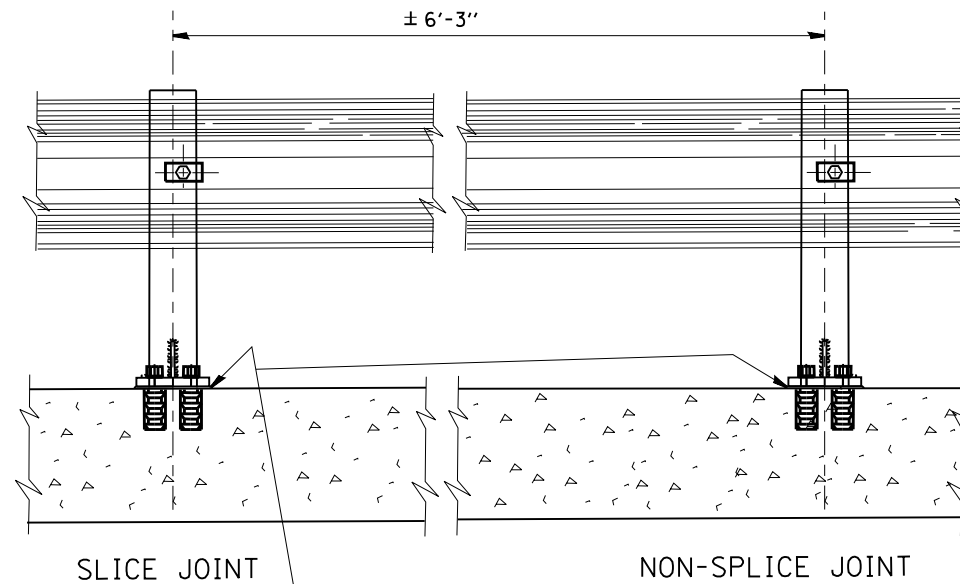
BAR SCHEDULE

BAR	NO.	LENGTH
V ₁	8	5'-2"
V ₂	3	3'-0"
V ₃	4	3'-0"
W ₁	3	11'-2"
W ₂	1	5'-0"
W ₃	2	6'-6"
W ₄	2	7'-2"
S ₁	4	10'-0"
S ₂	2	10'-0"
H ₁	1	2'-3"

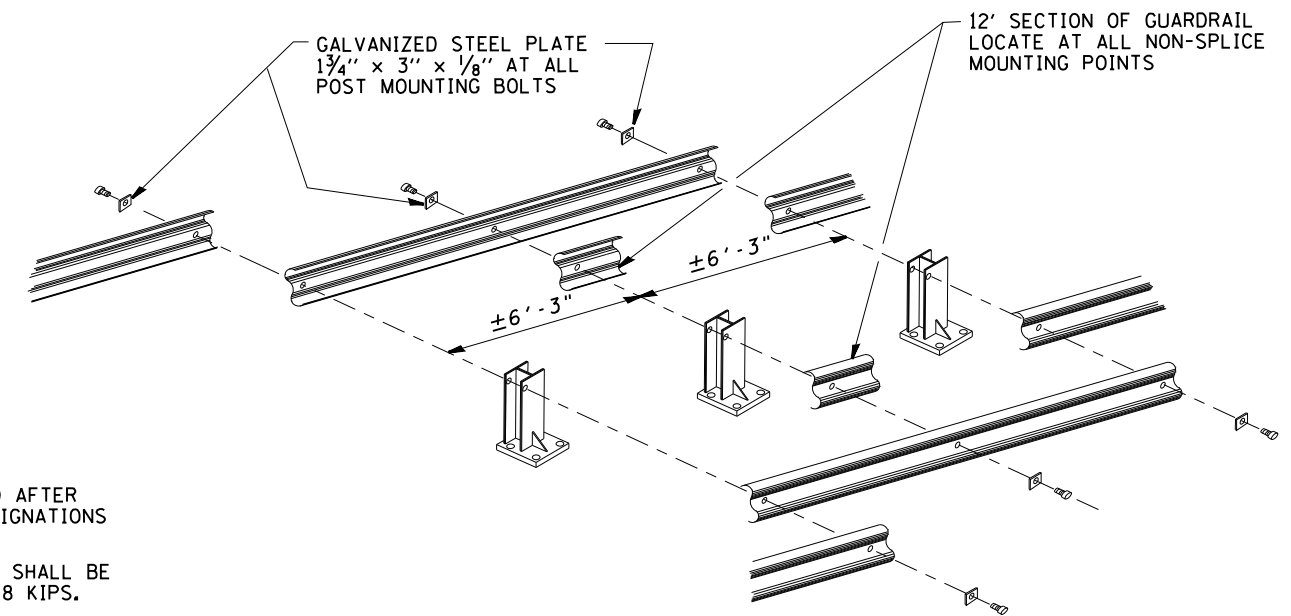
THIS SHEET IS FOR INFORMATION ONLY



7/8" GALVANIZED ANCHOR BOLTS AND SELF DRILLING EXPANSION SHELLS OR MULTI UNIT TYPE ANCHORS
1/8" HOLES THRU BASE PLATE

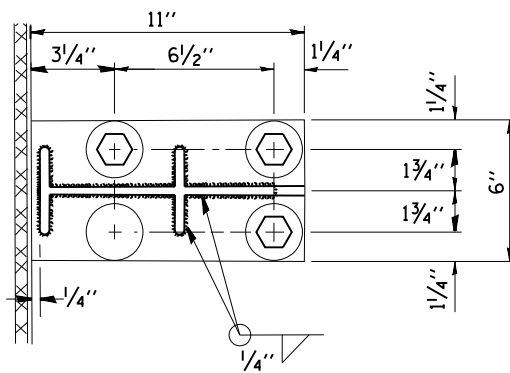


SEAL PERIMETER OF BASE OF POST TO MEDIAN WITH TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMERS - GUN GRADE WITH PRIMER



NOTE:

DIAMOND TIPPED DRILL SHALL BE USED TO DRILL THRU REINFORCEMENT BARS



SEC. A-A

NOTE:

POSTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM DESIGNATIONS A-123 AND A-385.

TWO PERCENT (2%) OF ALL ANCHOR BOLTS SHALL BE TEST LOADED IN PLACE. MIN. TEST LOAD = 8 KIPS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION A-153.

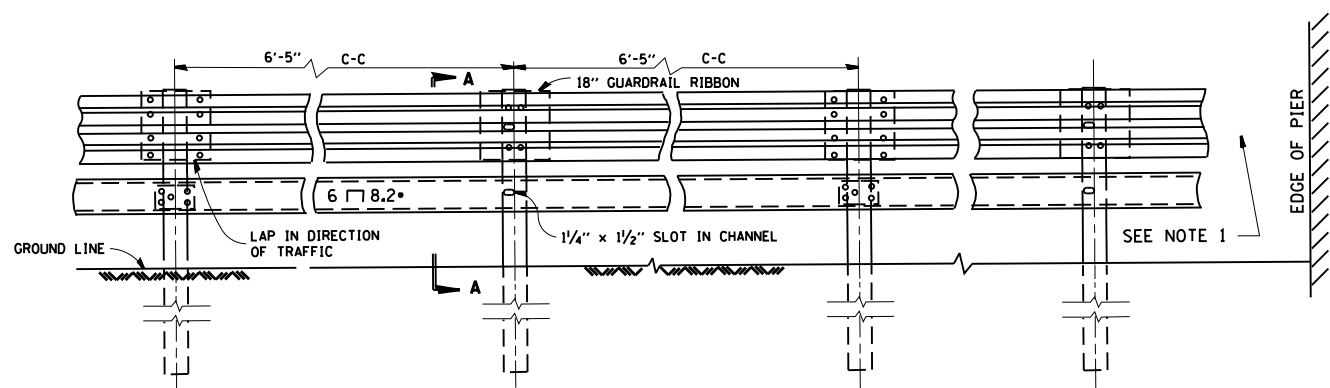
FOR MATERIAL COMPOSITION OF PREFABRICATED PAD, SEE ARTICLE 54.9(F), (BEARING AND ANCHORAGE), OF THE STANDARD SPECIFICATIONS.

PROVIDE 1-1/8" AND 2-1/16" GALVANIZED STEEL SHIMS FOR 25% OF THE POSTS.

IF ONE ANCHOR BOLT FAILS DURING TEST, TWO OTHER ANCHOR BOLTS SHALL BE TESTED. TESTING EQUIPMENT CAN BE OBTAINED FROM BOLT COMPANIES.

THIS SHEET IS FOR INFORMATION ONLY

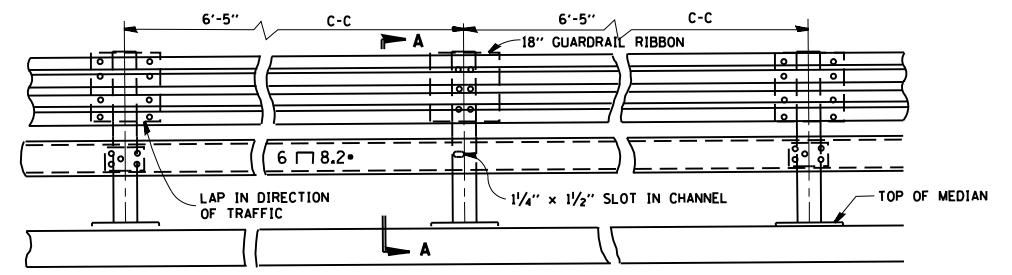
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et:\pw\work\pwidot\osbornnp\d0417925\DI4315-sht-cover.dgn		DRAWN - RFL	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR.	2012-022 GRR	VARIOUS	23	13
		CHECKED -	REVISED -							BM-05			
		DATE - 10-31-88	REVISED -										
	PLOT SCALE = 100.0000' / 1in.												
	PLOT DATE = 10/28/2014												
								CONTRACT NO. 62A34					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT													



ELEVATION

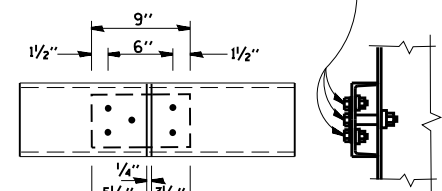
DETAIL OF END SECTION

NOTE 1:
FOR DETAILS OF GUARDRAIL END ANCHORAGE
AT PIERS, SEE SHEET NO. _____

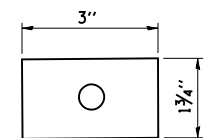


ELEVATION

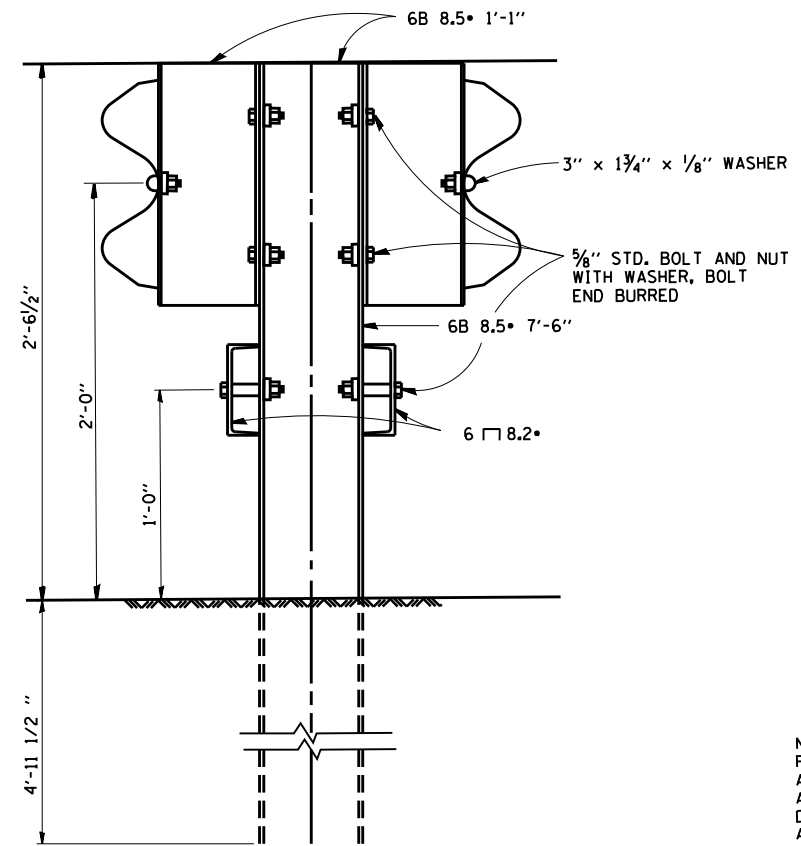
5/8" STD. BOLT AND NUT
WITH WASHER, BOLT
END BURRED



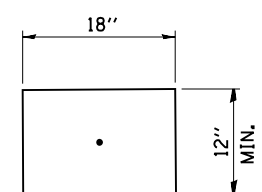
CHANNEL SPLICE
PLATE 8 3/4" x 4 1/2" x 1/4"



WASHER
PLATE 3" x 1 3/4" x 1/8"

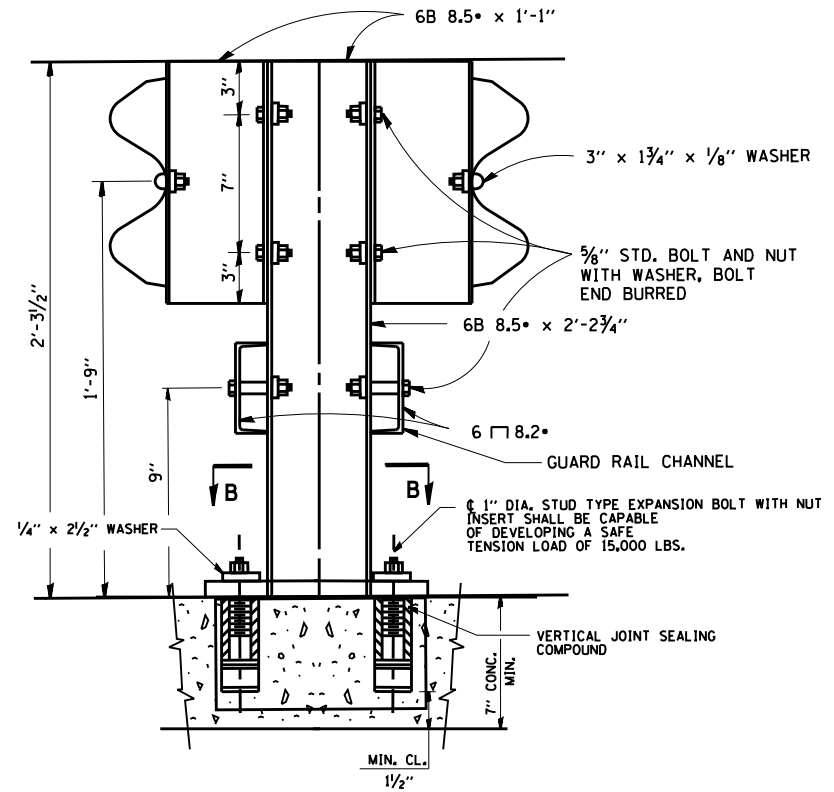


SECTION A-A



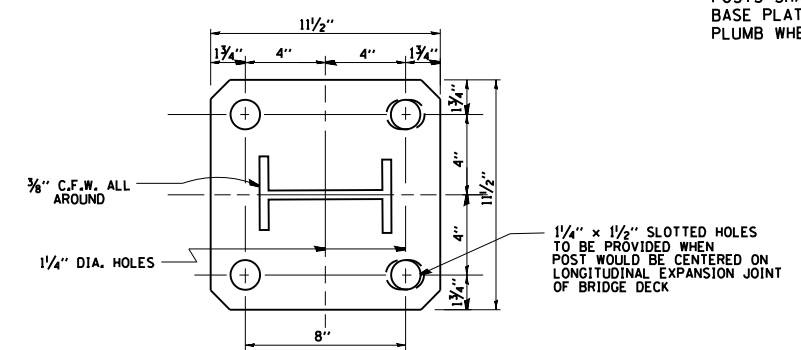
18" GUARDRAIL ELEMENT SPLICE

NOTE:
FOR DETAIL OF RAIL ELEMENT, RAIL SPLICING, BOLT,
AND NUT, SEE STATE STANDARD 2230.
A 1 3/8" x 3" x 1/8" STEEL PLATE WASHER AS SHOWN ON THIS
DRAWING SHALL BE PLACED BETWEEN THE BOLT HEAD
AND THE GUARDRAIL RIBBON AT ALL MOUNTING POINTS.
AN 18" PIECE OF GUARDRAIL RIBBON SHALL BE INSERTED
BETWEEN THE CONTINUOUS RIBBON AND THE POST AT
NON-SLICE MOUNTING POINTS.
RAIL, CHANNELS, POSTS, BASE PLATES, FASTENINGS,
AND ALL OTHER EXPOSED ACCESSORIES SHALL BE
GALVANIZED.



SECTION A-A
ANCHORAGE DETAIL

NOTE:
ALL WELDS SHALL BE GROUND SMOOTH.
POSTS SHALL BE CUT AND WELDED TO THE
BASE PLATE SO THAT THE POSTS WILL BE
PLUMB WHEN ERECTED.



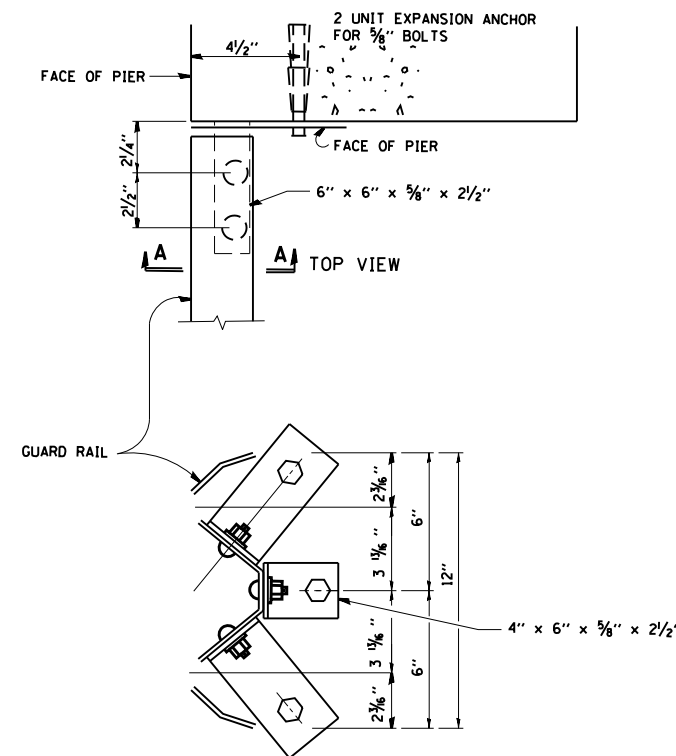
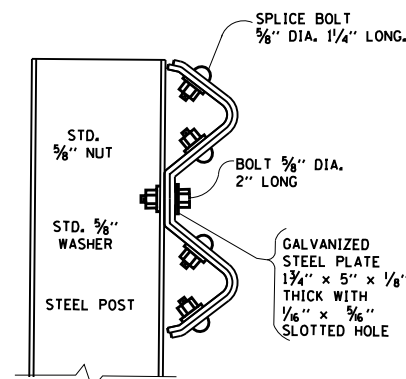
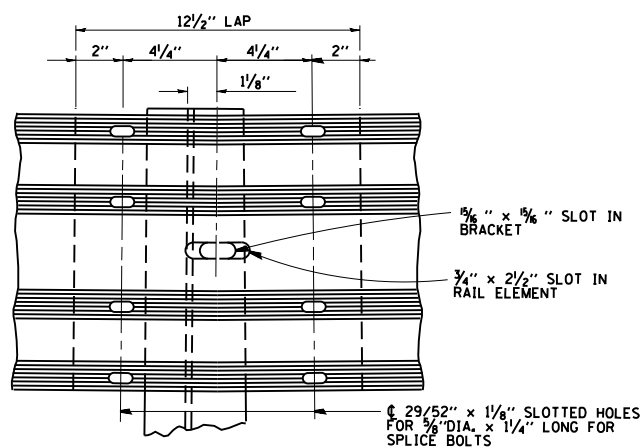
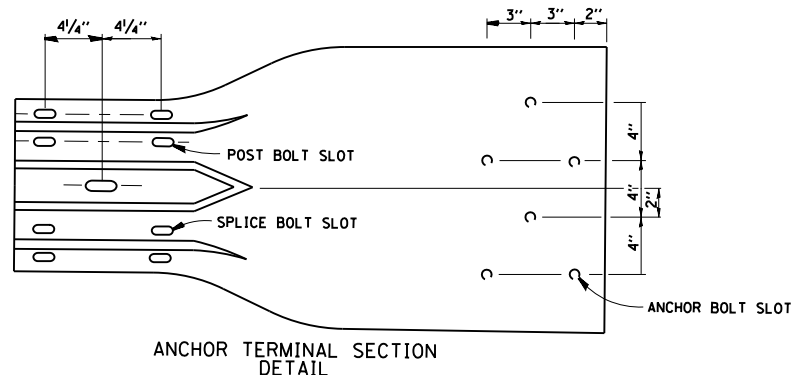
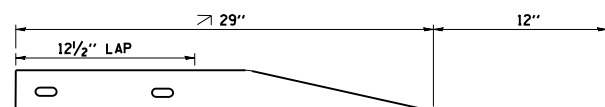
RAIL POST BASE PLATE
R 1 1/2" x 1 1/4" x 1 1/2"

SECTION B-B

THIS SHEET IS FOR INFORMATION ONLY

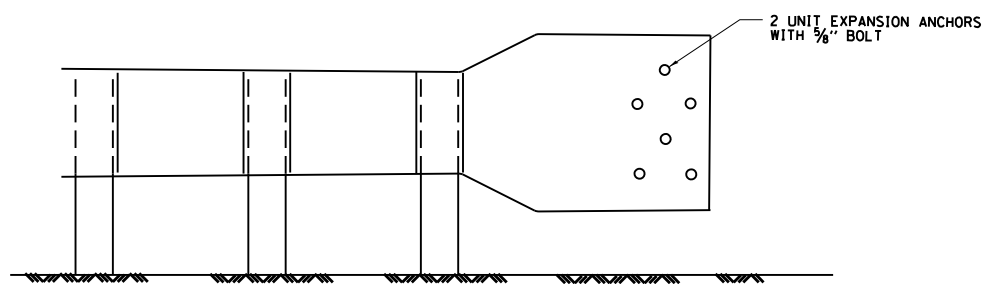
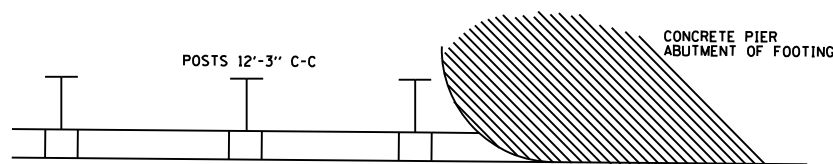
FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED - R. RITCHIE 05-02-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL PLATE BEAM GUARDRAIL SPECIAL			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pwork\pwork\osbornnp\d0417925\DI4315-sht-cover.dgn		DRAWN - RFL	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR.	2012-022 GRR	VARIOUS	23	14
		CHECKED -	REVISED -							BM-06			
		DATE -	REVISED -										

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



SECTION A-A
SCALE 4" = 1'

DETAIL OF CONNECTION OF GUARDRAIL TO SQUARE BRIDGE PIER OR FOUNDATION.



TYPICAL INSTALLATION
DETAIL OF CONNECTION OF GUARDRAIL TO ROUNDED BRIDGE PIER OR FOUNDATION

THIS SHEET IS FOR INFORMATION ONLY

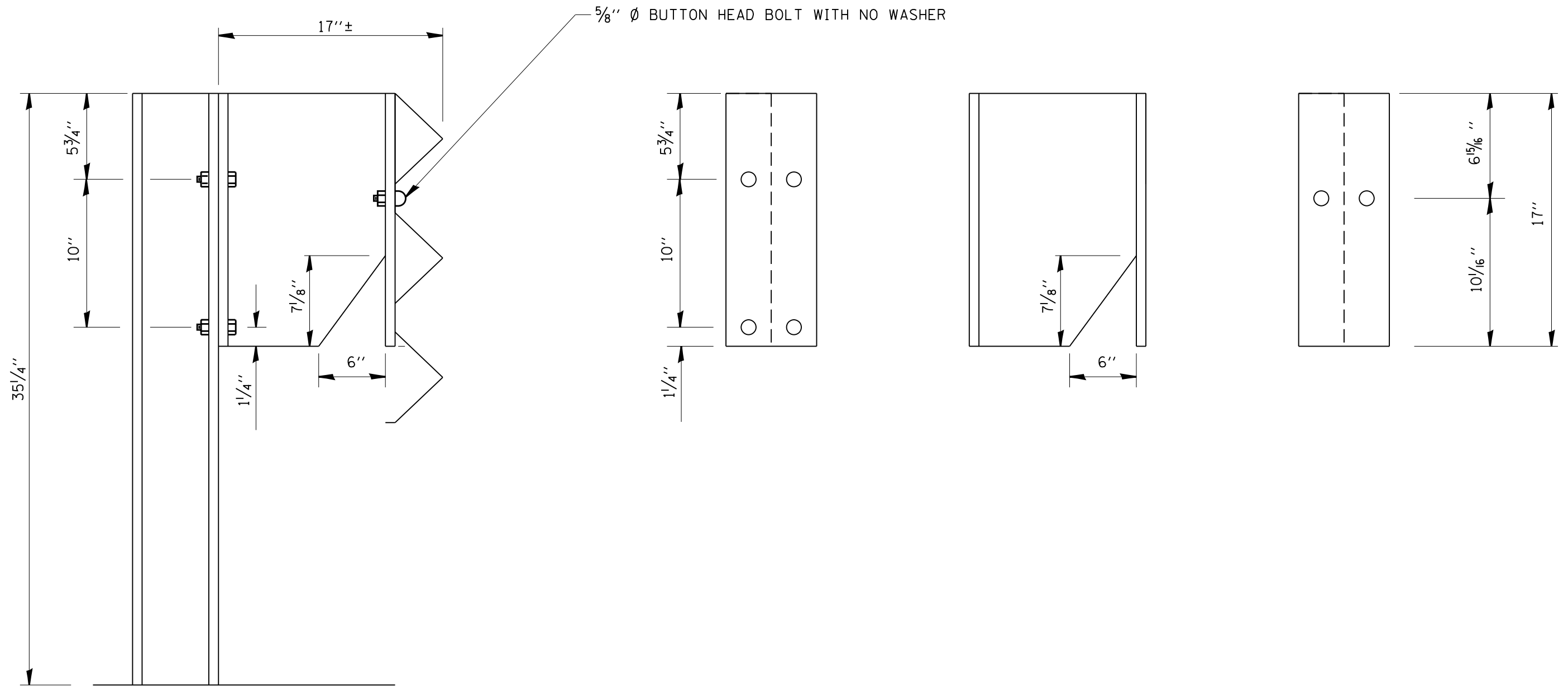
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et:\pwork\pwork\osbornnp\d0417925\DI4315-sht-cover.dgn		DRAWN - RFL	REVISED -
	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 10/28/2014	DATE - 10-31-88	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF GUARDRAIL SUPPORT
AND END ANCHORAGE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2012-022 GRR	VARIOUS	23	15
	BM-07		CONTRACT NO. 62A34	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



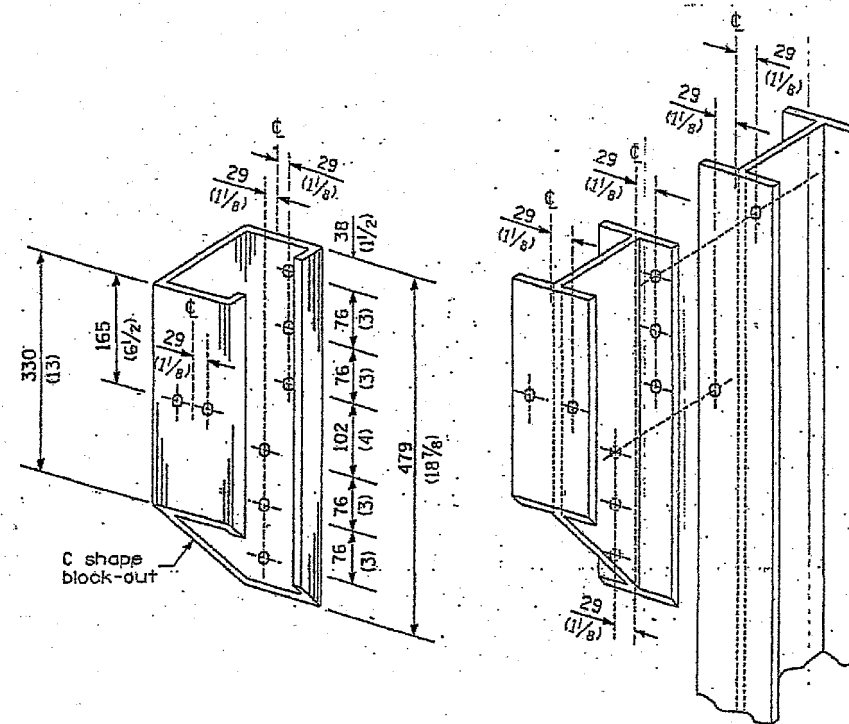
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	PLOT SCALE = 100.0000' / 1".	CHECKED -	REVISED -
	PLOT DATE = 10/28/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL THRIE BEAM GUARDRAIL
WITH MODIFIED OFFSET BLOCK**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2012-022 GRR	VARIOUS	23	16
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 62A34	



STEEL BLOCK-OUT AND
STEEL POST DETAILS

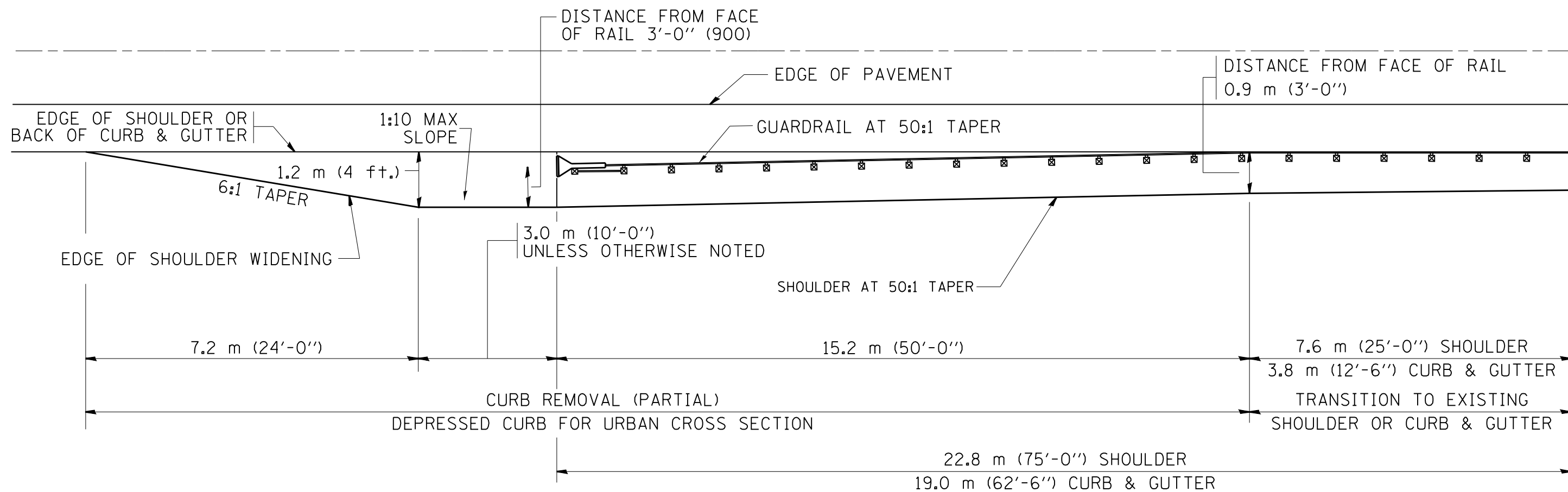
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Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/28/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM GUARDRAIL
STEEL BLOCK-OUT DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2012-022 GRR	VARIOUS	23	17
			CONTRACT NO. 62A34	
ILLINOIS FED. AID PROJECT				

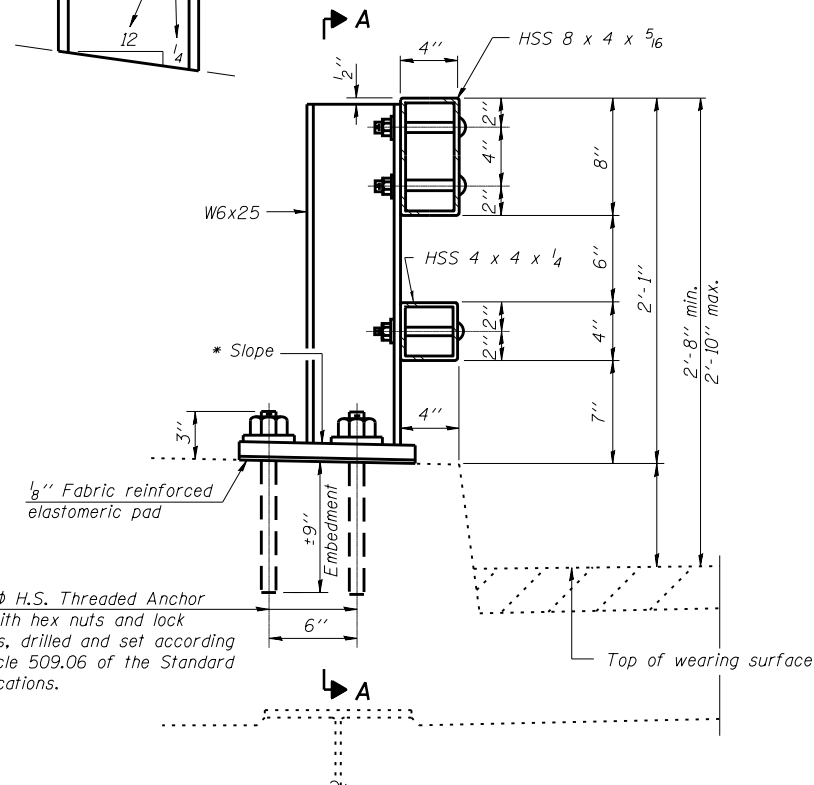


NOTES: THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

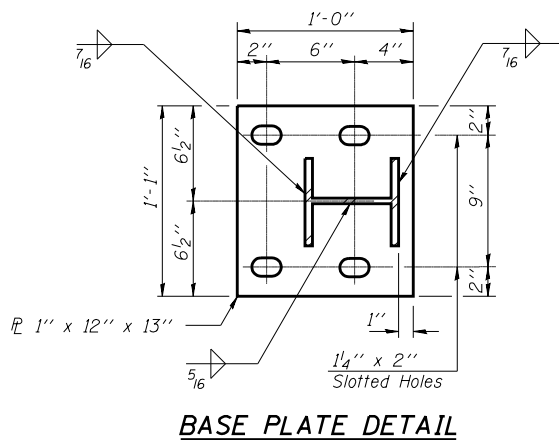
SHOULDER WIDENING SHALL BE IN ACCORDANCE WITH STATE STANDARD 630301

FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CURB REMOVAL (PARTIAL) FOR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL				F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
Default	10/28/2014	DRAWN -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	VAR.	2012-022 GRR	VARIOUS	23	18
		CHECKED -	REVISED -						CONTRACT NO. 62A34						
		DATE -	REVISED -						ILLINOIS FED. AID PROJECT						

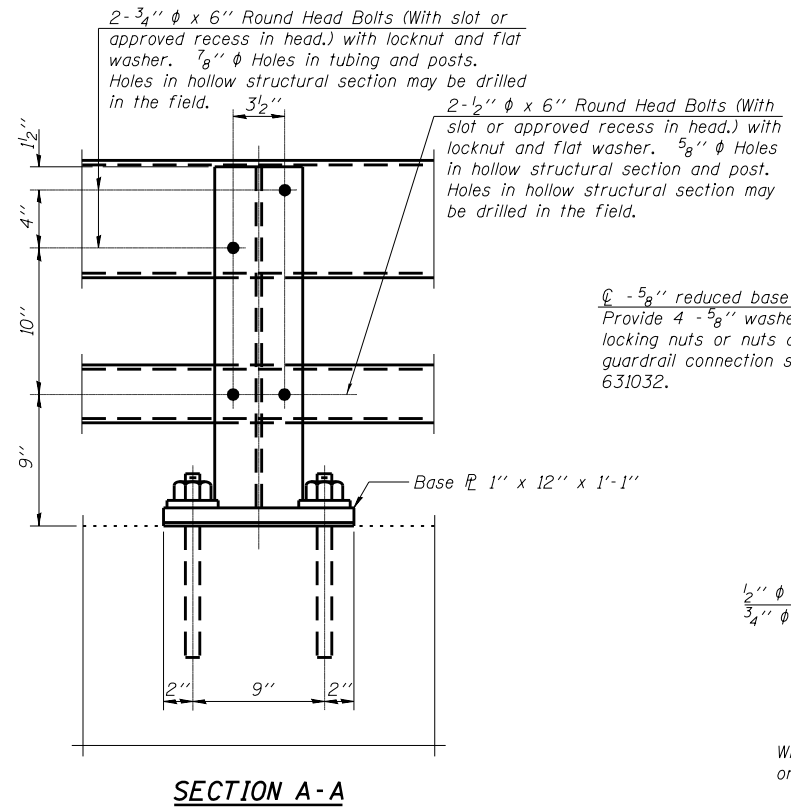
* Cut bottom end of post to curb slope.



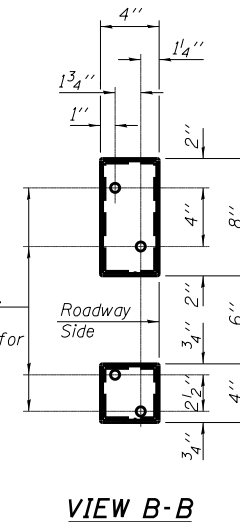
SECTION AT RAIL POST



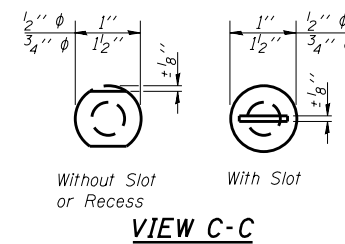
BASE PLATE DETAIL



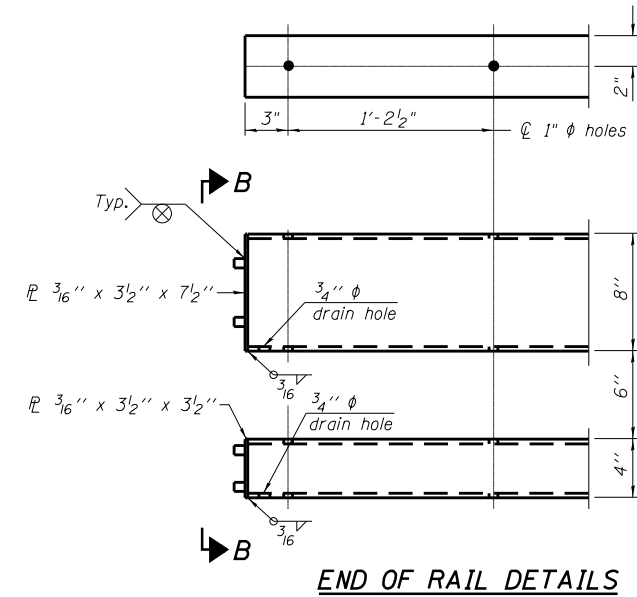
SECTION A-A



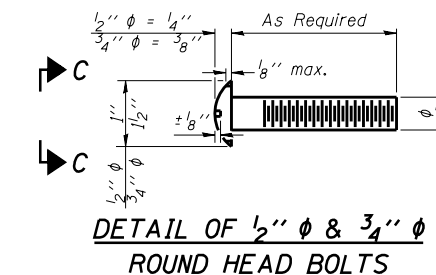
VIEW B-B



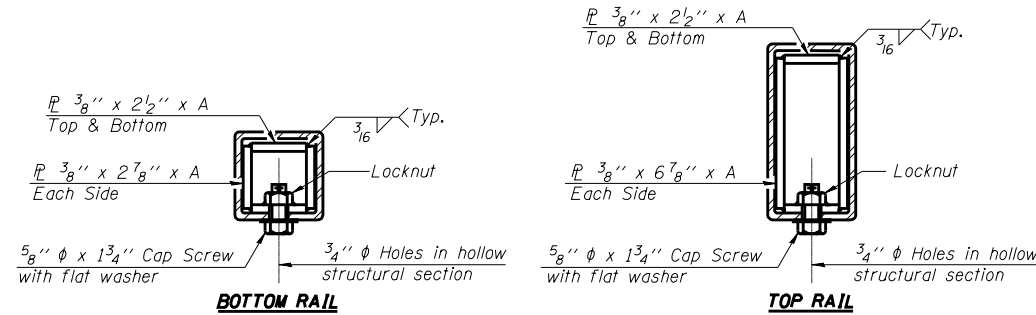
VIEW C-C



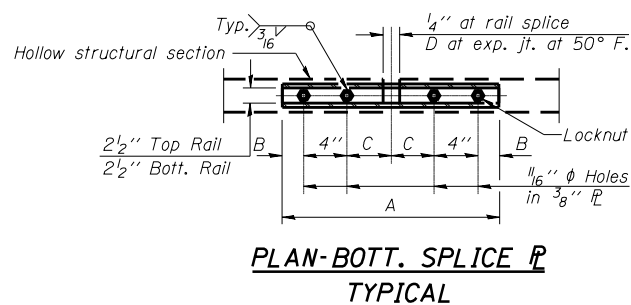
END OF RAIL DETAILS



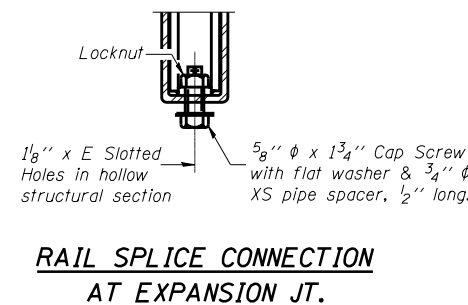
DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4" ≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2" ≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9" ≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	23

R-31

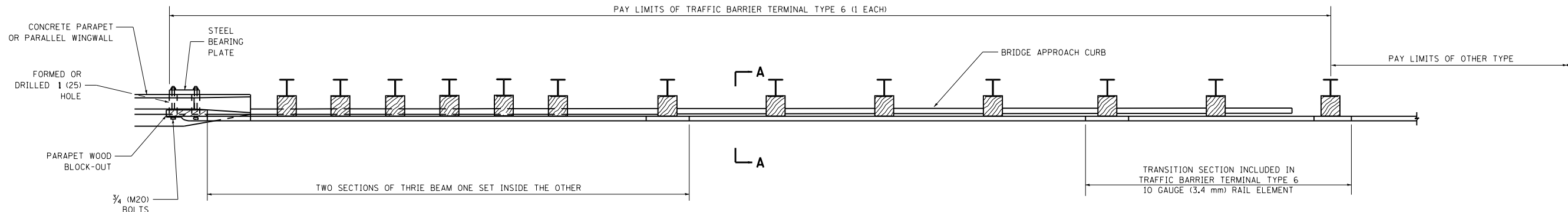
7-1-10

(6'-3" Maximum Post Spacing)

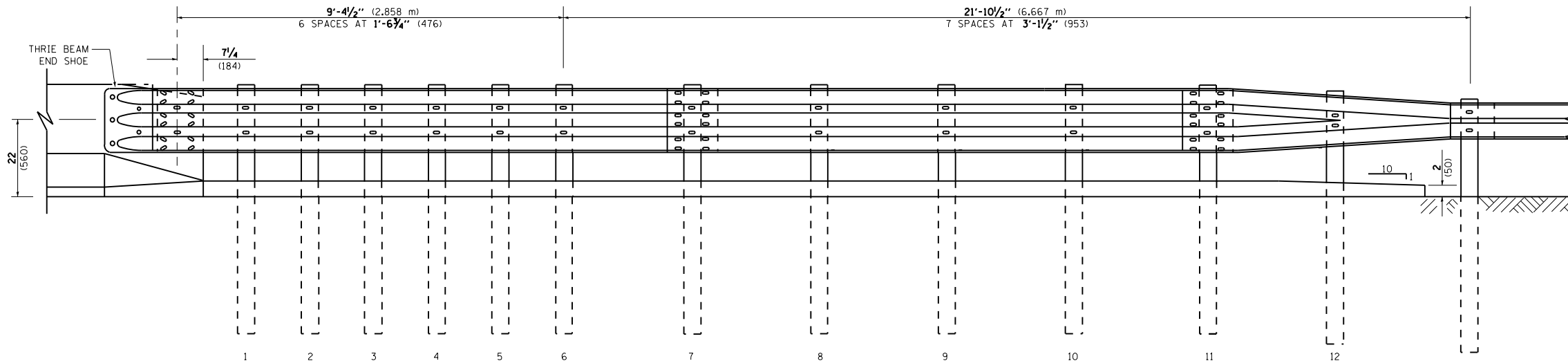
**STEEL RAILING, TYPE 2399
STRUCTURE NO.**

PARAPET OR WINGWALL

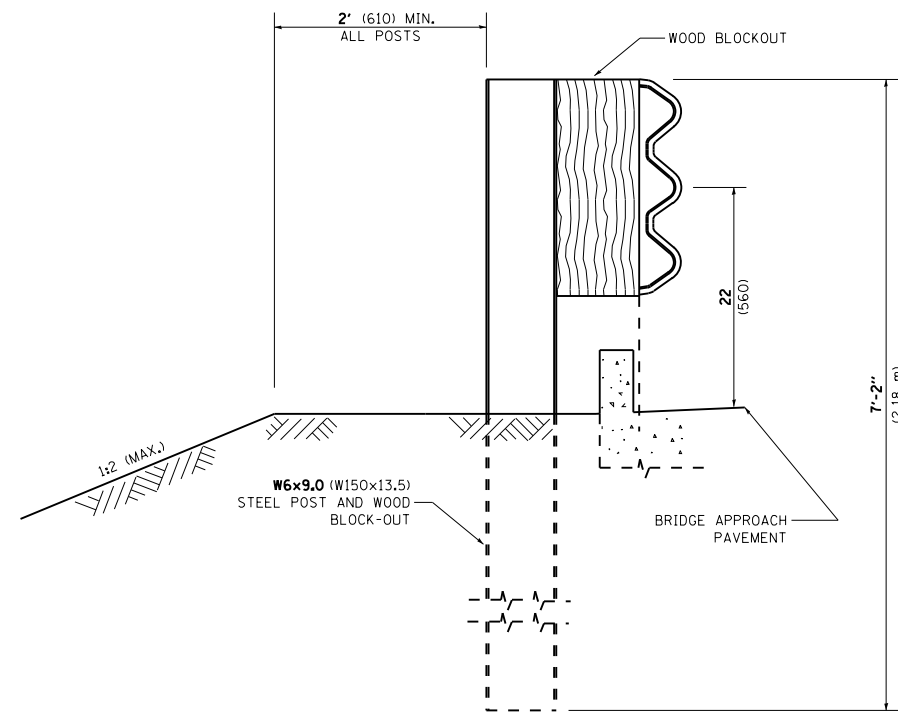
PAY LIMITS OF TRAFFIC BARRIER TERMINAL TYPE 6 (1 EACH)



PLAN



ELEVATION



SECTION A-A

GENERAL NOTES

TO BE USED WHEN CONNECTING TO EXISTING GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.

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).

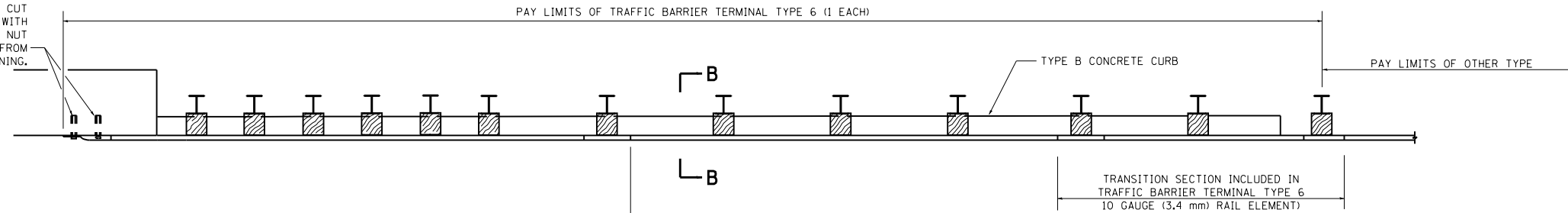
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED - STATE STANDARD;	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPE 6 TERMINAL FOR USE WITH 21" HIGH SPBGR			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pw_work\p\idot\osbornnp\d0417925\DI4315-sht-cover.dgn		DRAWN -	631031-05 - 02/19/2008		SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	VAR.	2012-022 GRR	VARIOUS	23	20
		CHECKED -	REVISED -							BM 22			
		DATE -	REVISED -							CONTRACT NO. 62A34			
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

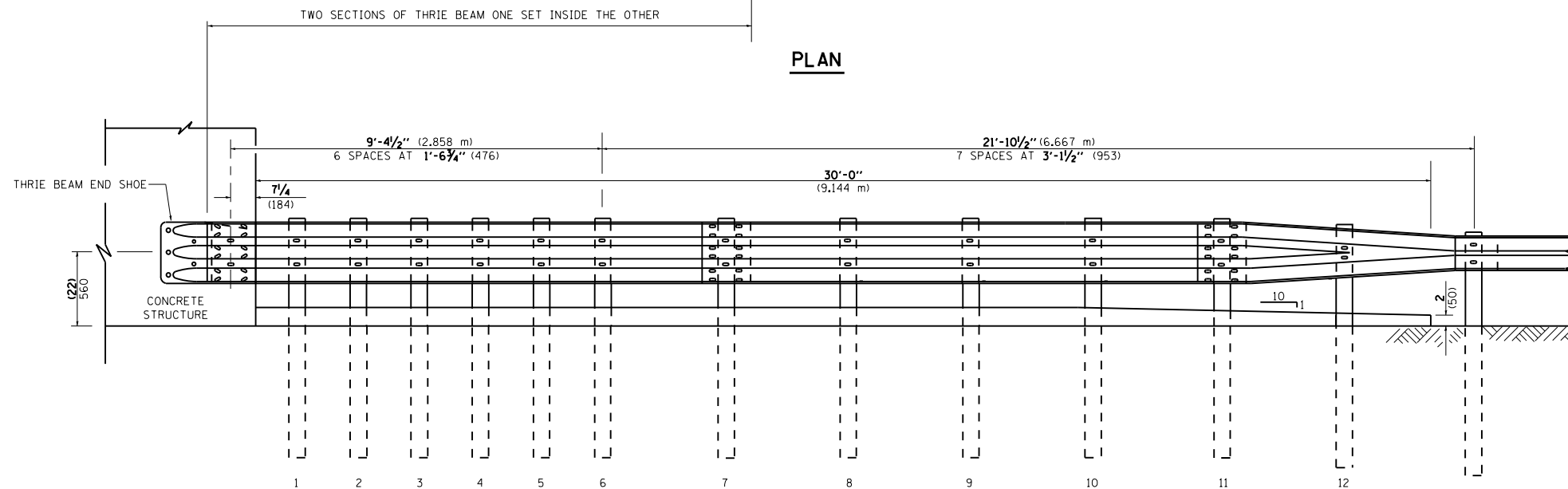
OTHER CONCRETE STRUCTURE

5 EPOXY GROUTED 3/4" (M20) ANCHOR BOLTS WITH STANDARD WASHERS. AFTER TIGHTENING, CUT THE ANCHOR BOLTS FLUSH WITH NUTS, AND DAMAGE THE NUT TO PREVENT IT FROM LOOSENING.

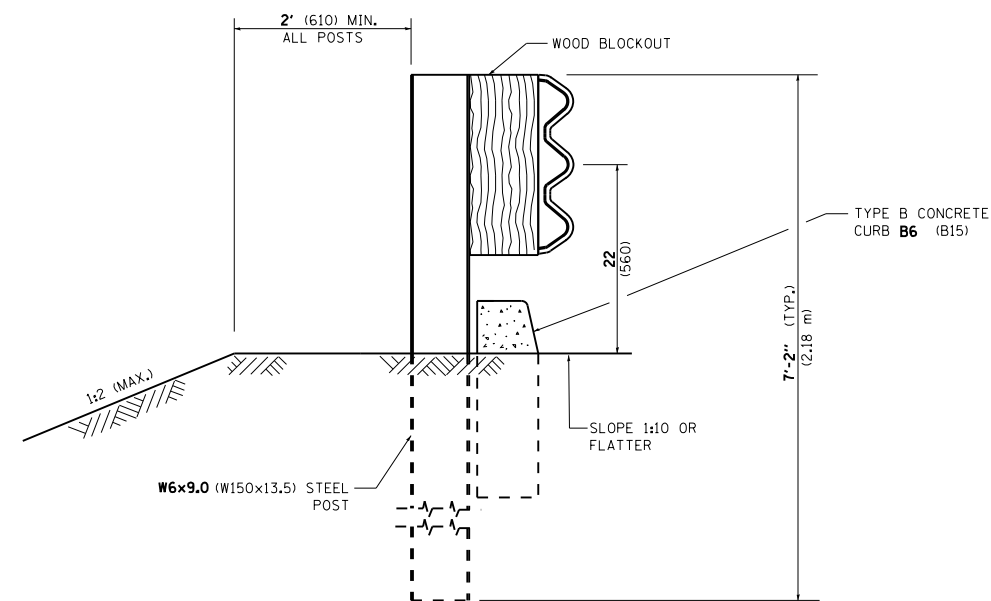
PAY LIMITS OF TRAFFIC BARRIER TERMINAL TYPE 6 (1 EACH)



PLAN

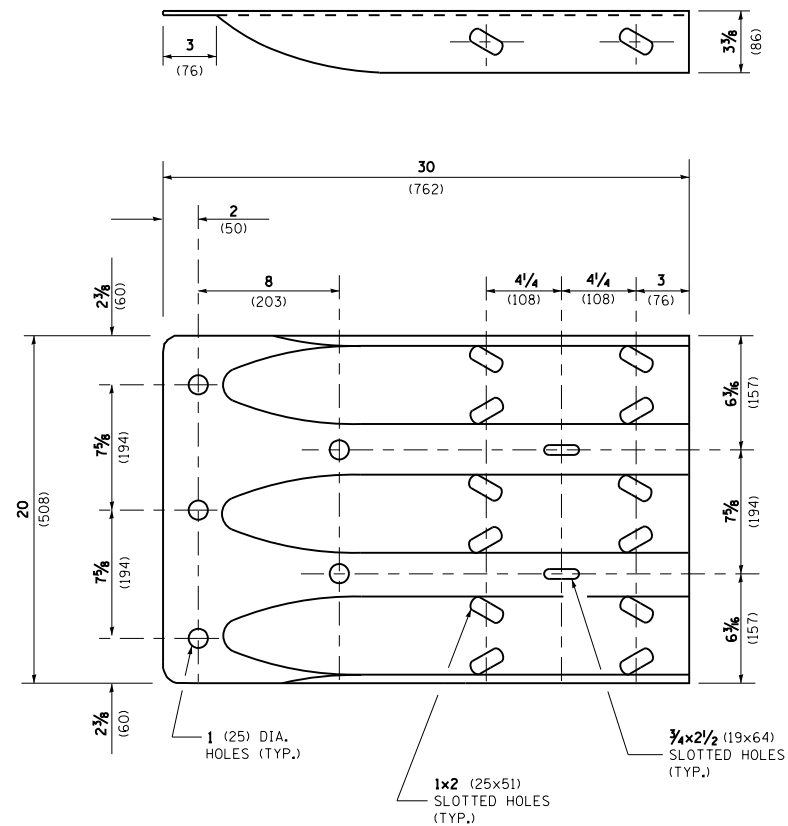


ELEVATION

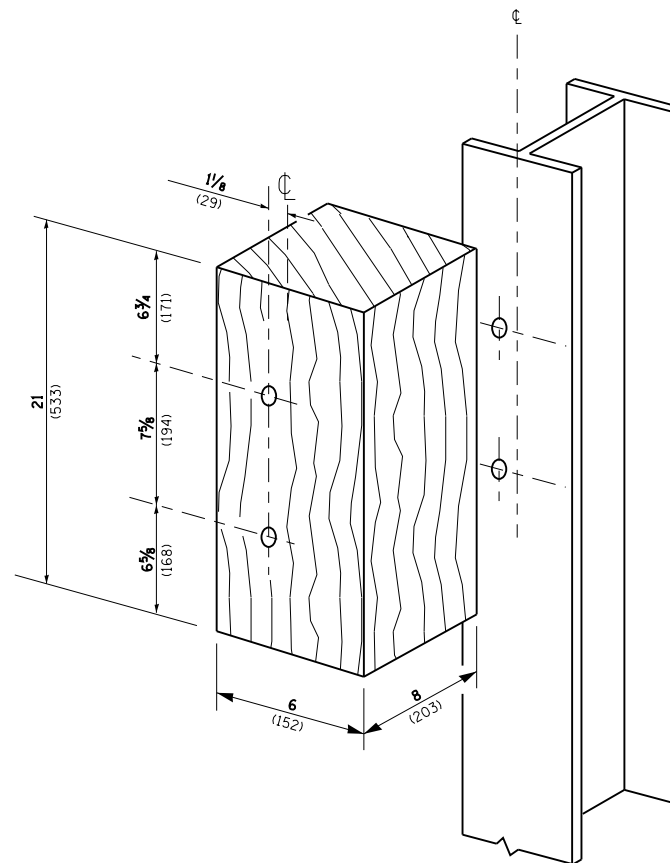


SECTION B-B

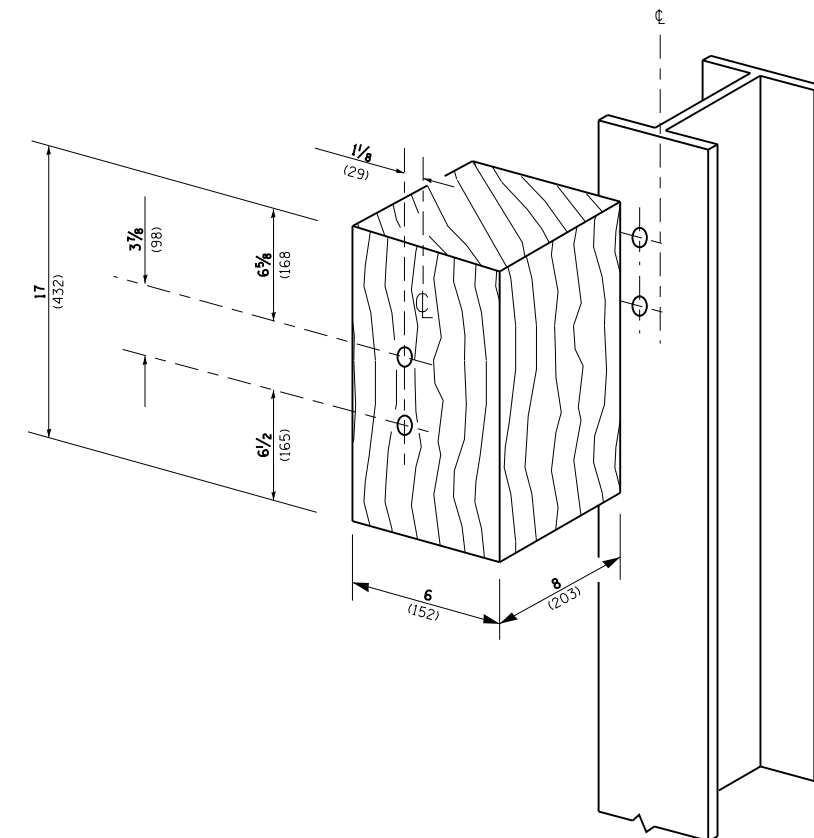
FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED - STATE STANDARD;	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPE 6 TERMINAL FOR USE WITH 21" HIGH SPBGR			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED -	REVISED -							BM 22			
		DATE -	REVISED -							CONTRACT NO. 62A34			
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



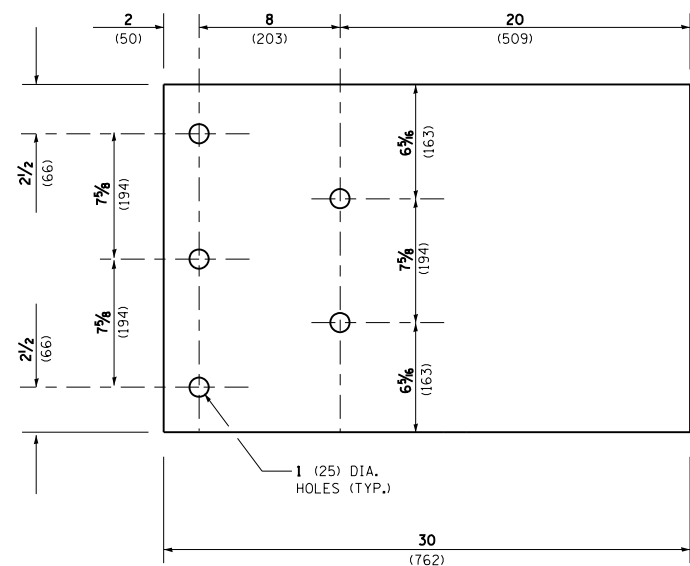
THRIE BEAM END SHOE DETAIL



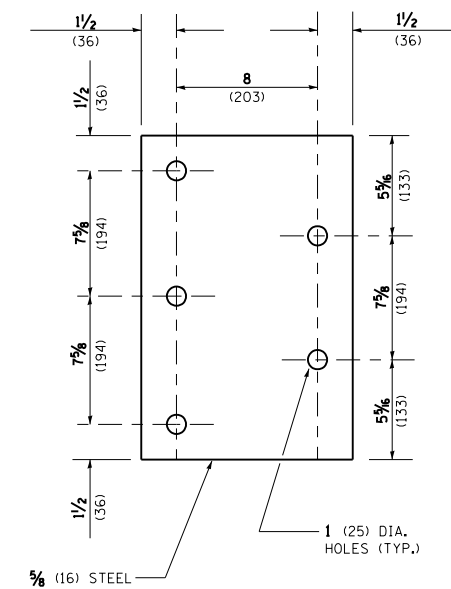
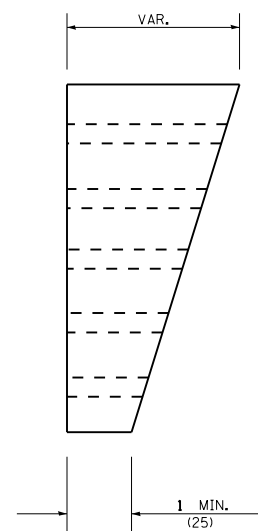
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL



PARAPET STEEL BEARING PLATE DETAIL

(5 EACH INDIVIDUAL 5x5x5/16 (125x125x16) STEEL PLATES WITH CENTERED 1 (25) HOLES MAY BE SUBSTITUTED FOR THE PLATE SHOWN.)

FILE NAME =	USER NAME = osbornnp	DESIGNED -	REVISED - STATE STANDARD;
et:\pw_work\p1dot\osbornnp\d0417925\DI4315-sht-cover.dgn		DRAWN -	631031-05 - 02/19/2008
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -
	PLOT DATE = 10/28/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPE 6 TERMINAL
FOR USE WITH 21" HIGH SPBGR**

SCALE: NONE SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2012-022 GRR	VARIOUS	23	22
BM 22		CONTRACT NO. 62A34		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

