

INDEX

SHEET NO.	DESCRIPTION
ST1	QUANTITIES
ST2-ST11	TABULATIONS
ST12-ST24	ROADWAY LAYOUTS
ST25-ST33	SIGN PANEL LAYOUTS
ST34-ST50	DETAILS
ST51-ST53	CROSS SECTIONS

TABULATION OF QUANTITIES				ST
TAB	SHEET NO	ITEM	UNIT	TOTAL SIGNING QUANTITIES
		REMOVE DELINEATOR	EACH	14
		REMOVE MARKER	EACH	4
STA	ST2	REMOVE SIGN TYPE A	EACH	3
		REMOVE SIGN TYPE C	EACH	30
STE	ST6	REMOVE SIGN TYPE D	EACH	14
STM	ST8	REMOVE SIGN TYPE EA	EACH	1
STG	ST6	SALVAGE SIGN TYPE D	EACH	1
STJ	ST8	SALVAGE SIGN TYPE EA	EACH	1
STR	ST11	CONCRETE FOOTINGS (TYPE OH SPREAD)	CU YD	18.7
STR	ST11	CONCRETE FOOTINGS (TYPE OH SHAFT)	CU YD	14.1
STB	ST3	STRUCT STEEL-POSTS FOR TYPE A SIGNS (P)	POUND	1904
STR	ST11	STRUCT STEEL-POSTS FOR OH SIGNS (B) (P)	POUND	12645
STR	ST11	STRUCT STEEL-TRUSSES FOR OH SIGNS (B) (P)	POUND	8057
STR	ST11	STR STEEL-PANEL MT PST FOR OH SIGNS (B) (P)	POUND	1032
STB	ST3	SIGN PANELS TYPE A (P)	SQ FT	231
STD,STH	ST4,ST5	SIGN PANELS TYPE C	SQ FT	405
STI,STF	ST5,ST7	SIGN PANELS TYPE D	SQ FT	576
STK,STN	ST8	SIGN PANELS TYPE EA (P)	SQ FT	50
STO	ST8	SIGN PANELS TYPE EO (P)	SQ FT	45
STU	ST2	SIGN PANELS TYPE OVERLAY	SQ FT	97
STS	ST10	SIGN PANELS TYPE OH (P)	SQ FT	338
STC	ST2	SIGN PANEL OVERLAY TYPE A (P)	SQ FT	538
STQ	ST10	SIGN PANEL OVERLAY TYPE OH (P)	SQ FT	105
STL	ST8	SIGN PANEL OVERLAY TYPE EA (P)	SQ FT	23
STG	ST6	INSTALL SIGN TYPE D	EACH	1
STJ	ST8	INSTALL SIGN TYPE EA	EACH	1
STP	ST10	OVERHEAD SIGN IDENTIFICATION PLATE	EACH	1
STV	ST9	DEL INEATOR	EACH	14
STT	ST9	REFERENCE LOCATION SIGN	EACH	2
STW	ST9	CLEARANCE MARKER X4-4	EACH	2

(P) DENOTES PLAN QUANTITY

I HEREBY CERTIFY THAT SHEETS ST1-ST53 WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: ROBERT HEENAN LICENSE # 1982
 DATE: 1/28/2016 SIGNATURE:
 DESIGN SQUAD N. BOCKWINKEL, K. PETERA

QUANTITIES

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 PLOT NAME: Rural Sample Plan_CHARTS12
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

PLOTTED/REVISED: 1/28/2016

REMOVE SIGN TYPE A							STA	
SIGN NO	QTY	LOCATION	PANEL SIZE (1)		POSTS			
			EXTRUDED TYPE	FLAT SHEET	SIZE (1)		L1	L2
	EACH		INCH		BREAK-AWAY	NON BREAK-AWAY	FEET	FEET
A I94-122	1	878+50 EB	198 x 168		W 8 x 24		21.5	22.5
A I94-123	1	915+50 WB	198 x 162		W 8 x 24		24.0	23.5
A I94-125	1	965+25 WB	198 x 156		W 8 x 24		20.0	21.0
TOTAL		3						

SPECIFIC NOTE:
 (1) SIZES ARE APPROXIMATE

DISTRICT #: METRO
 I/PLOT NAME: 2
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

SIGN PANEL OVERLAY TYPE A			STC	
SIGN NO	LOCATION	OVERLAY	AREA	
		INCH	SQ FT	
A I94-120	780+00 EB	192 x 150	200.00	
A I94-121	834+00 EB	192 x 150	200.00	
A I94-124	941+25 WB	144 x 138	138.00	
TOTAL			538.00	

GENERAL NOTE:
 1. SEE SHEET ST26 FOR SIGN PANEL OVERLAYS.

SIGN PANELS TYPE OVERLAY					STU
CODE NO.	QTY	SIZE	AREA	TOTAL	LEGEND
		INCH	SQ FT	SQ FT	
M1-1	10	24 x 24	4.00	40.00	INTERSTATE 94
M1-5B	5	36 x 36	9.00	45.00	MINNESOTA 25
M1-5B	2	24 x 24	4.00	8.00	MINNESOTA 25
M1-6A	1	24 x 24	4.00	4.00	COUNTY 8
TOTAL				97.00	

TABULATIONS-TYPE A AND OVERLAYS

DRAWN BY: LBJ

CHECKED BY: RFK

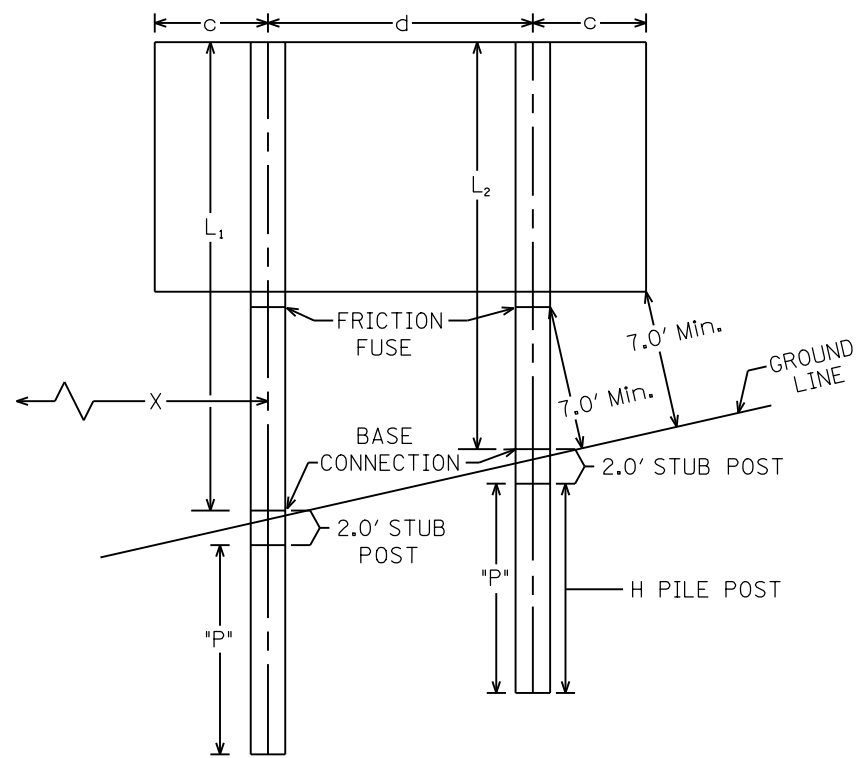
CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST2 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: 3
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

SIGN TYPE A (H PILE FOOTINGS)														STB			
SIGN NO	LOCATION	PANEL		SIZE	QTY	POST		ADDITIONAL STEEL PER POST	WEIGHT	c	d	"P"	WEIGHT	TOTAL WEIGHT STRUCTURAL STEEL	"X"	"H"	
		SIZE	AREA			LENGTH											
		INCH	SQ FT			L1	L2										
A I94-504	878+50 EB	198 x 168	231.00	W 8 x 24	2	22.0	23.5	118	1328.00	41	116	12	576.00	1904.00	30	6	
		TOTAL	231.00											TOTAL	1904.00		



BREAKAWAY POSTS-H-PILE FOOTING
 (L₁ IS POST NEAREST ROADWAY)

TYPE A SIGNS

POST QUANTITIES			
POST SIZE	QUANTITY (1)	POST SIZE	QUANTITY (1)
W4X13	59+13 LBS/FT	W8X28	143+28 LBS/FT
W5X16	67+16 LBS/FT	W8X31	173+31 LBS/FT
W6X20	104+20 LBS/FT	W10X39	195+39 LBS/FT
W8X24	118+24 LBS/FT		

SPECIFIC NOTE:

(1) CONSTANT INCLUDES STUB POST WEIGHT.

GENERAL NOTES:

1. PILE SHALL BE THE SAME SIZE AS THE SIGN POST AND IS TO BE DRIVEN TO A 12 TO 14 TON BEARING CAPACITY.
2. SEE SHEETS ST36 AND ST37 FOR STRUCTURAL DETAILS.
3. POST LENGTHS ARE APPROXIMATE.
4. "X" IS THE DISTANCE FROM THE EDGE OF THE THRU LANE TO THE FIRST POST.
5. "H" IS THE HEIGHT ABOVE THE THRU LANE EDGE TO THE BOTTOM OF SIGN PANEL.
6. "P" IS THE LENGTH OF THE H PILE POST.
7. SEE SHEET ST51 FOR CROSS SECTION.
8. SEE SHEET ST25 FOR SIGN PANELS.

TABULATIONS-TYPE A

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST3 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: 4
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

SIGN PANELS TYPE C										STD
SIGN NO	QTY	POSTS			MTG HT (1)	PANEL			CODE NO	PANEL LEGEND
		NO & TYPE	KNEE BRACES QTY	LENGTH FEET		SIZE		TOTAL AREA		
						INCH	SQ FT	SQ FT		
C-1	1	2-U	1	17	7	36 x 18	4.50	4.50	M3-4A	WEST (BLUE)
						36 x 36	9.00	9.00	M1-1	94
(2) C-2	3	2-U	2	21	7	48 x 96	32.00	96.00	R2-4B	SPEED LIMIT 70 MINIMUM 40
C-3	3	2-U	1	17	7	48 x 48	16.00	48.00	W4-1R	MERGE RIGHT
C-4	1	2-U	1	17	7	36 x 18	4.50	4.50	M3-2A	EAST (BLUE)
						36 x 36	9.00	9.00	M1-1	94
C-5	1	2-U	1	19	7	36 x 36	9.00	9.00	R3-4	NO U-TURN
						36 x 36	9.00	9.00	R3-4	NO U-TURN
C-6	2	2-U	1	17	7	48 x 48	16.00	32.00	W3-3	SIGNAL AHEAD
C-7	1	2-U		14	7	48 x 12	4.00	4.00	E10-9R	CAMPING
C-8	1	(5)			7	54 x 18	6.75	6.75	R6-1R	ONE WAY RIGHT
						54 x 18	6.75	6.75	R6-1L	ONE WAY LEFT
C-9	2	2-U	1	16	7	36 x 36	9.00	18.00	R16-X4	EMERGENCY STOPPING ONLY
(4) C-10	3	1-ST		11	7	36 x 36	9.00	27.00	R5-1	DO NOT ENTER
C-11	1	2-U	1	16	7	54 x 18	6.75	6.75	R6-1L	ONE WAY LEFT
						54 x 18	6.75	6.75	R6-1R	ONE WAY RIGHT
C-12	3	2-U	1	17	7	48 x 48	16.00	48.00	R5-1	DO NOT ENTER
C-13	2	2-U		15	7	18 x 24	3.00	6.00	R5-10D	PEDS PROHIBITED
C-14	2	2-U	1	15	7	42 x 30	8.75	17.50	R5-1A	WRONG WAY
C-15	1	2-U		14	7	48 x 12	4.00	4.00	E10-9L	CAMPING
C-16	1	2-U	1	15	7	54 x 30	11.25	11.25	R3-30ACA	L-T-R
C-17	1	(5)			7	54 x 18	6.75	6.75	R6-1L	ONE WAY LEFT
						54 x 18	6.75	6.75	R6-1R	ONE WAY RIGHT
(4) C-18	1	1-ST		11	7	24 x 30	5.00	5.00	R4-7	KEEP RIGHT
						24 x 24	4.00	4.00	R3-2	NO LEFT TURN
TOTAL								392.75		

SPECIFIC NOTES:

- (1) MOUNTING HEIGHT IS MINIMUM (WITH A +6 INCH TOLERANCE) SEE SHEET ST39 FOR TYPICAL MOUNTING.
- (2) FOR PUNCHING DETAILS, SEE SHEET ST40.
- (3) MOUNT BACK TO BACK.
- (4) MOUNT IN CONCRETE, SEE SHEET ST41.
- (5) MOUNT ON SIGNAL POLE

GENERAL NOTES:

- 1. POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
- 2. SEE SHEETS ST38 TO ST40 FOR STRUCTURAL DETAILS.
- 3. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR PUNCHING CODE AND DETAILED DRAWINGS OF TYPE C SIGN PANELS.

TABULATIONS-TYPE C

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST4 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 PLOT NAME: 5
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

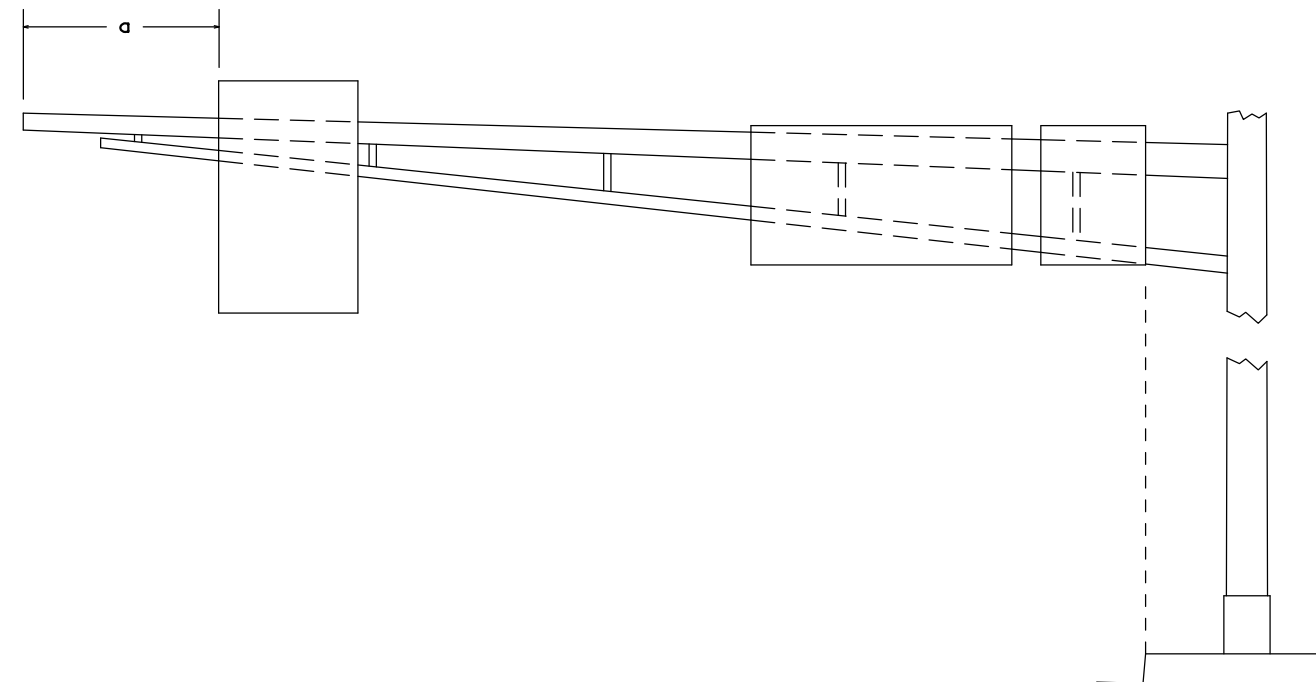
SIGN PANELS TYPE C (MAST ARM MOUNTED)											STH		
SIGN NO	SIGNAL SYSTEM	POLE NO	QTY	a	PANEL				MOUNTING BRACKET		PANEL LEGEND		
					SIZE		AREA	TOTAL AREA	CODE	NUMBER		SPACING (1)	
					FEET	INCH	SQ FT	SQ FT					
C-19	TH 25/94		1	(2)	36	x	48	12.00	12.00	R10-12	2	24	LEFT TURN YIELD ON GREEN
								TOTAL SQ FT	12.00				

SPECIFIC NOTES:

- (1) SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105A FOR BRACKET SPACING REQUIREMENTS.
- (2) SPACE SIGNS EVENLY BETWEEN SIGNAL HEADS, EVP DEVICES, SIGNAL POLE AND OTHER SIGNS. WHEN POSSIBLE ALIGN LANE USAGE SIGNS IN THE CENTER OF APPROACHING LANES.

GENERAL NOTES:

- 1. FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105A.
- 2. FOR TYPE D STRINGER AND PANEL JOINT DETAILS SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105.



SIGN PANELS TYPE D (MAST ARM MOUNTED)											STI	
SIGN NO	SIGNAL SYSTEM	POLE NO	QTY	a	PANEL				MOUNTING BRACKET		PANEL LEGEND	
					SIZE		AREA	TOTAL AREA	NUMBER	SPACING (1)		
					FEET	INCH	SQ FT	SQ FT				
D-5	TH 25/94		1	(2)	42	x	60	17.50	17.50	2	30	WEST 94 LEFT ARROW
D-8	TH 25/94		2	(2)	42	x	54	15.75	31.50	2	30	25 DOUBLE ARROW
D-9	TH 25/94		1	(2)	42	x	66	19.25	19.25	2	30	EAST 94 NEXT RIGHT
D-10	TH 25/94		1	(2)	42	x	60	17.50	17.50	2	30	WEST 94 RIGHT ARROW
								TOTAL SQ FT	85.75			

SPECIFIC NOTES:

- (1) SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105A FOR BRACKET SPACING REQUIREMENTS.
- (2) SPACE SIGNS EVENLY BETWEEN SIGNAL HEADS, EVP DEVICES, SIGNAL POLE AND OTHER SIGNS. WHEN POSSIBLE ALIGN LANE USAGE SIGNS IN THE CENTER OF APPROACHING LANES.

GENERAL NOTES:

- 2. FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105A.
- 3. FOR TYPE D STRINGER AND PANEL JOINT DETAILS SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL, PAGE 105.
- 4. SEE SHEETS ST27 TO ST29 FOR SIGN PANELS.

PLOTTED/REVISED: 1/28/2016

REMOVE SIGN TYPE D					STE
SIGN NO	QTY	POSTS		PANEL	PANEL LEGEND
		NO & TYPE	KNEE BRACES QTY	SIZE (1) INCH	
D-101	1	2-U	2	108 x 60	BIG LAKE EXIT 193
D-102	1	2-U	2	132 x 54	MONTICELLO NEXT 2 EXITS
D-103	2	2-U	2	72 x 84	EXIT 193
D-104	1	2-U	2	102 x 54	BUFFALO-MONTICELLO-BIG LAKE
D-105	1	(2)		48 x 66	WEST 94 LEFT ARROW
D-106	1	2-U	2	78 x 78	UP ARROW EAST/ 94 /WEST RIGHT ARROW
D-107	2	(2)		42 x 54	25 DOUBLE ARROW
D-108	1	(2)		42 x 66	EAST 94 NEXT RIGHT
D-109	1	(2)	1	42 x 60	WEST 94 RIGHT ARROW
D-110	1	2-U	2	102 x 66	EAST 94 MINNEAPOLIS ST PAUL
D-111	1	2-U	2	102 x 54	MONTICELLO BIG LAKE BUFFALO
D-112	1	3-U	3	108 x 66	UP ARROW WEST/94/EAST RIGHT ARROW
TOTAL		14			

SPECIFIC NOTE:
 (1) SIZES ARE APPROXIMATE.
 (2) MAST ARM MOUNTED.

SALVAGE & INSTALL SIGN TYPE D							STG	
SIGN NO	QTY	POSTS				MTG HT (1) FEET	PANEL	PANEL LEGEND
		NO & TYPE	KNEE BRACES QTY	SPACING INCH	LENGTH FEET		SIZE INCH	
D-201	1	2-U	2	72	17	7	120 x 48	HOSPITAL EXIT 194
TOTAL		1						

SPECIFIC NOTE:
 (1) MOUNTING HEIGHT IS MINIMUM (WITH A +6 INCH TOLERANCE) SEE SHEET ST39 FOR TYPICAL MOUNTING.

- GENERAL NOTES:
- POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
 - SEE SHEETS ST38 TO ST40 FOR STRUCTURAL DETAILS.
 - SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR TYPE D STRINGER AND PANEL JOINT DETAILS.

TABULATIONS-TYPE D

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST6 OF ST53 SHEETS

LICENSED PROFESSIONAL ENGINEER

DISTRICT #: METRO
 PLOT NAME: 6
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: 7
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

SIGN PANELS TYPE D										STF
SIGN NO	QTY	POSTS				MTG HT (1)	PANEL			PANEL LEGEND
		NO & TYPE	KNEE BRACES QTY	LENGTH FEET	SPACING INCH		SIZE INCH	AREA SQ FT	TOTAL AREA SQ FT	
D-1	1	2-U	2	18	66	7	108 x 60	45.00	45.00	
D-2	1	3-U	3	18	45	7	132 x 60	55.00	55.00	
(2) D-3	2	2-U	2	20	42	7	72 x 84	42.00	84.00	
D-4	1	2-U	2	17	60	7	102 x 54	38.25	38.25	
D-6	2	2-U	2	17	30	7	42 x 54	15.75	31.50	
D-7	1	2-U	2	18	54	7	84 x 66	38.50	38.50	
D-11	1	3-U	3	18	45	7	108 x 66	49.50	49.50	
D-12	1	2-U	2	17	60	7	102 x 54	38.25	38.25	
D-13	1	2-U	2	18	30	7	48 x 66	22.00	22.00	
D-14	1	3-U	3	18	45	7	108 x 66	49.50	49.50	
D-15	1	2-U	2	18	54	7	84 x 66	38.50	38.50	
TOTAL									490.00	

SPECIFIC NOTES:
 (1) MOUNTING HEIGHT IS MINIMUM (WITH A +6 INCH TOLERANCE) SEE SHEET ST39 FOR TYPICAL MOUNTING.
 (2) SEE STANDARD SIGNS AND MARKINGS MANUAL (E5-1).

GENERAL NOTES:
 1. POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
 2. SEE SHEETS ST38 TO ST40 FOR STRUCTURAL DETAILS.
 3. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR TYPE D STRINGER AND PANEL JOINT DETAILS.
 4. SEE SHEETS ST27 TO ST29 FOR SIGN PANELS.

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: 8
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn

SALVAGE & INSTALL SIGN TYPE EA						STJ	
SIGN NO	QTY EACH	INSTALL LOCATION	PANEL SIZE		POSTS		LEGEND
			SALVAGE INCH	INSTALL INCH	NO. & TYPE	SPACING	
EA-201	1	A94-001	108 x 24	108 x 30	3-U	36	EXIT 193
TOTAL		1					

GENERAL NOTES:
 1. SEE SHEET ST42 FOR TYPE EA STRUCTURAL DETAIL.
 2. TYPE EA POST SPACING MAY BE VARIED TO MISS MEMBERS OF A SIGN STRUCTURES.

SIGN PANELS TYPE EA (EXTRUDED PANEL SECTIONS)						STK
SIGN NO	QTY	LOCATION	PANEL			REQUIRED PANEL SIZE
			SIZE INCH	AREA SQ FT	TOTAL AREA SQ FT	
EA-201	1	AI94-001	108 x 6	4.50	4.50	108 x 30
TOTAL			4.50			

SIGN PANEL OVERLAY TYPE EA					STL	
SIGN NO.	QTY	LOCATION	PANEL OVERLAY			LEGEND
			SIZE INCH	AREA SQ FT	TOTAL SQ FT	
EA-201	1	AI94-001	108 x 30	22.50	22.50	EXIT 193
TOTAL			22.50			

REMOVE SIGN TYPE EA					STM
SIGN NO	QTY EACH	LOCATION	POSTS NO & TYPE	PANEL SIZE (IN)	LEGEND
TOTAL		1			

SIGN PANELS TYPE EA							STN	
SIGN NO	QTY	LOCATION	PANEL			POSTS		LEGEND
			SIZE (IN)	AREA (SQ FT)	TOTAL AREA (SQ FT)	NO	SPACING	
EA-1	2	AI94-002, AI94-257	108 x 30	22.50	45.00	3	36	EXIT 193
TOTAL			45					

GENERAL NOTES:
 1. SEE SHEET ST43 FOR STRUCTURAL DETAIL.
 2. POST SPACING MAY BE VARIED TO MISS MEMBERS OF A SIGN STRUCTURES.
 3. SEE SHEET ST30 FOR SIGN PANELS.

SIGN PANELS TYPE EO						STO		
SIGN NO	QTY	LOCATION	PANEL SIZE			POSTS		
			SIZE (IN)	AREA (SQ FT)	TOTAL AREA (SQ FT)	NO	SPACING	
EO-1	2	OH I94-627, OH I94-628	108 x 30	22.50	45.00	3	36	EXIT 193
TOTAL			45					

GENERAL NOTES:
 1. SEE SHEET ST43 FOR STRUCTURAL DETAIL.
 2. POST SPACING MAY BE VARIED TO MISS MEMBERS OF OH SIGN STRUCTURES.
 3. SEE SHEET ST30 FOR SIGN PANELS.

TABULATIONS-TYPE EA AND EO

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST8 OF ST53 SHEETS

REFERENCE LOCATION SIGN (1)			STT
CODE NO	QTY EACH	SIZE INCH	LEGEND
D10-3	2	12 x 48	MILE 194

SPECIFIC NOTE:

(1) PLACE ON 3 LB/FT POST (MNDOT 3401).

GENERAL NOTE:

- SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR REFERENCE LOCATION SIGN.

DELINEATOR			STV
CODE NO	QUANTITY		TOTAL
	COLOR		
	WHITE	YELLOW	
(1) X4-6	6	8	14

SPECIFIC NOTE:

(1) PLACE ON 3LB/FT POST (MNDOT 3401).

GENERAL NOTES:

- FOR DELINEATOR PLACEMENT, SEE SHEET ST35.
- SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR DELINEATOR DESIGN.

OBJECT MARKER			STW
CODE NO	SIZE INCH	COLOR	QUANTITY EACH
(1) X4-4(C)	12 x 24	BLACK ON YELLOW	2

TOTAL QUANTITIES

CODE NO	QUANTITY EACH
X4-4	2

SPECIFIC NOTE:

(1) PLACE ON 3LB/FT POST (MNDOT 3401).

GENERAL NOTES:

- FOR MARKER PLACEMENT, SEE SHEET ST35.
- SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR MARKER DESIGN.

TABULATIONS

SIGN PANELS TYPE OH						STS
SIGN NO	LOCATION	PANEL		PANEL		TOTAL AREA (SQ. FT.)
		SIZE (IN.)	AREA (SQ. FT.)	SIZE (IN.)	AREA (SQ. FT.)	
OH I94-627	914+00 WB	156 x 144	156.00			156.00
OH I94-628	966+00 WB	168 x 156	182.00			182.00
TOTAL						338.00

GENERAL NOTE:
1. SEE SHEET ST32 FOR SIGN PANELS.

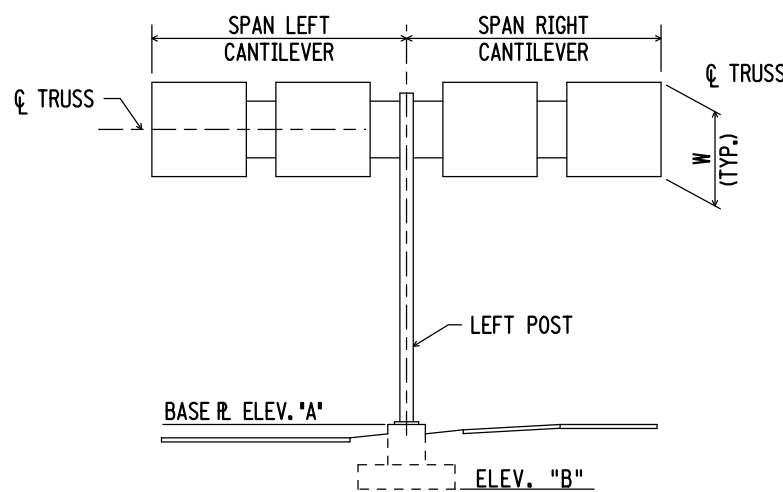
OH SIGN IDENTIFICATION PLATE			STP
SIGN NO	QTY	LOCATION	IDENTIFICATION PLATE NO
	EACH		
OH I94-503	1	BR.86082	94-503
TOTAL			1

GENERAL NOTES:
1. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR OH SIGN IDENTIFICATION PLATE (X5-1).
2. SEE SHEET SEE SHEET ST42 FOR MOUNTING DETAILS DETAILS.

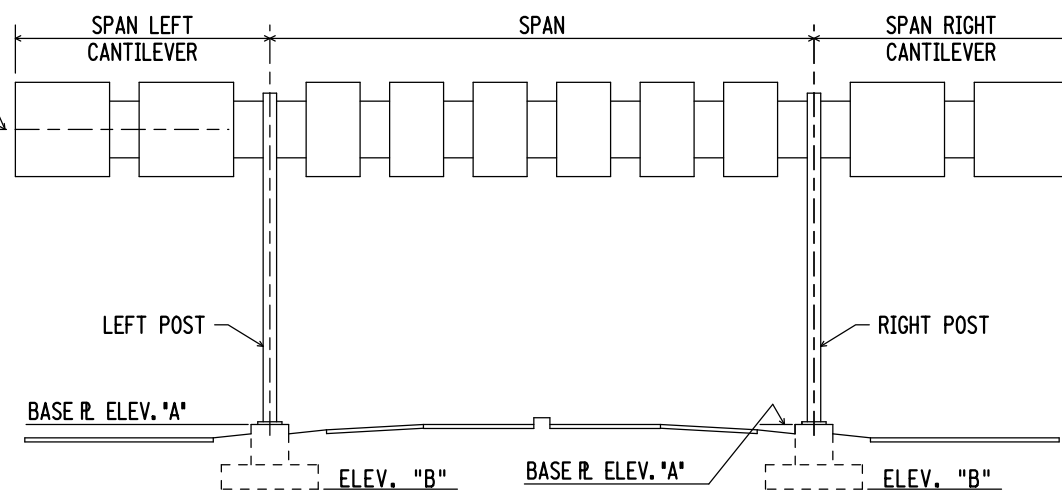
SIGN PANEL OVERLAY TYPE OH								STQ
SIGN NO	LOCATION	PANEL OVERLAY		PANEL OVERLAY		PANEL OVERLAY		TOTAL AREA (SQ. FT.)
		SIZE (IN.)	AREA (SQ. FT.)	SIZE (IN.)	AREA (SQ. FT.)	SIZE (IN.)	AREA (SQ. FT.)	
OH I94-503	BR.86082	168 x 90	105.00					105.00
TOTAL								105.00

GENERAL NOTE:
1. SEE SHEET ST33 FOR SIGN PANEL OVERLAYS.

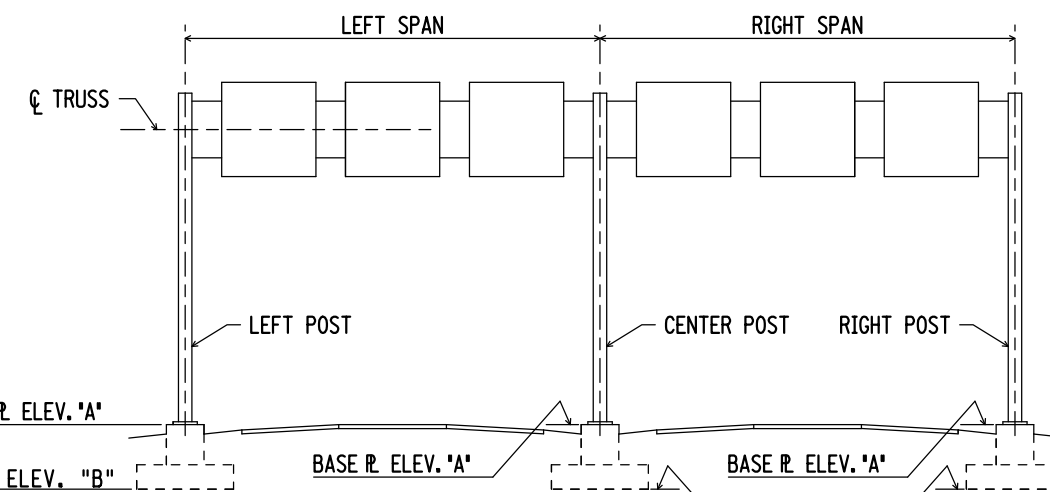
PLOTTED/REVISED: 1/28/2016



BRIDGE TYPE BC
BUTTERFLY AND CANTILEVER SPANS



BRIDGE TYPE S
SIMPLE SPAN WITH CANTILEVERS



BRIDGE TYPE C
CONTINUOUS SPANS

OVERHEAD SIGN STRUCTURES

SIGN NO	STATION	BRIDGE TYPE	TRUSS TYPE	SPAN LENGTHS				LOW STEEL ELEVATION (1)	LEFT POST		CENTER POST		RIGHT POST			
				LEFT CANT.	RIGHT CANT.	SPAN OR LEFT SPAN	RIGHT SPAN		ELEVATION (1)		TYPE	ELEVATION (1)		TYPE	ELEVATION (1)	
									A	B		A	B		A	B
OH I94-627	914+00 WB	BC	A	35'-0"				926.71	907.70	900.99	5E					
OH I94-628	966+00 WB	BC	A	30'-6"				920.10	901.27	(4)	5E					

TABULATION OF OVERHEAD SIGN STRUCTURE QUANTITIES (2)

SIGN NO		OH I94-627	OH I94-628					STR
	TOTALS							
STRUCT. STEEL POSTS (3)	POUNDS	6300	6345					12645
STRUCT. STEEL TRUSSES	POUNDS	4305	3752					8057
STRUCT. STEEL WALKWAY SUPPORTS	POUNDS							
STRUCT. STEEL WALKWAY GRATING	POUNDS							
STRUCT. STEEL PANEL MTG. POSTS	POUNDS	498	534					1032
CONCRETE FOOTINGS (SPREAD)	CU YD	18.7						18.7
CONCRETE FOOTINGS (SHAFT)	CU YD		14.1					14.1

OH SIGN IDENTIFICATION PLATE (5)

SIGN NO	QTY	LOCATION	IDENTIFICATION PLATE NO
OH I94-627	1	914+00 WB	94-627
OH I94-628	1	966+00 WB	94-628

SPECIFIC NOTES:

- (1) CENTER LINE ELEVATION IS FIELD ELEVATION.
- (2) BASED ON TABULATED ELEVATIONS AND DIMENSIONS. REVISE IF NECESSARY USING QUANTITY TABLES ON SHEET ST45.
- (3) INCLUDES F. & I. OH SIGN IDENTIFICATION PLATE, SEE SHEET ST42.
- (4) DRILLED SHAFT FOOTING.
- (5) SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR X5-1 SIGN.

GENERAL NOTES:

1. THE SUBSCRIPTION E ON THE POST TYPE DENOTES THE POST WHICH HAS THE HAND HOLE AND PROVISIONS FOR GROUNDING, I.E. POST TYPE 3E.
2. TABULATED ELEVATIONS AND DIMENSIONS ARE APPROXIMATE ONLY. FABRICATION DEPENDENT ON THESE ELEVATIONS AND DIMENSIONS SHALL NOT BE STARTED UNTIL THE ENGINEER HAS MADE FINAL DETERMINATION OF THEM IN THE FIELD.
3. LEFT AND RIGHT DESIGNATIONS ARE SHOWN LOOKING IN DIRECTION OF TRAFFIC FLOW. WHEN TWO DIRECTIONS OF TRAFFIC ARE SPANNED THE DESIGNATIONS ARE SHOWN LOOKING UP STATIONING.
4. SEE SHEETS ST44-ST50 FOR DETAILS.
5. SEE SHEETS ST52-ST53 FOR CROSS SECTIONS.

TABULATIONS-TYPE OH

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

LIC. NO. _____

DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94)

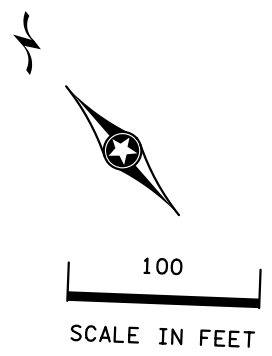
SHEET NO. ST11

OF ST53 SHEETS

DISTRICT #: METRO

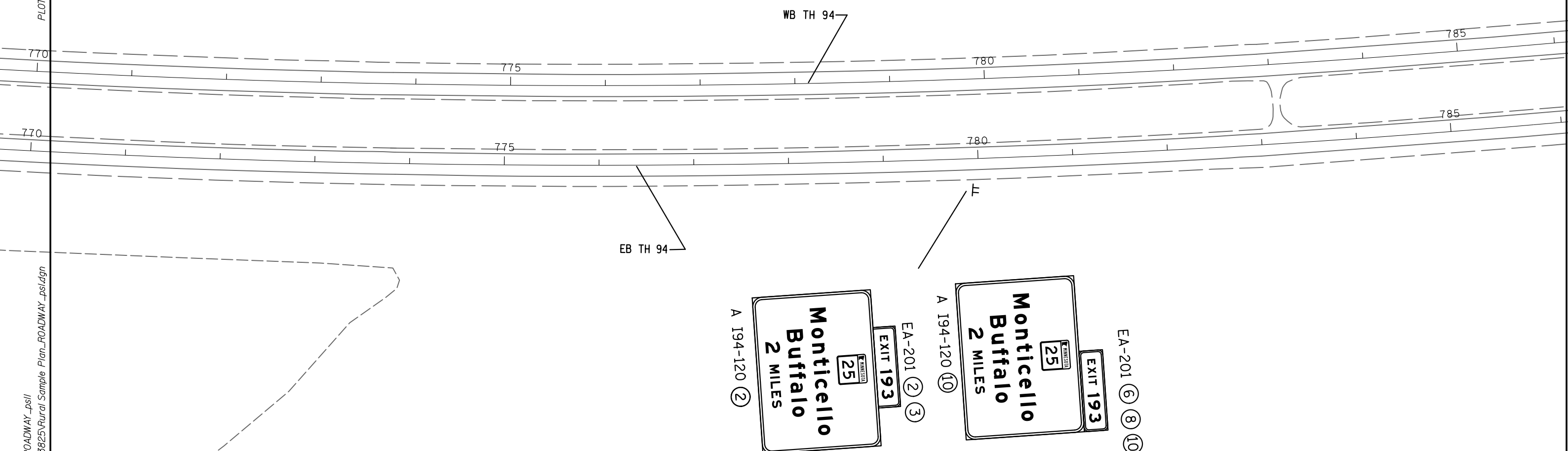
PLOT NAME: II

PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_CHARTS.dgn



PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: Rural Sample Plan_ROADWAY_psl
 PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn



- NOTES:
- ② INPLACE
 - ③ SALVAGE
 - ⑥ INSTALL
 - ⑧ F. & I. EXTRUDED PANEL SECTION(S)
 - ⑩ F. & I. SIGN PANEL(S) TYPE OVERLAY

DRAWN BY: LBJ

CHECKED BY: RFK

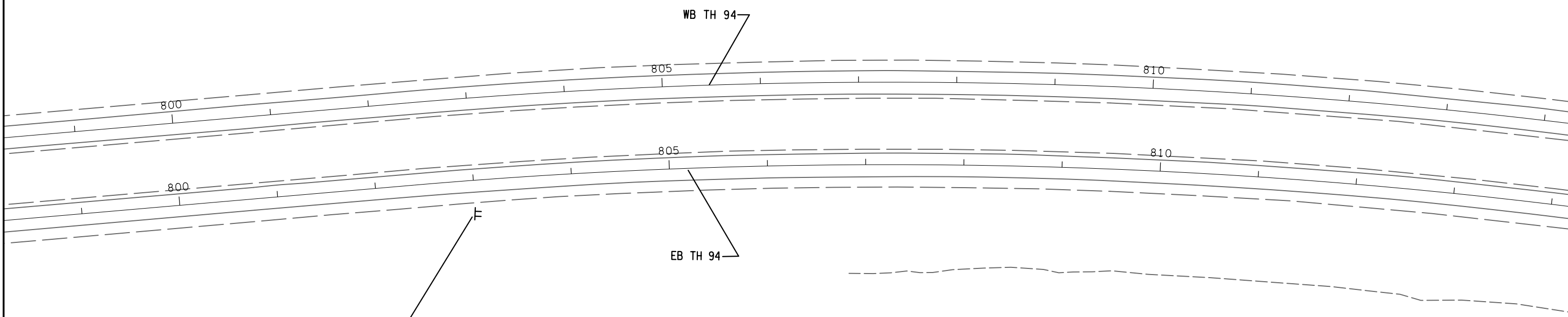
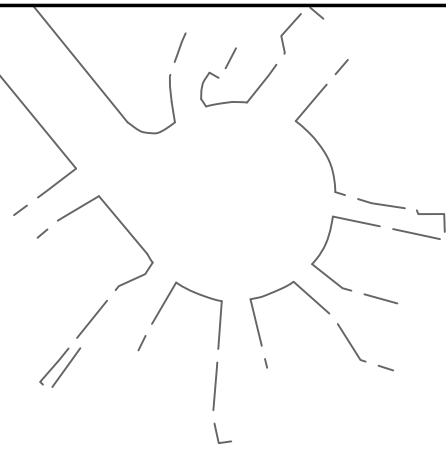
CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

ROADWAY LAYOUT

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST12 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan_ROADWAY_psl2
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn



D-101 (2) (4)
D-1 (1)

**Big Lake
EXIT 193**

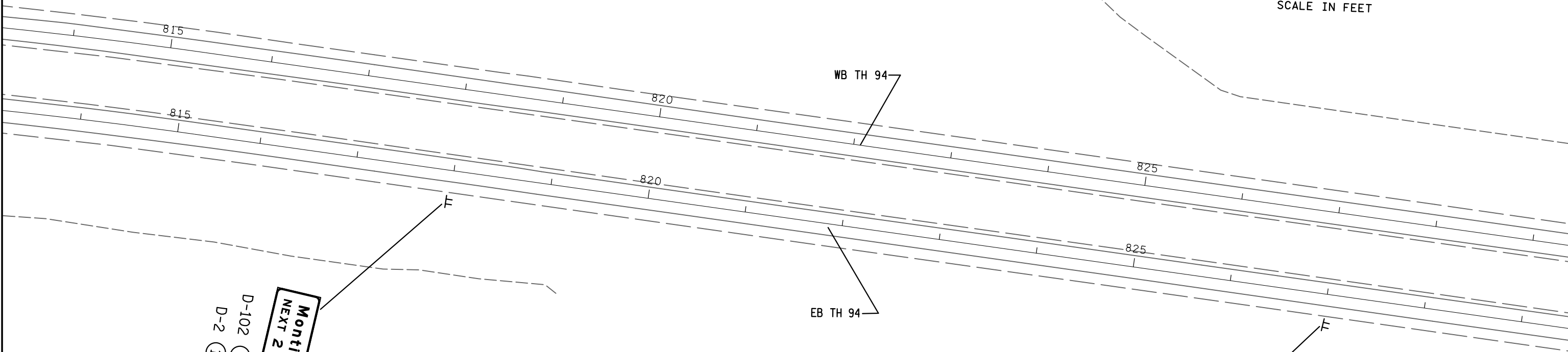
- NOTES:
- (1) F. & I.
 - (2) INPLACE
 - (4) REMOVE

PLOTTED/REVISED: 1/28/2016

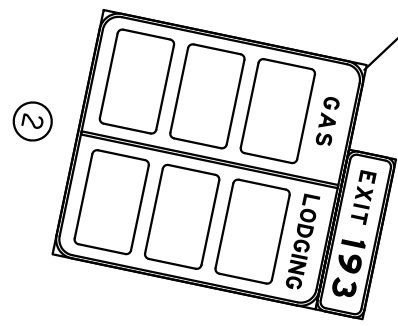
DISTRICT #: METRO
IPLOT NAME: Rural Sample Plan_ROADWAY_psl3
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn



100
SCALE IN FEET



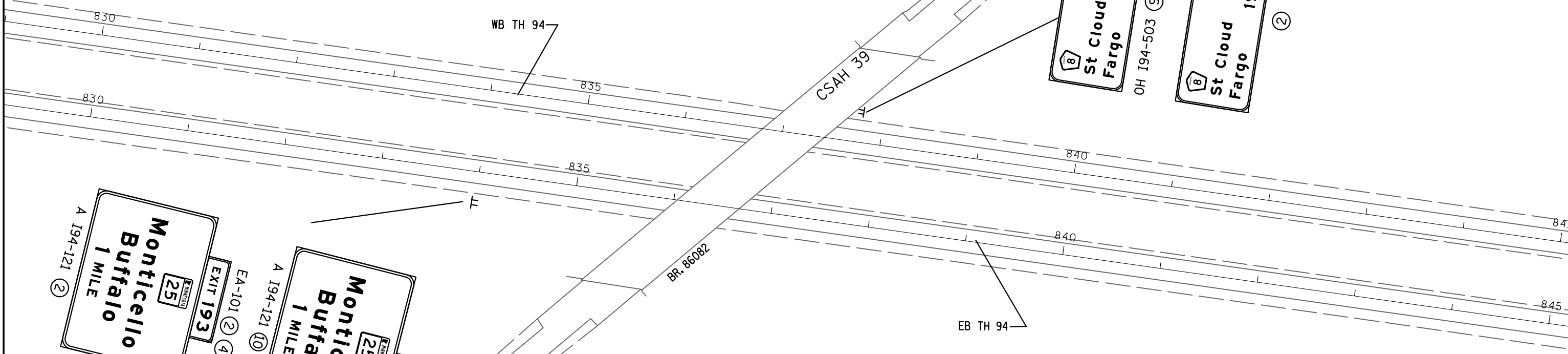
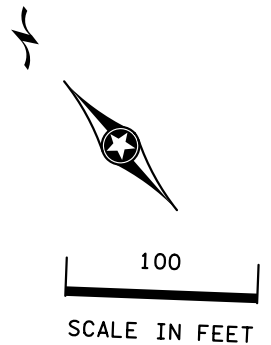
Monticello
NEXT 2 EXITS
D-102 (2) (4)
D-2 (1)



NOTES:

- (1) F. & I.
- (2) INPLACE
- (4) REMOVE

PLOTTED/REVISED: 1/28/2016



Monticello Buffalo
1 MILE
EXIT 193
EA-101
A 194-121

Monticello Buffalo
1 MILE
EXIT 193
EA-1
A 194-121

St Cloud Fargo 192
OH 194-503

St Cloud Fargo 192

NOTES:

- ① F. & I.
- ② INPLACE
- ④ REMOVE
- ⑥ INSTALL
- ⑨ F. & I. OH SIGN IDENTIFICATION PLATE
- ⑩ F. & I. SIGN PANEL(S) TYPE OVERLAY

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan_ROADWAY_psl4
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl4.dgn

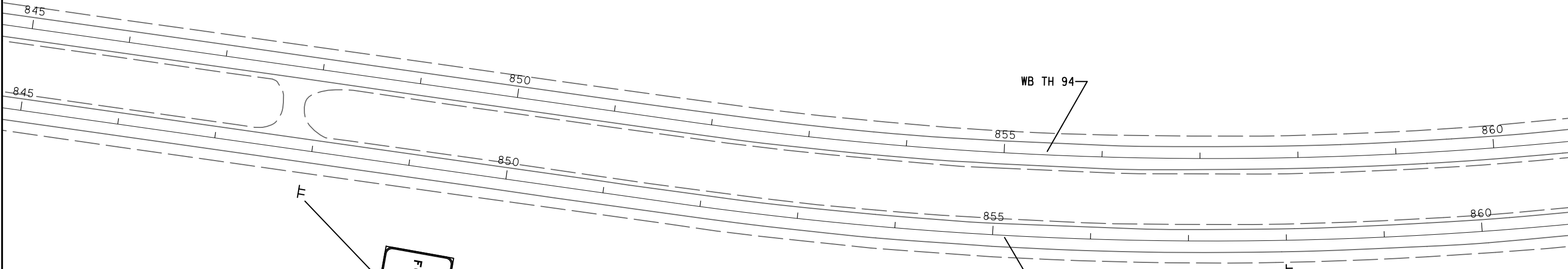
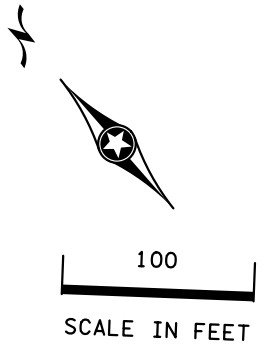
DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

ROADWAY LAYOUT
STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST15 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016



TT

②
GAS DIESEL
FOOD LODGING
CAMPING
EXIT 193

WB TH 94

855

860

850

845

845

855

860

EB TH 94

T

NOTE:

② INPLACE

②

FOOD-EXIT 193

ROADWAY LAYOUT

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST16 OF ST53 SHEETS

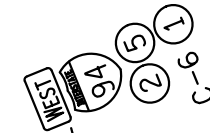
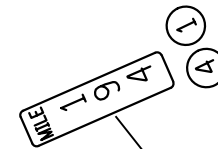
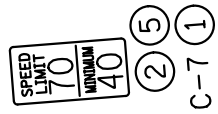
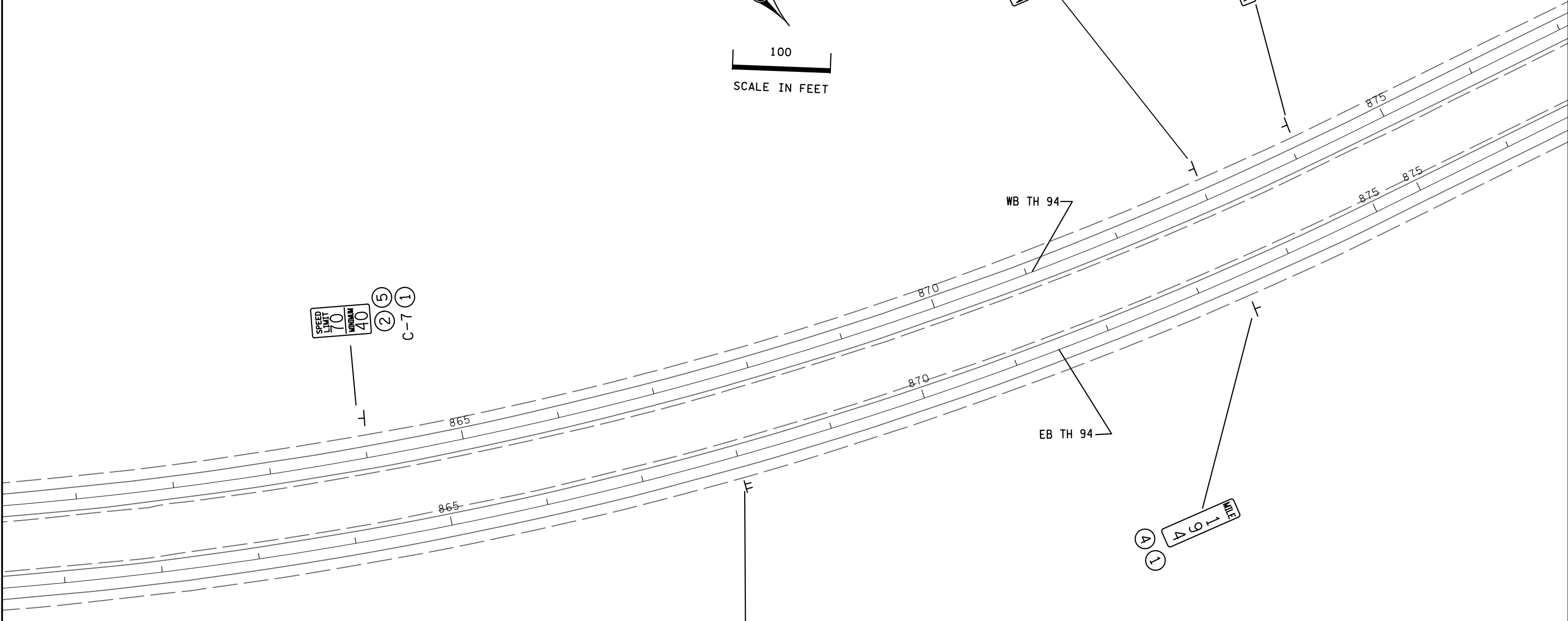
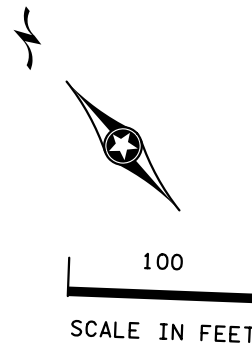
DISTRICT #: METRO

IPLOT NAME: Rural Sample Plan_ROADWAY_psl5

PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
I/PLOT NAME: Rural Sample Plan_ROADWAY_psl6
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl6.dgn

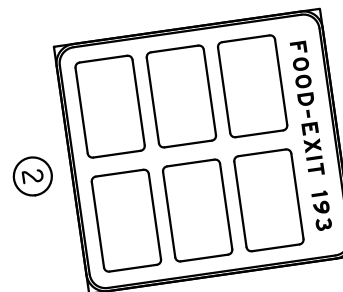


WB TH 94

EB TH 94

NOTES:

- ① F. & I.
- ② INPLACE
- ④ REMOVE
- ⑤ REMOVE SIGN TYPE C



ROADWAY LAYOUT

DRAWN BY: LBJ

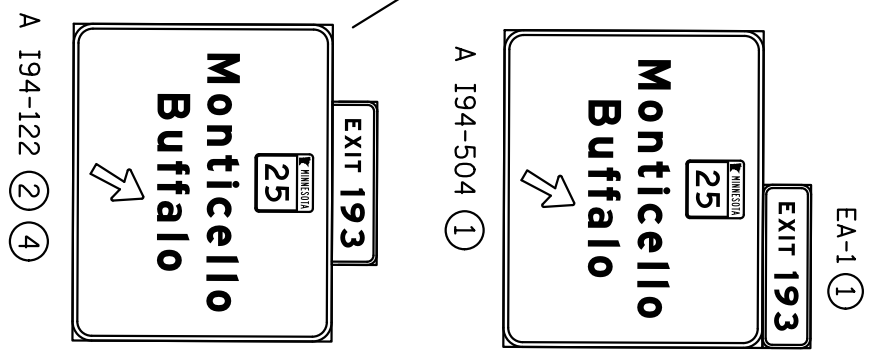
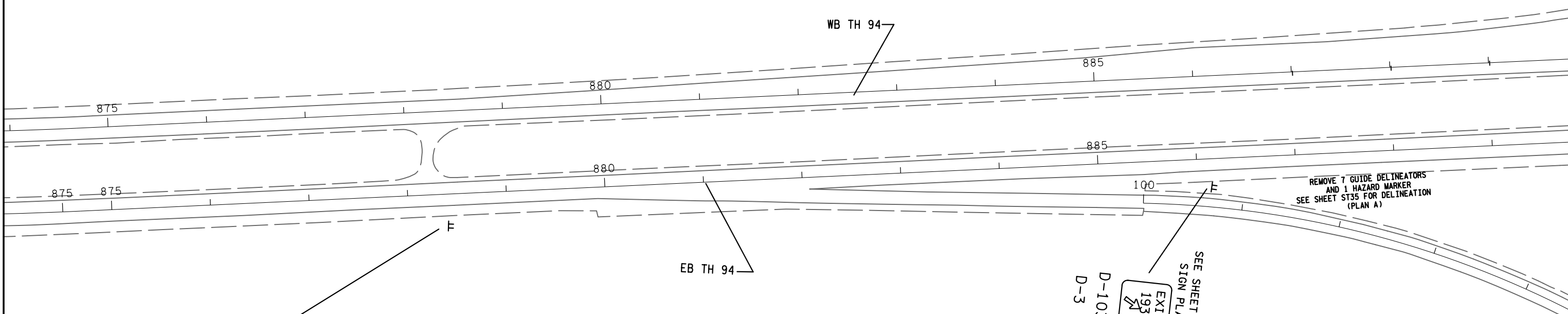
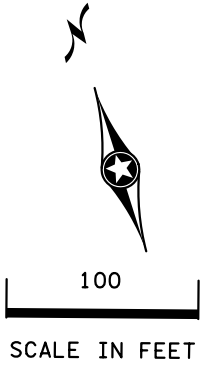
CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

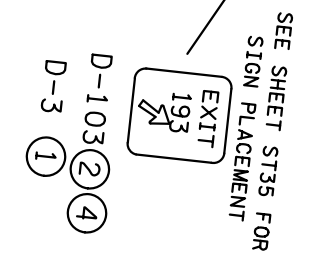
STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST17 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT : * METRO
IPLOT NAME: Rural Sample Plan_ROADWAY_pst
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_ROADWAY_pst.dgn



- NOTES:
- ① F. & I.
 - ② INPLACE
 - ④ REMOVE
 - ⑤ REMOVE SIGN TYPE C



REMOVE 7 GUIDE DELINEATORS AND 1 HAZARD MARKER SEE SHEET ST35 FOR DELINEATION (PLAN A)

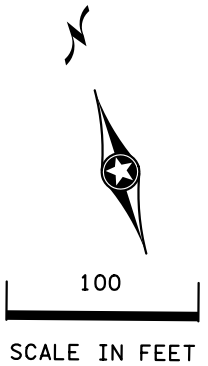
ROADWAY LAYOUT

DRAWN BY: LBJ CHECKED BY: RFK CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST18 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
I/PLOT NAME: Rural Sample Plan_ROADWAY_psl8
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn



SEE SHEET ST34 FOR SIGN PLACEMENT



(2) (5)
C-5 (1)

WB TH 94

BR. 86083

TH 25

EB TH 94

SEE SHEET ST34 FOR SIGN PLACEMENT



(2) (5)
C-5 (1)

NOTES:

- (1) F. & I.
- (2) INPLACE
- (5) REMOVE SIGN TYPE C

ROADWAY LAYOUT

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

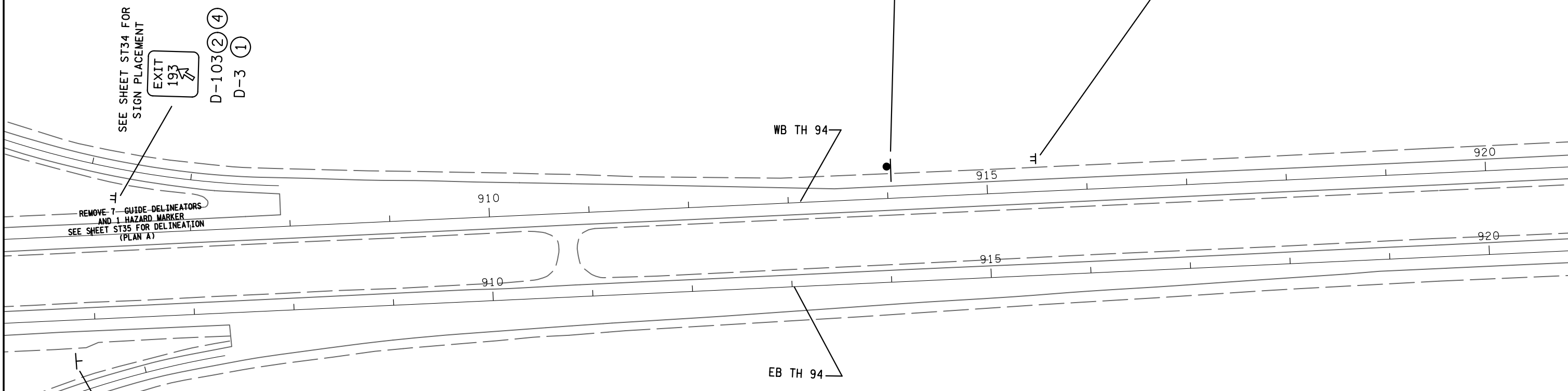
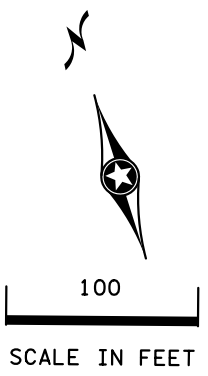
LIC. NO. _____

DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94)

SHEET NO. ST19

OF ST53 SHEETS



D-103 (2) (4)
D-3 (1)

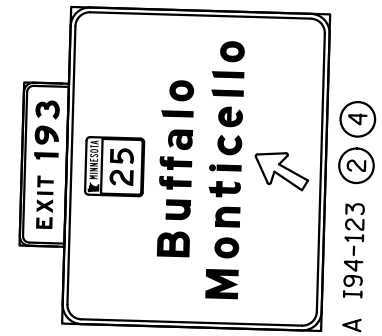
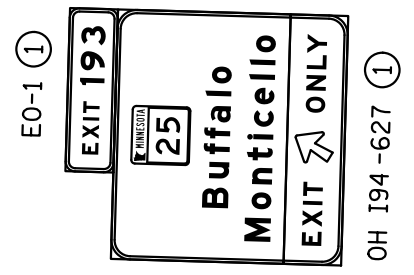
SEE SHEET ST34 FOR SIGN PLACEMENT

REMOVE 7 GUIDE DELINEATORS AND 1 HAZARD MARKER SEE SHEET ST35 FOR DELINEATION (PLAN A)



C-5 (2) (5)
C-5 (1)

SEE SHEET ST34 FOR SIGN PLACEMENT



NOTES:

- (1) F. & I.
- (2) INPLACE
- (4) REMOVE
- (5) REMOVE SIGN TYPE C

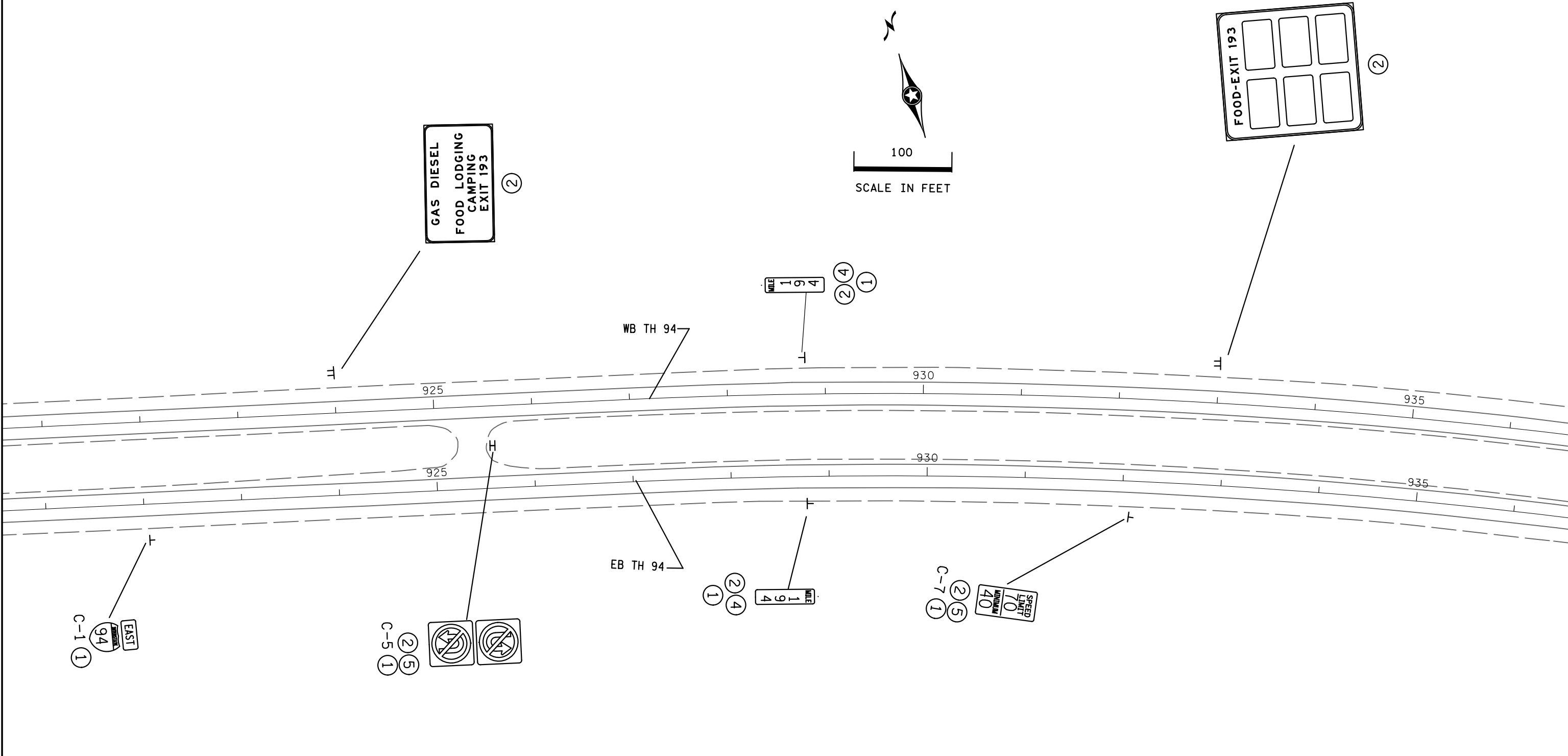
ROADWAY LAYOUT

DRAWN BY: LBJ

CHECKED BY: RFK

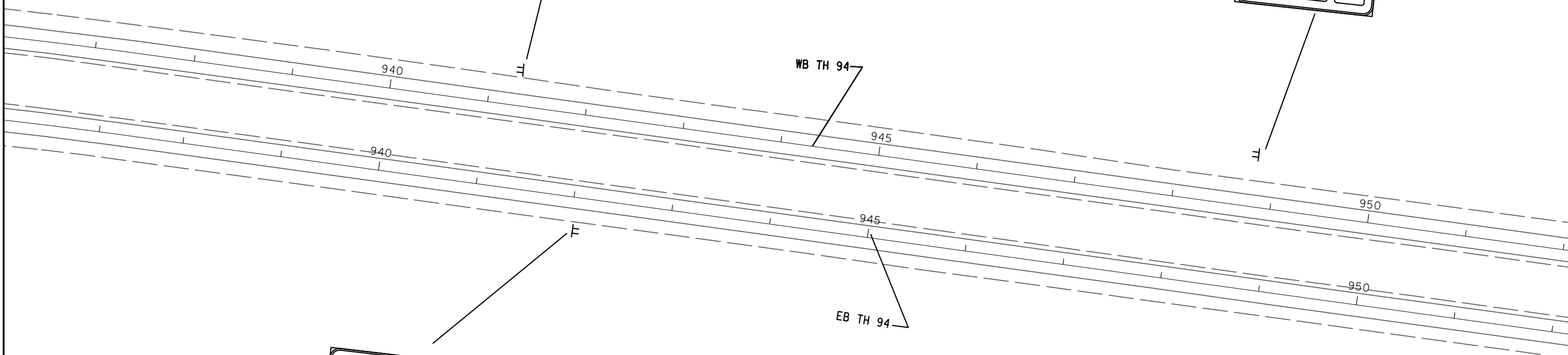
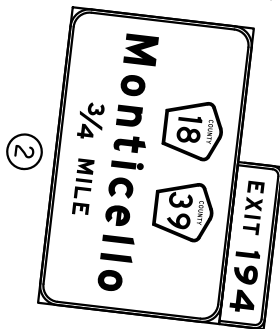
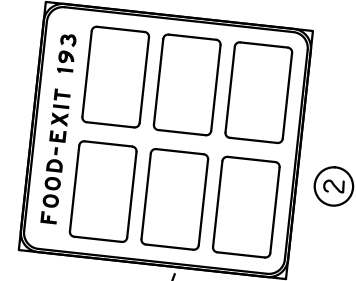
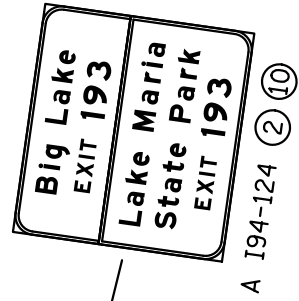
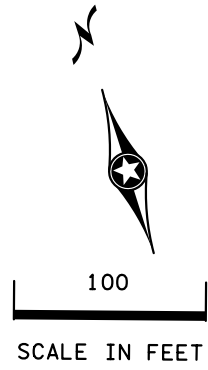
CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST20 OF ST53 SHEETS



- NOTES:
- ① F. & I.
 - ② INPLACE
 - ④ REMOVE
 - ⑤ REMOVE SIGN TYPE C

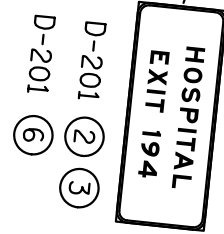
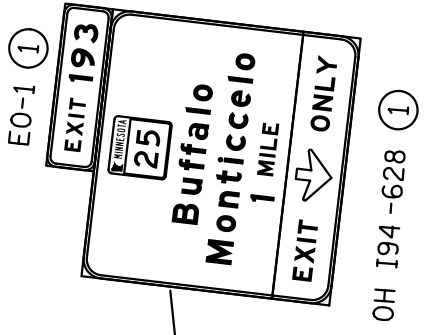
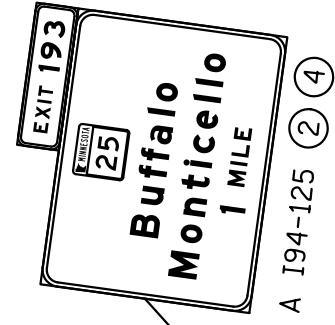
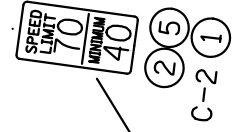
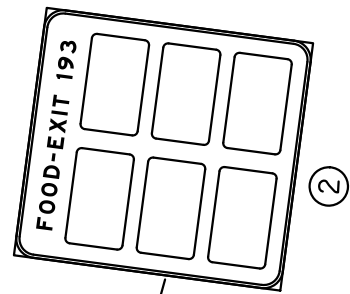
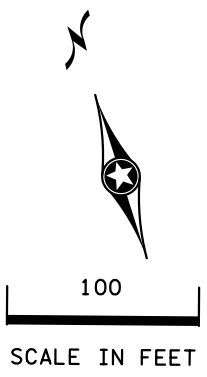
PLOTTED/REVISED: 1/28/2016



- NOTES:
- (2) INPLACE
 - (10) F. & I. SIGN PANEL(S) TYPE OVERLAY

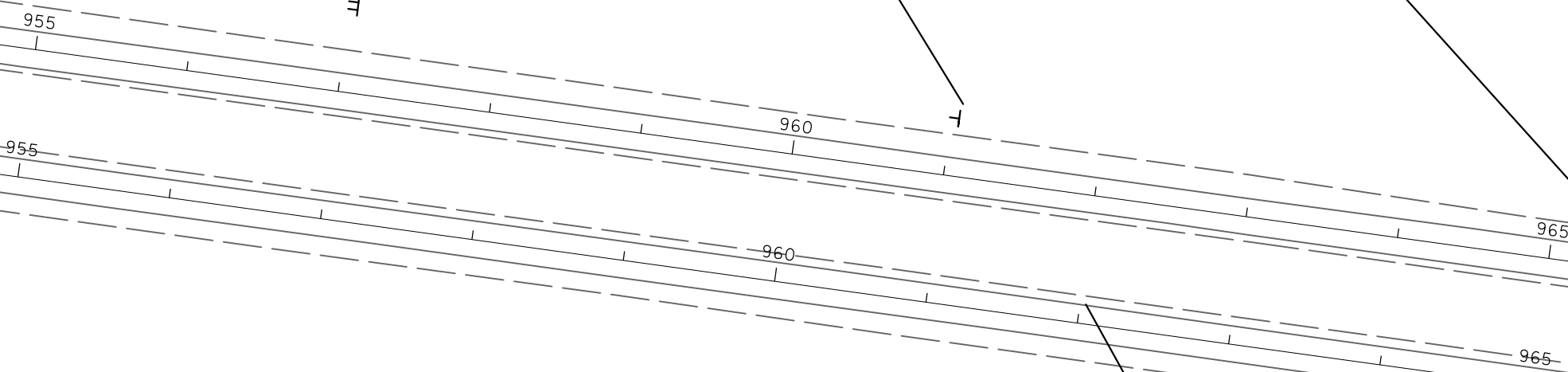
DISTRICT #: METRO
I/PLOT NAME: Rural Sample Plan_ROADWAY_psl
PATH & FILENAME: IP_PWP:d1633825Rural Sample Plan_ROADWAY_psl.dgn

PLOTTED/REVISED: 1/28/2016



WB TH 94

EB TH 94



- NOTES:
- ① F. & I.
 - ② INPLACE
 - ③ SALVAGE
 - ④ REMOVE
 - ⑤ REMOVE SIGN TYPE C
 - ⑥ INSTALL

ROADWAY LAYOUT

DRAWN BY: LBJ

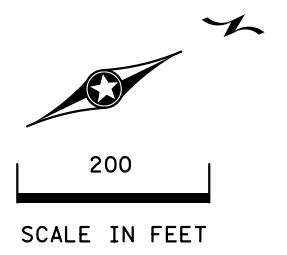
CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

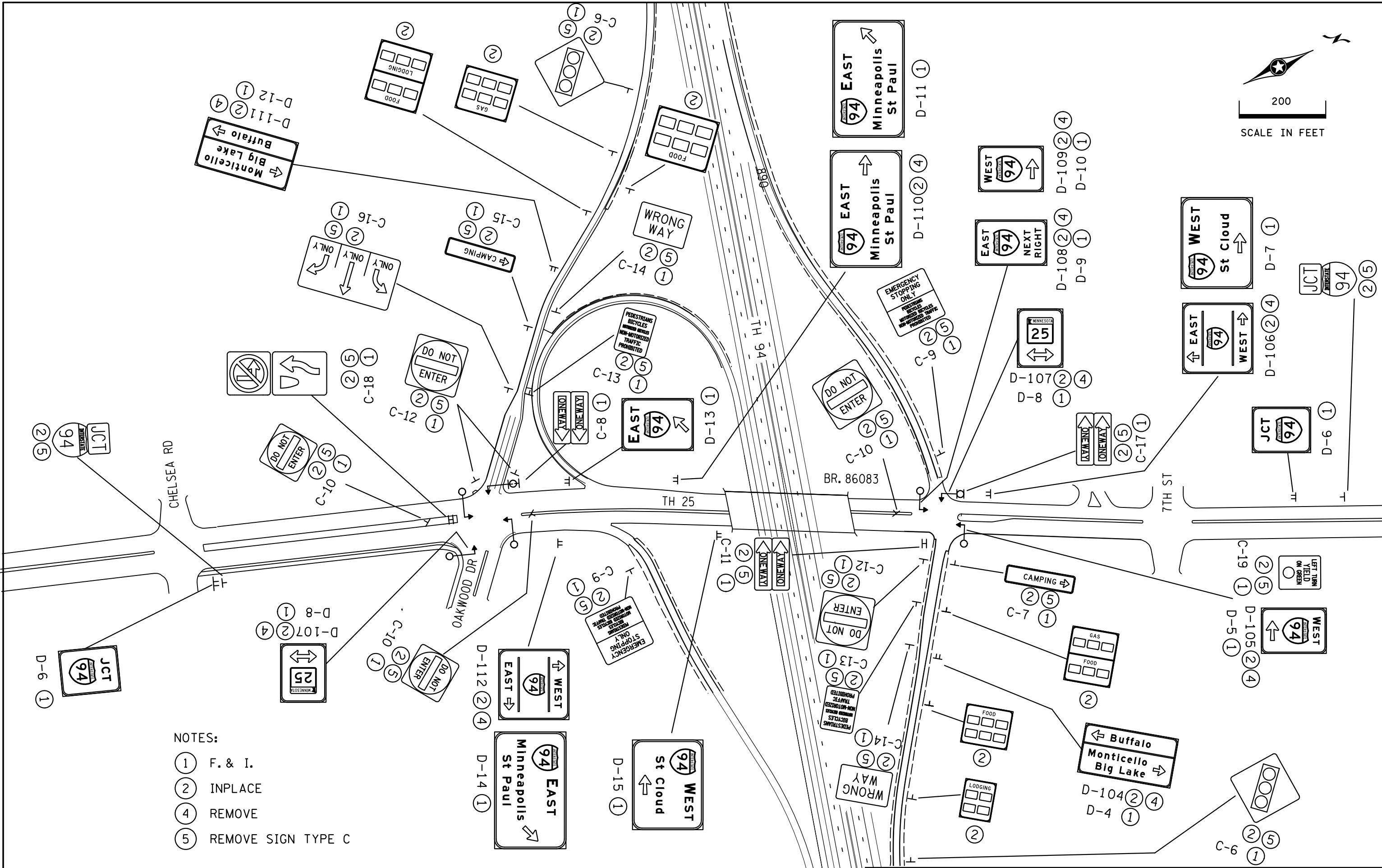
STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST23 OF ST53 SHEETS

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan_ROADWAY_psl12
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_ROADWAY_psl1dgn

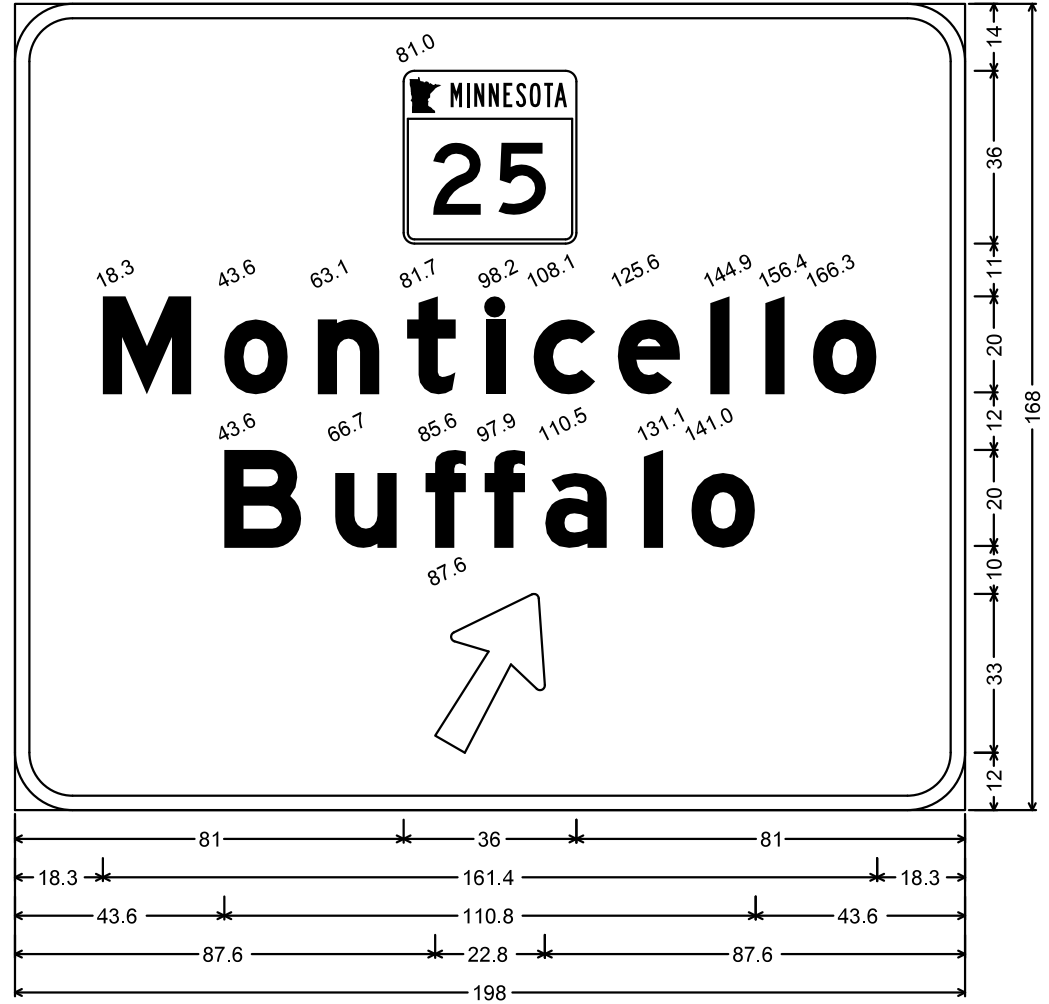
DISTRICT *: METRO
 IPLOT NAME: Rural Sample Plan_ROADWAY_psl13
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan_ROADWAY_psl.dgn
 PLOTTED/REVISED: 1/28/2016



- NOTES:
- ① F. & I.
 - ② INPLACE
 - ④ REMOVE
 - ⑤ REMOVE SIGN TYPE C



ROADWAY LAYOUT



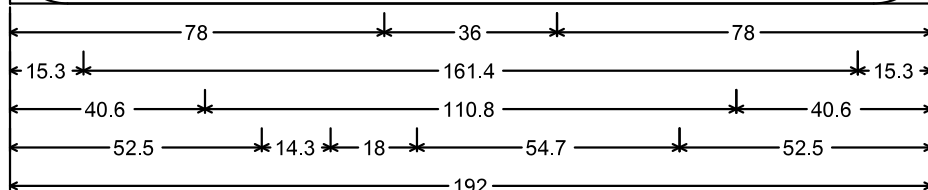
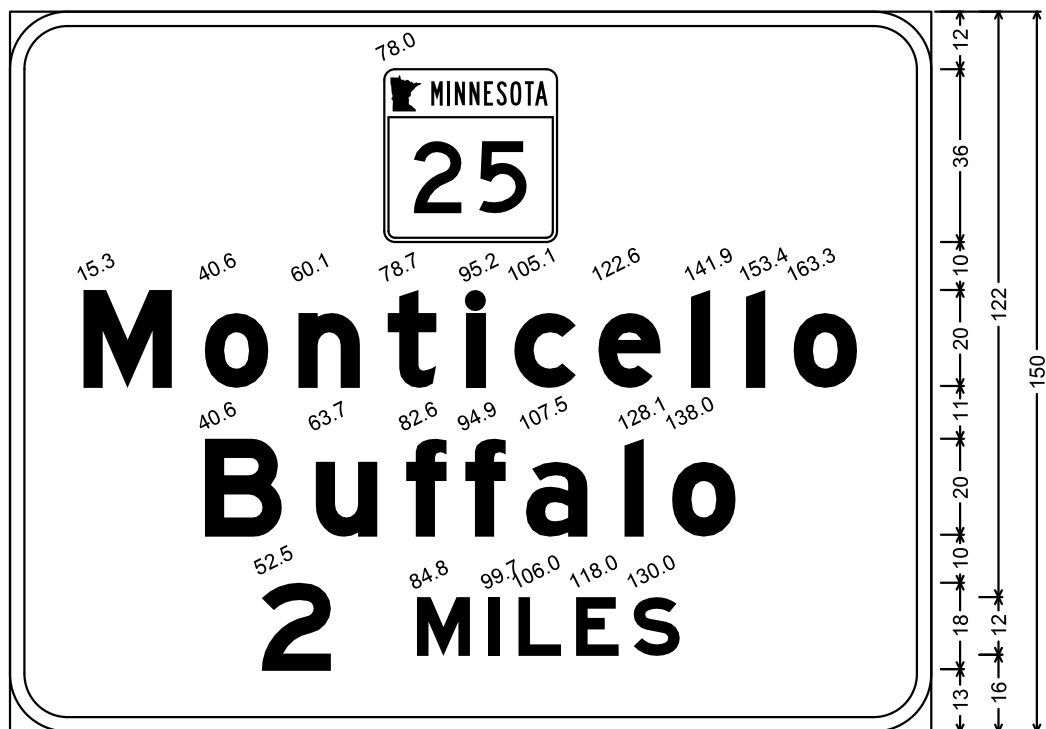
A 194-504; 12.0" Radius, 3.0" Border, White on Green;
 [Monticello] E Mod; [Buffalo] E Mod; Arrow 17 - 36.0" 60°;

SEE SHEET ST33 FOR NOTES

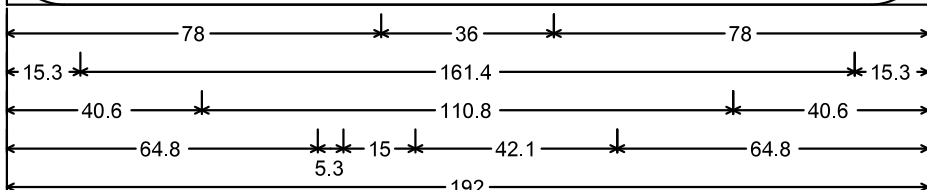
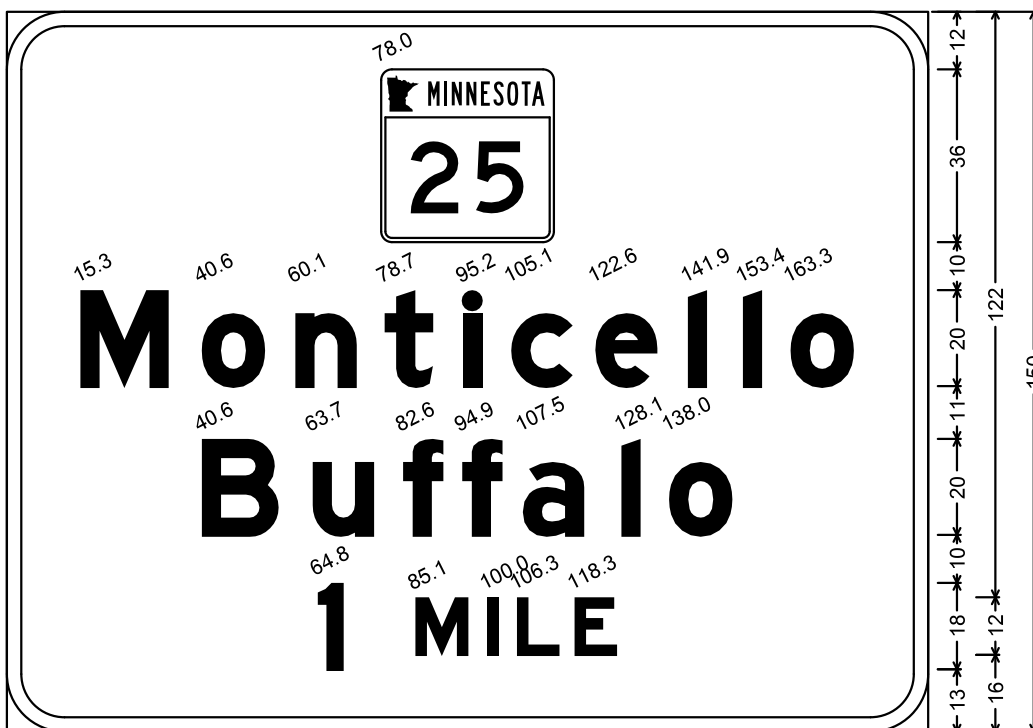
TYPE A SIGN PANELS

PLOTTED/REVISED: 1/28/2016

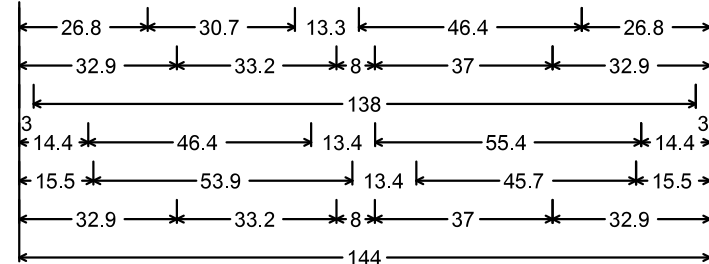
DISTRICT #: METRO
PLOT NAME: RURAL SAMPLE PLAN PANEL LAYOUTS2
PATH & FILENAME: IP_PWP:d\633825\RURAL SAMPLE PLAN PANEL LAYOUTS.DWG



A 194-120; 12.0" Radius, 3.0" Border, White on Green;
 [Monticello] E Mod; [Buffalo] E Mod; [2 MILES] E Mod;



A 194-121; 12.0" Radius, 3.0" Border, White on Green;
 [Monticello] E Mod; [Buffalo] E Mod; [1 MILE] E Mod;



A 194-124; 12.0" Radius, 3.0" Border, White on Green;
 [Big Lake] E Mod; [EXIT 193] E Mod;
 12.0" Radius, 3.0" Border, White on Brown;
 [Lake Maria] E Mod; [State Park] E Mod;
 [EXIT 193] E Mod;

SEE SHEET ST33 FOR NOTES

TYPE A SIGN PANEL OVERLAYS

DRAWN BY: LBJ

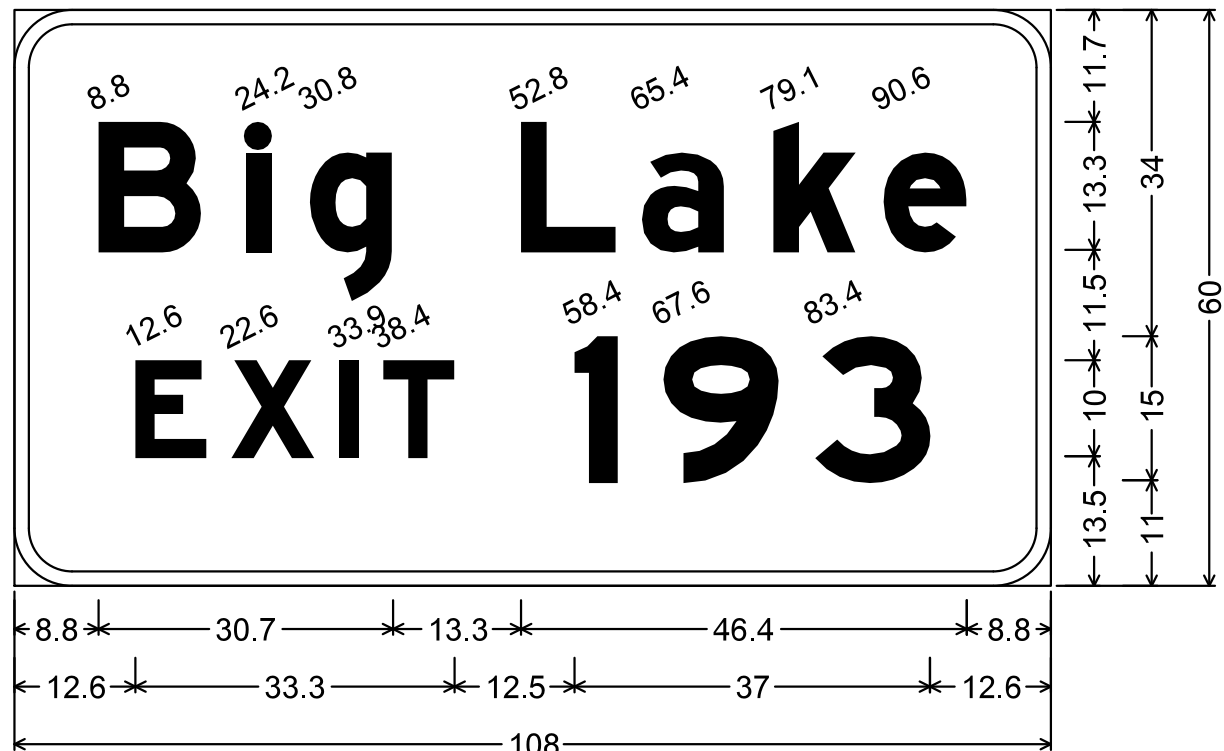
CHECKED BY: RFK

CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

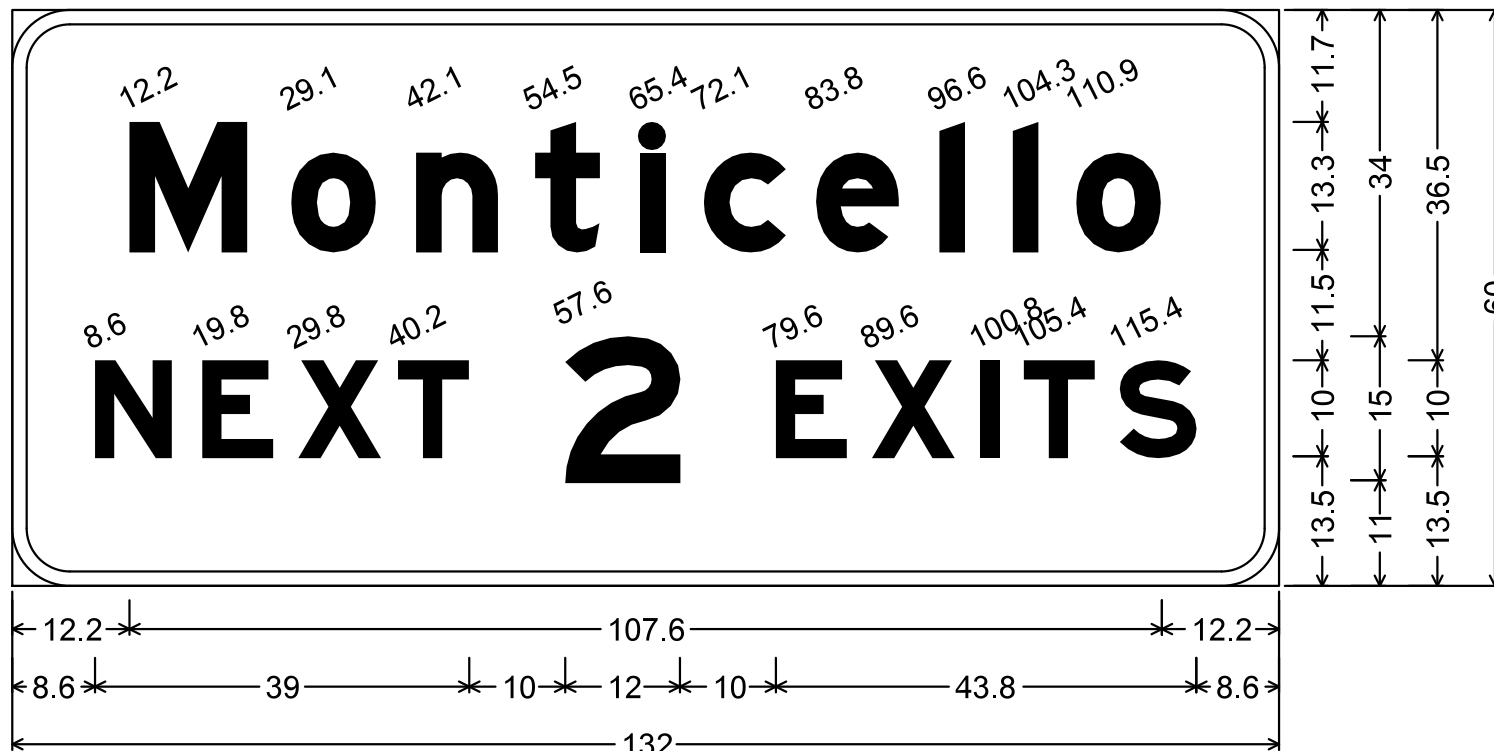
STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST26 OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

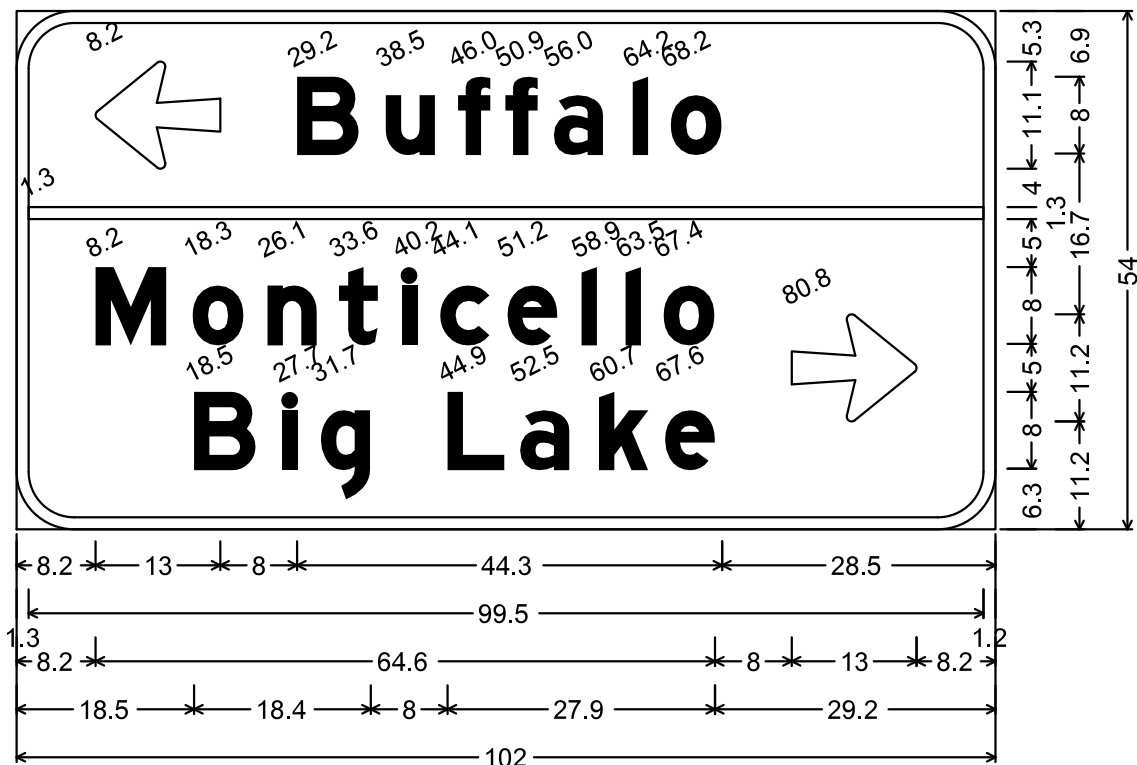
DISTRICT #: METRO
PLOT NAME: RURAL SAMPLE PLAN PANEL LAYOUTS3
PATH & FILENAME: IP_PWP-d1633825RURAL SAMPLE PLAN PANEL LAYOUTS.DWG



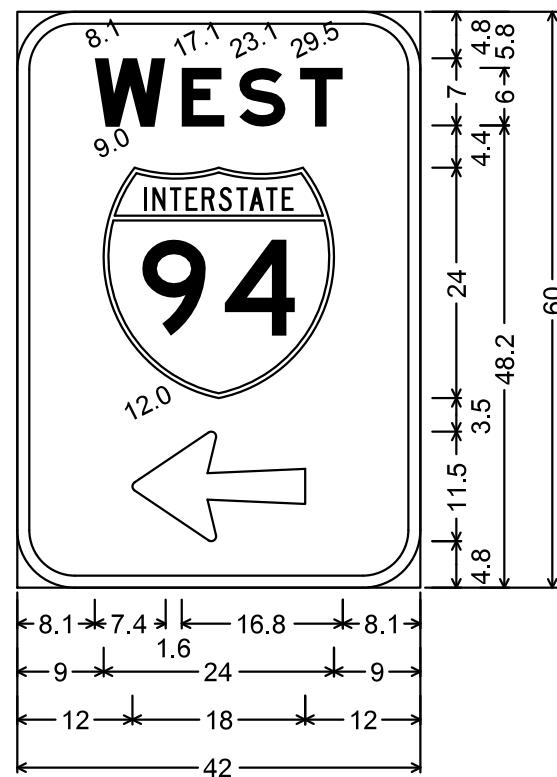
D-1; 6.0" Radius, 1.5" Border, White on Green;
[Big Lake] E Mod; [EXIT 193] E Mod;



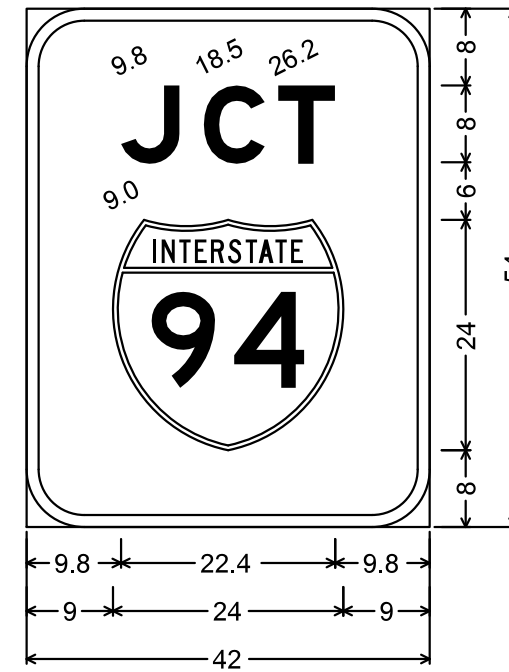
D-2; 6.0" Radius, 1.5" Border, White on Green;
[Monticello] E Mod; [NEXT 2 EXITS] E Mod;



D-4; 6.0" Radius, 1.3" Border, White on Green;
Arrow 5 - 13.0" 180°; [Buffalo] E Mod; [Monticello] E Mod;
[Big Lake] E Mod; Arrow 5 - 13.0" 0°;



D-5;
6.0" Radius, 1.3" Border, White on Green;
[WEST] E Mod;
Arrow 14 - 18.0" 180°;



D-6;
6.0" Radius, 1.3" Border, White on Green;
[JCT] E Mod;

SEE SHEET ST33 FOR NOTES

TYPE D SIGN PANELS

DRAWN BY: LBJ

CHECKED BY: RFK

CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

LIC. NO. _____

DATE 1/28/2016

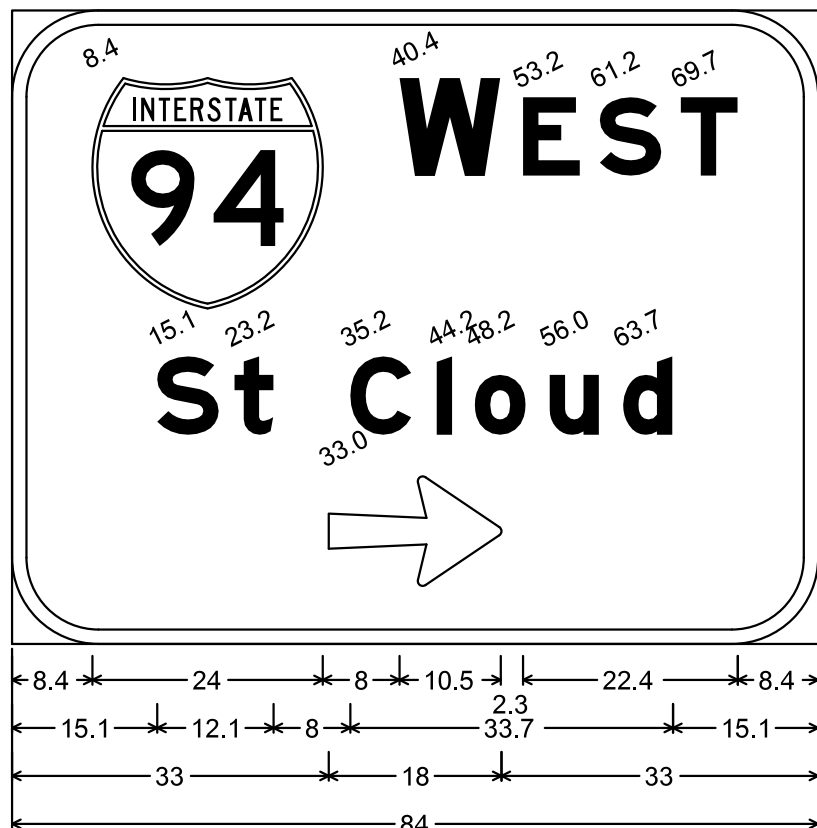
STATE PROJ. NO. 8680-515 (TH 94)

SHEET NO. ST27

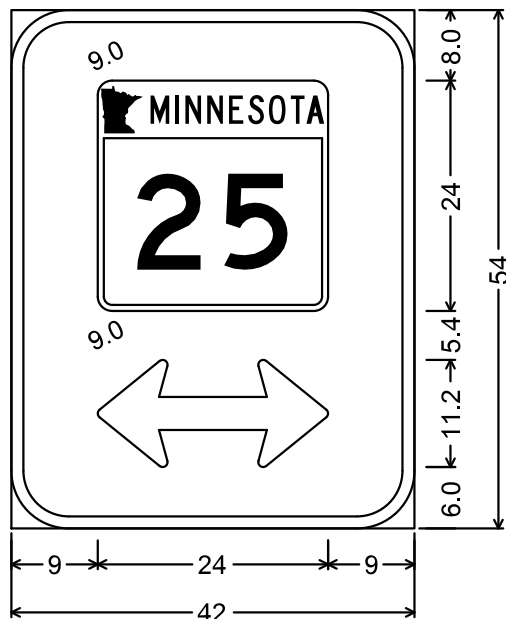
OF ST53 SHEETS

PLOTTED/REVISED: 1/28/2016

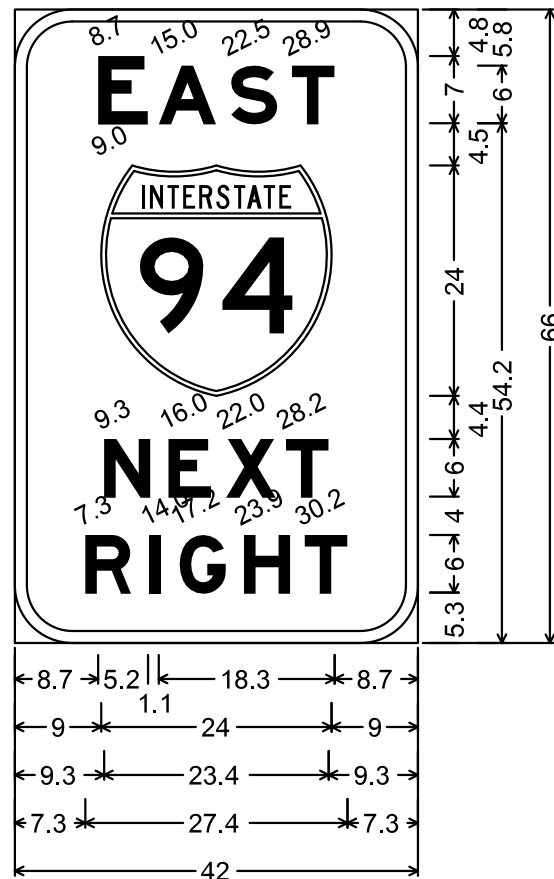
DISTRICT #: METRO
PLOT NAME: RURAL SAMPLE PLAN PANEL LAYOUTS4
PATH & FILENAME: IP_PWP:d1633825RURAL SAMPLE PLAN PANEL LAYOUTS.DGN



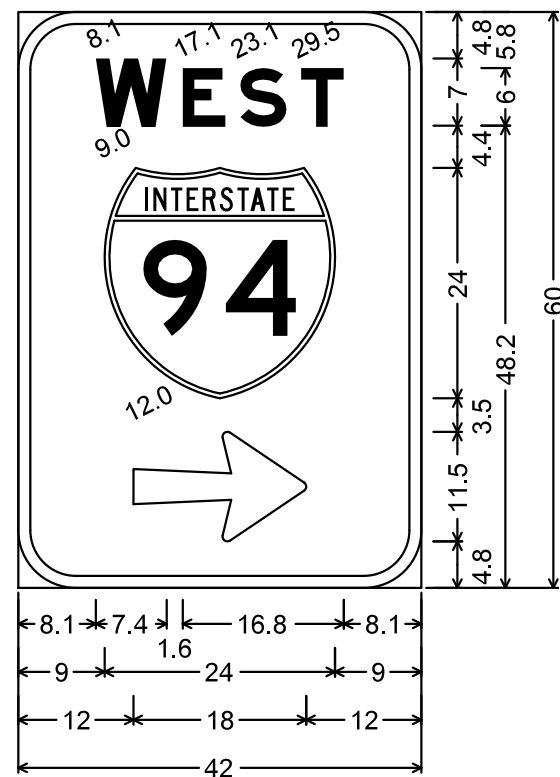
D-7; 9.0" Radius, 1.5" Border, White on Green;
[WEST] E Mod; [St Cloud] E Mod;
Arrow 14 - 18.0" 0°;



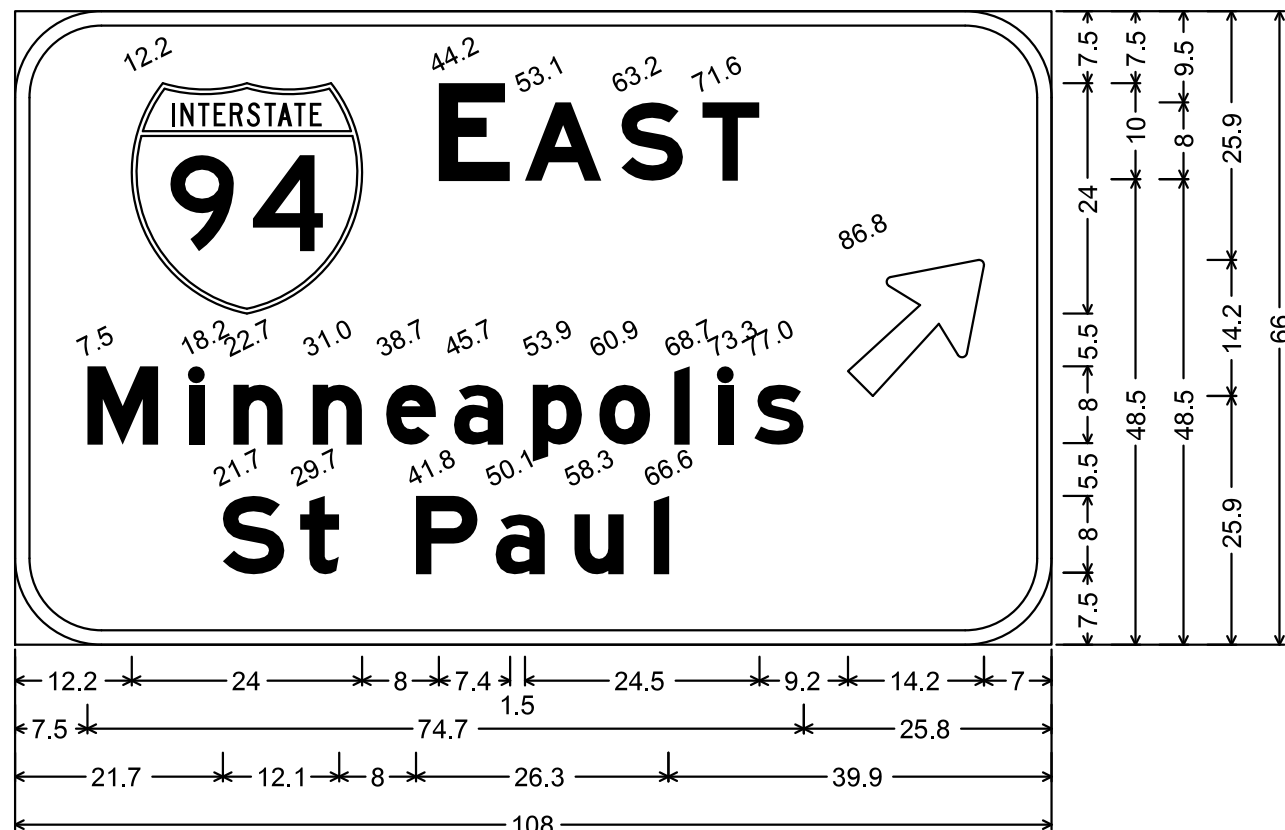
D-8;
6.0" Radius, 1.3" Border, White on Green;
Double Headed Arrow 5 - 24.0" 0°;



D-9;
6.0" Radius, 1.3" Border, White on Green;
[EAST] E Mod;
[NEXT] E Mod;
[RIGHT] E Mod;



D-10;
6.0" Radius, 1.3" Border, White on Green;
[WEST] E Mod;
Arrow 14 - 18.0" 180°;



D-11; 9.0" Radius, 1.5" Border, White on Green;
[EAST] E Mod; [Minneapolis] E Mod; [St Paul] E Mod;
Arrow 14 - 18.0" 45°;

SEE SHEET ST33 FOR NOTES

TYPE D SIGN PANELS

DRAWN BY: LBJ

CHECKED BY: RFK

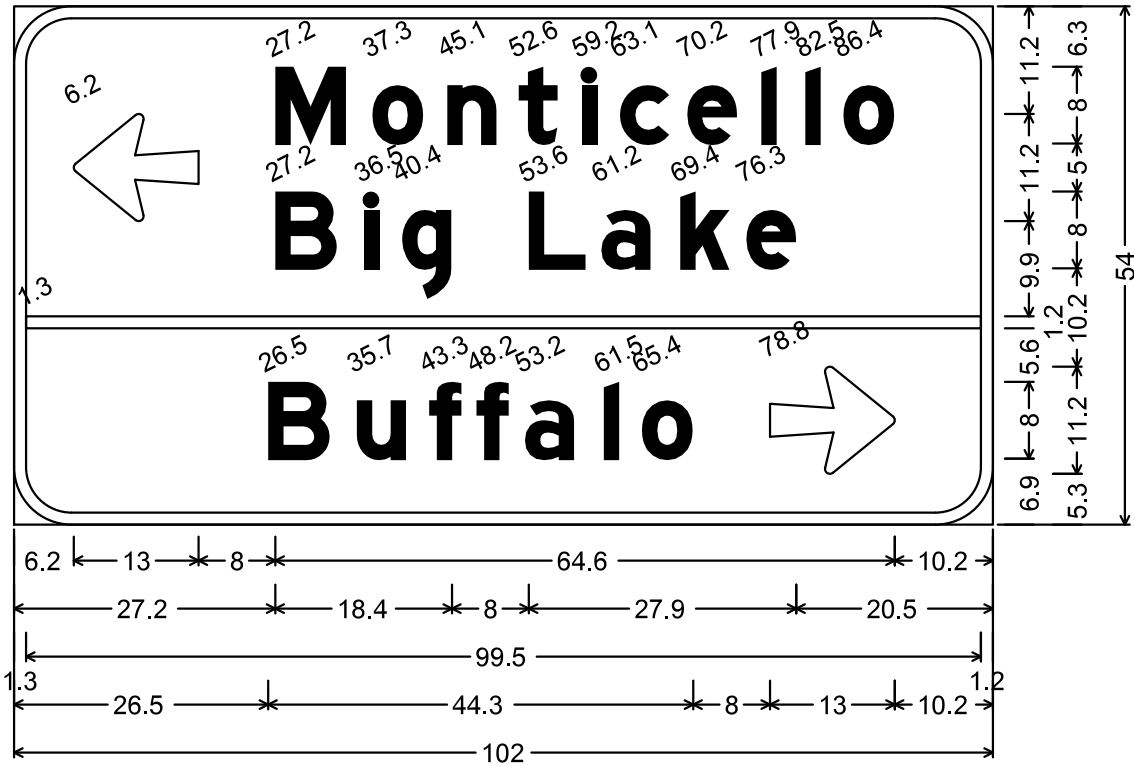
CERTIFIED BY _____

LICENSED PROFESSIONAL ENGINEER

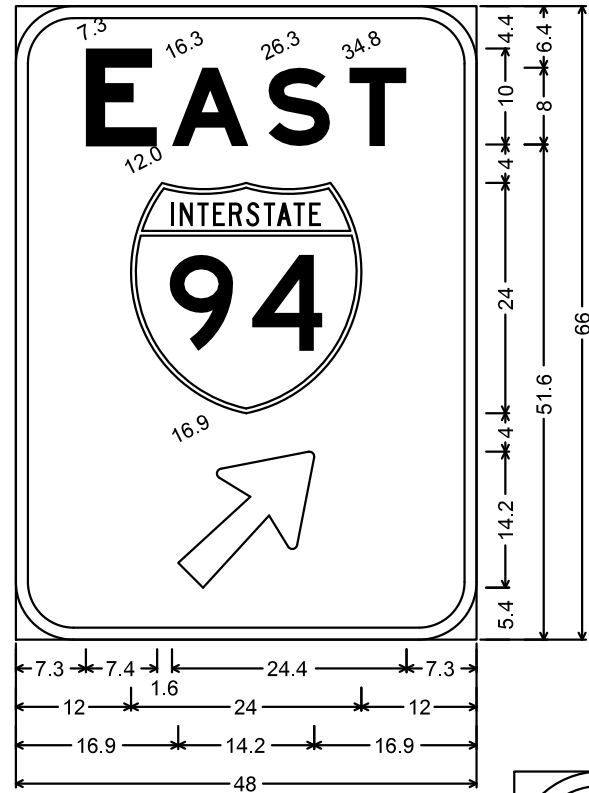
LIC. NO. _____

DATE 1/28/2016

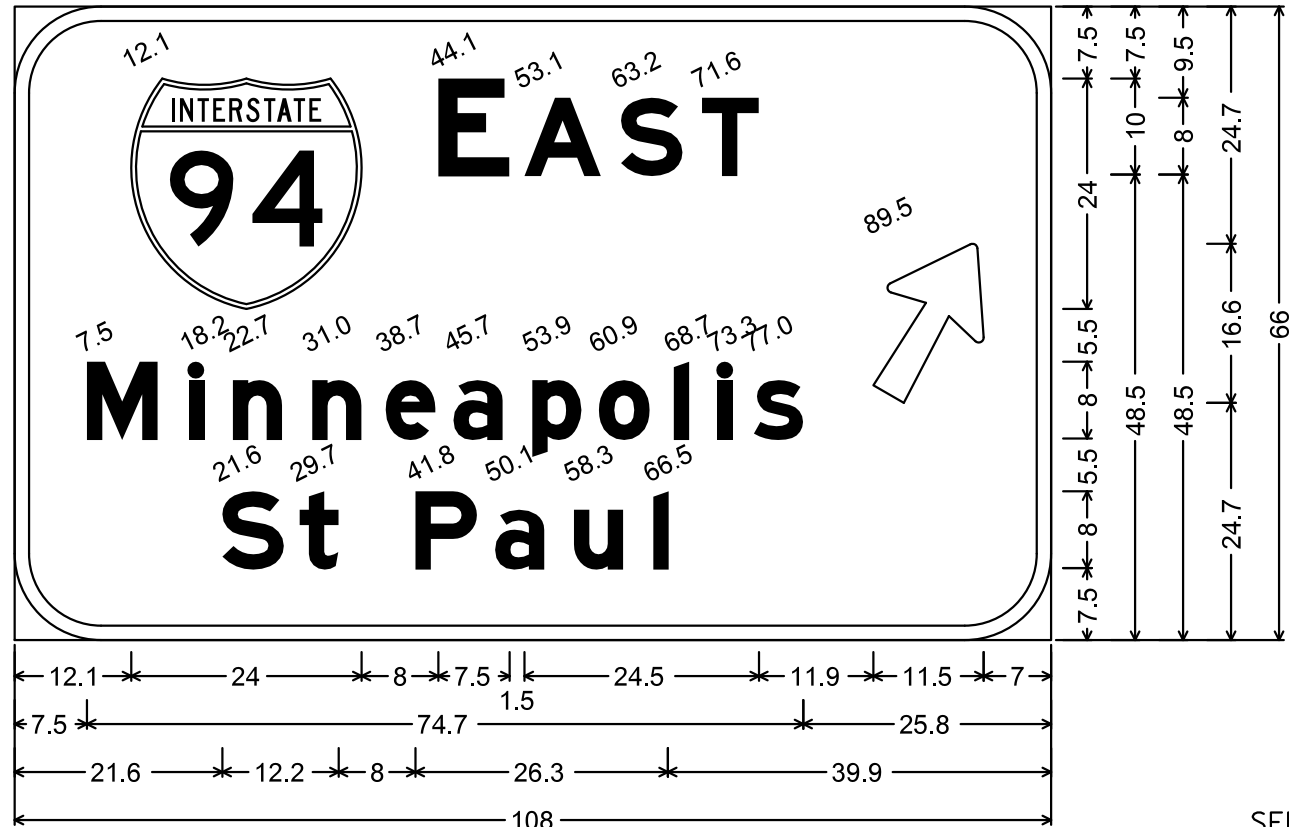
STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST28 OF ST53 SHEETS



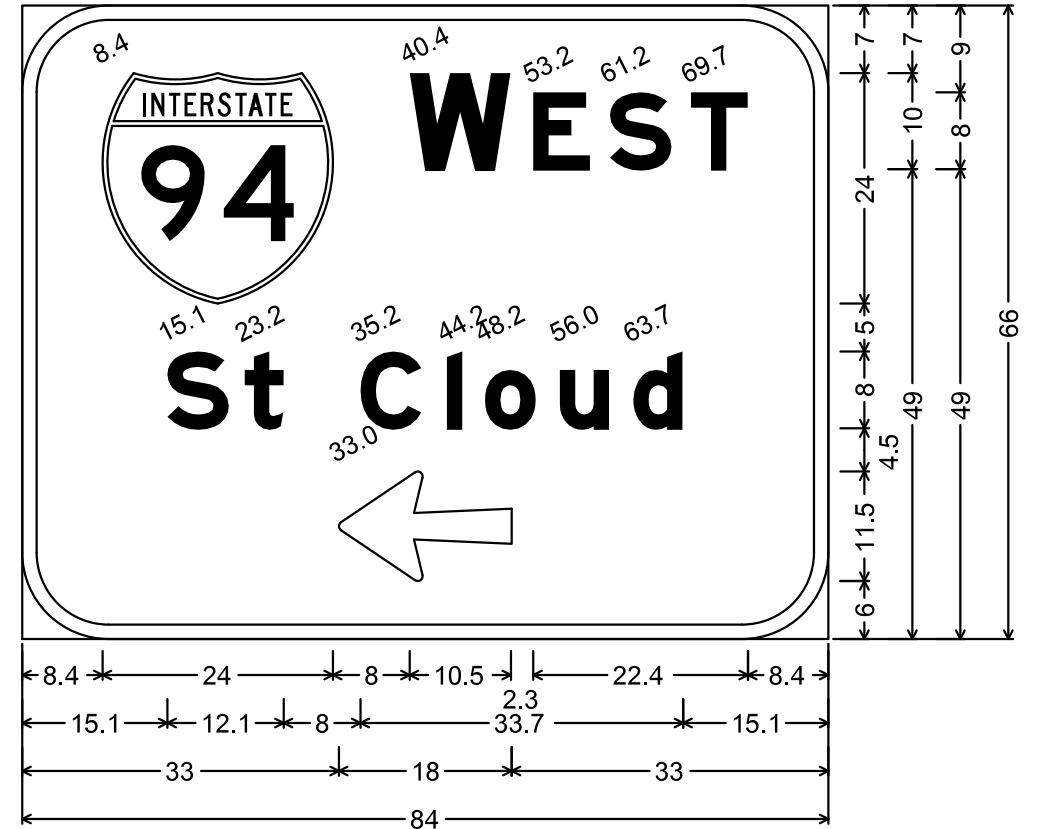
D-12; 6.0" Radius, 1.3" Border, White on Green;
 Arrow 5 - 13.0" 180°; [Monticello] E Mod; [Big Lake] E Mod;
 [Buffalo] E Mod; Arrow 5 - 13.0" 0°;



D-13;
 6.0" Radius, 1.3" Border, White on Green;
 [EAST] E Mod; Arrow 14 - 18.0" 45°;



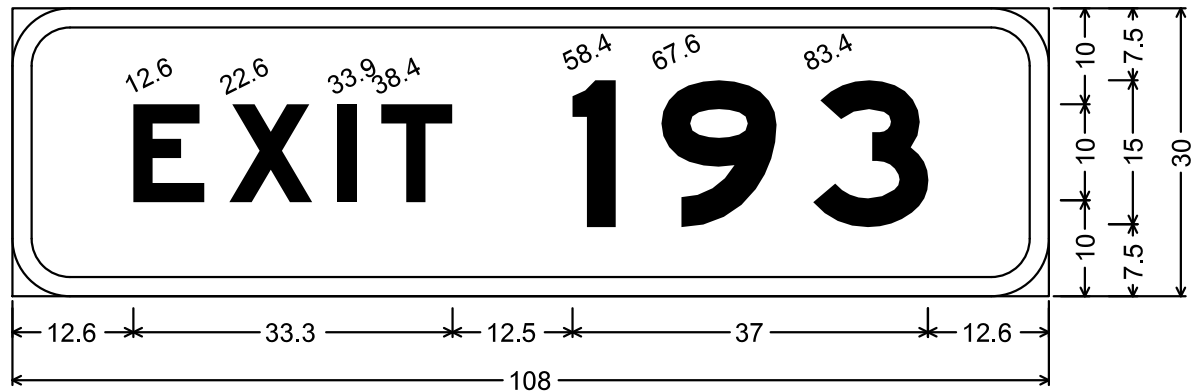
D-14; 9.0" Radius, 1.5" Border, White on Green;
 [EAST] E Mod; [Minneapolis] E Mod; [St Paul] E Mod;
 Arrow 14 - 18.0" 60°;



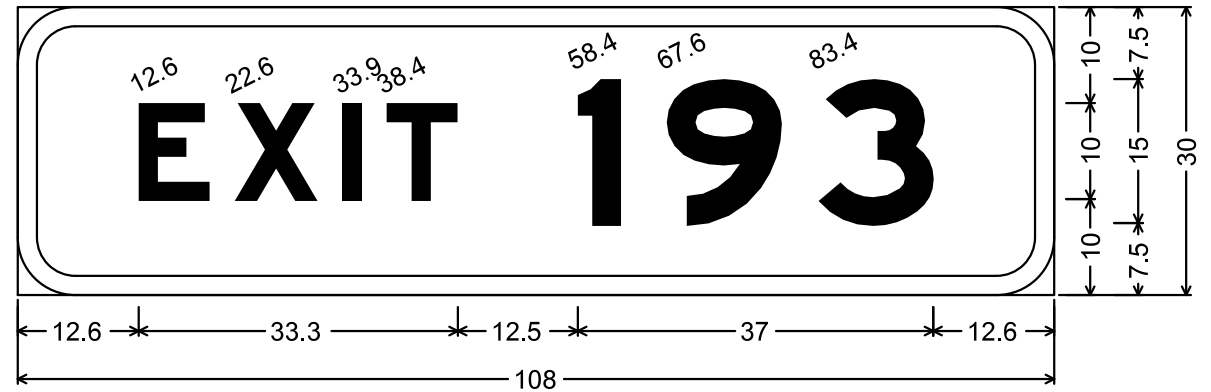
D-15; 9.0" Radius, 1.5" Border, White on Green;
 [WEST] E Mod; [St Cloud] E Mod;
 Arrow 14 - 18.0" 180°;

SEE SHEET ST33 FOR NOTES

TYPE D SIGN PANELS



EA-1; 6.0" Radius, 2.0" Border, White on Green;
[EXIT 193] E Mod;



EO-1; 6.0" Radius, 2.0" Border, White on Green;
[EXIT 193] E Mod;

SEE SHEET ST33 FOR NOTES

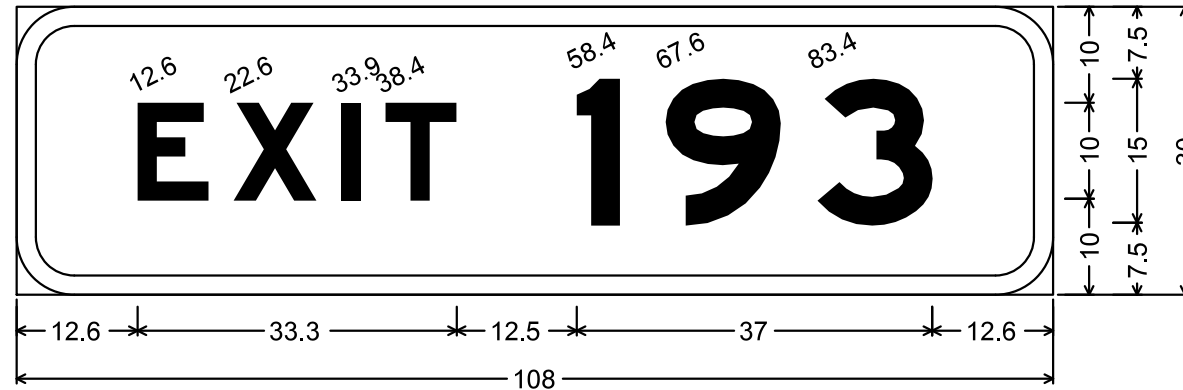
TYPE EA AND EO SIGN PANELS

DRAWN BY: LBJ

CHECKED BY: RFK

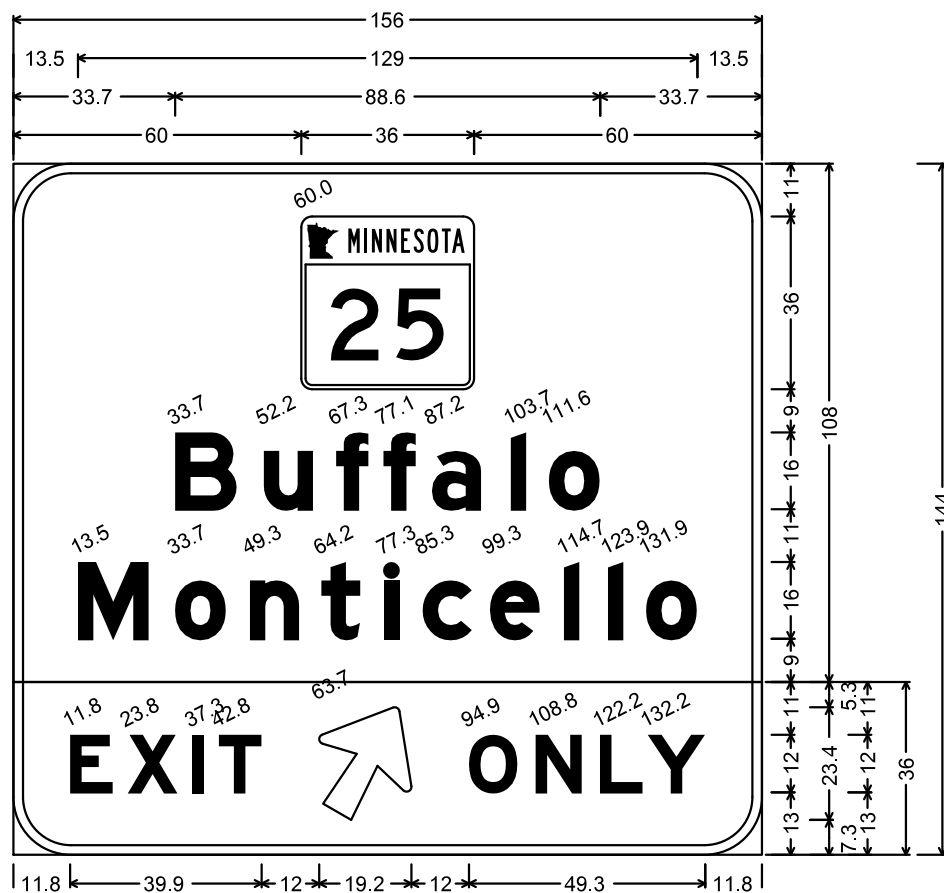
CERTIFIED BY _____ LIC. NO. _____ DATE 1/28/2016

STATE PROJ. NO. 8680-515 (TH 94) SHEET NO. ST30 OF ST53 SHEETS

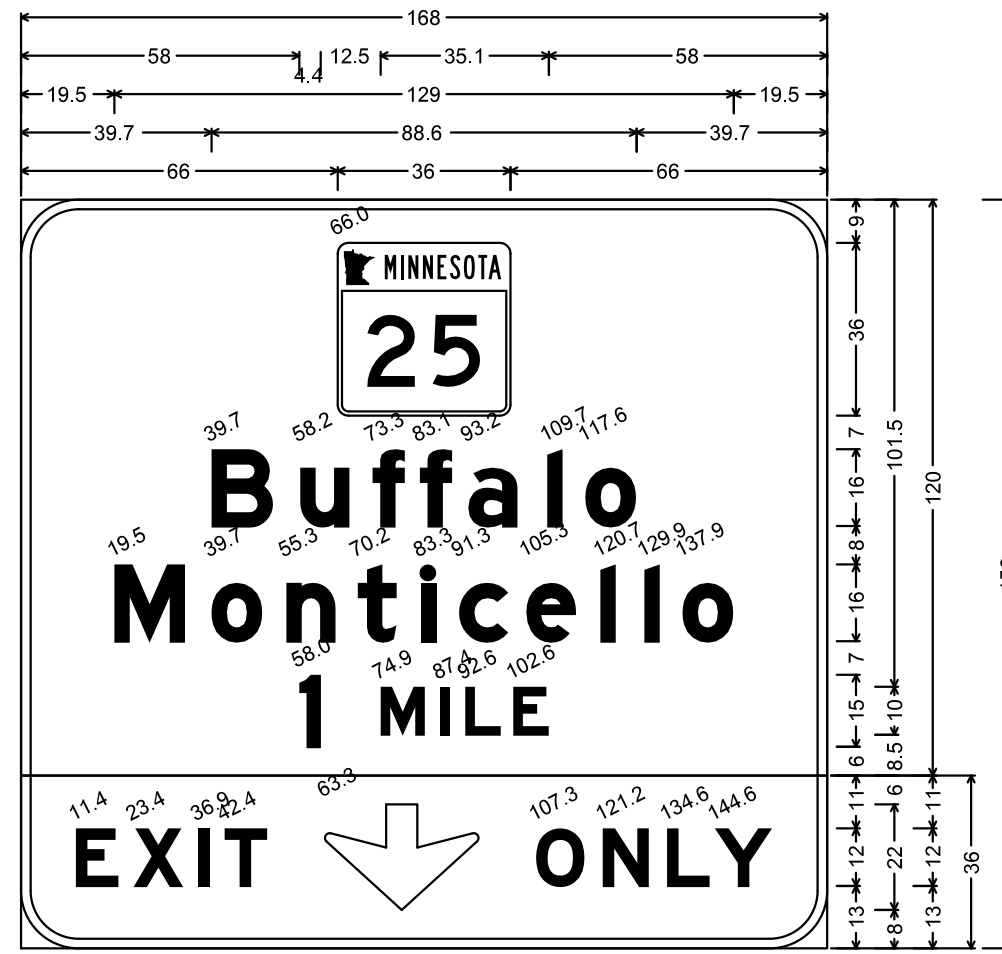


EA-201; 6.0" Radius, 2.0" Border, White on Green;
 [EXIT 193] E Mod;

SEE SHEET ST33 FOR NOTES



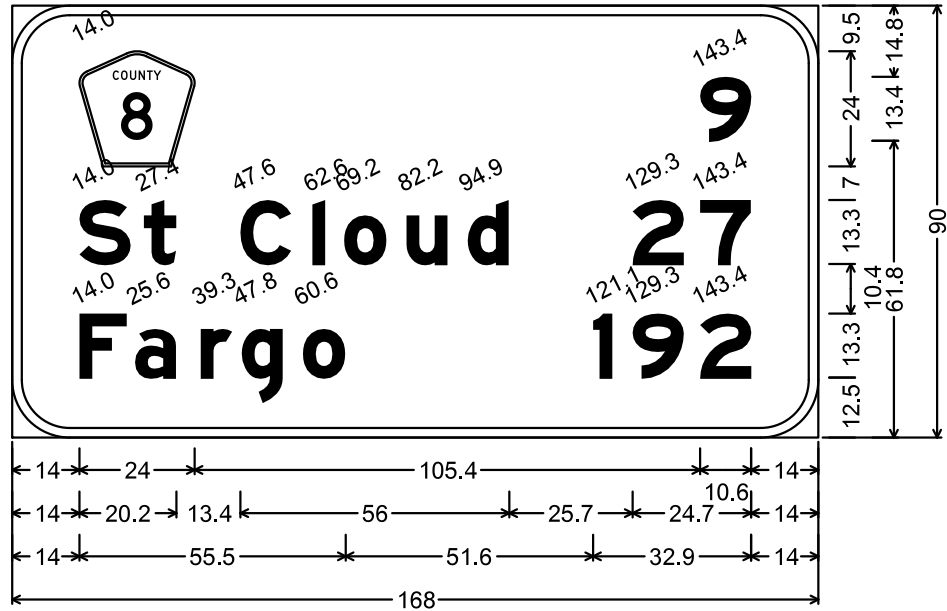
OH 194-627;
 12.0" Radius, 2.0" Border, White on Green;
 [Buffalo] E Mod; [Monticello] E Mod;
 12.0" Radius, 2.0" Border, Black on Yellow;
 [EXIT] Black E Mod; Arrow 8 - 25.0" 60° Black;
 [ONLY] Black E Mod;



OH 194-628;
 12.0" Radius, 2.0" Border, White on Green;
 [Buffalo] E Mod; [Monticello] E Mod; [1 MILE] E Mod;
 12.0" Radius, 2.0" Border, Black on Yellow;
 [EXIT] Black E Mod; Down Arrow 22.0" 270° Black;
 [ONLY] Black E Mod;

SEE SHEET ST33 FOR NOTES

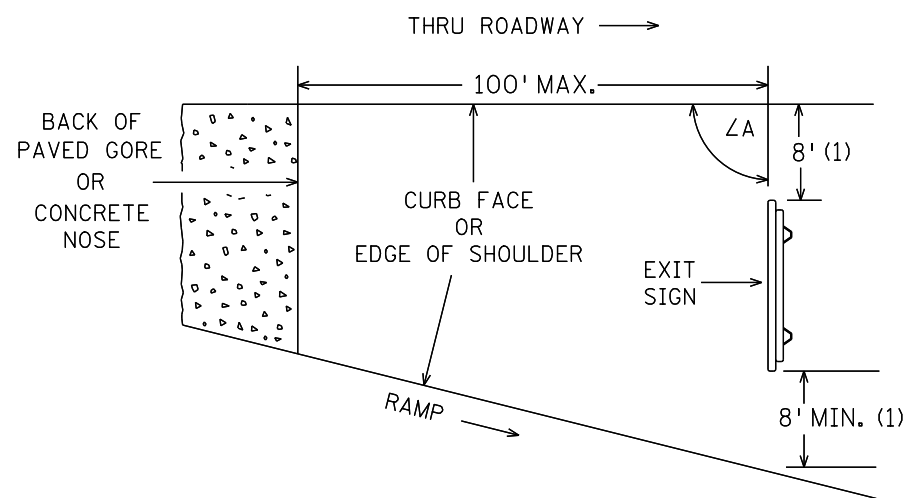
OH SIGN PANELS



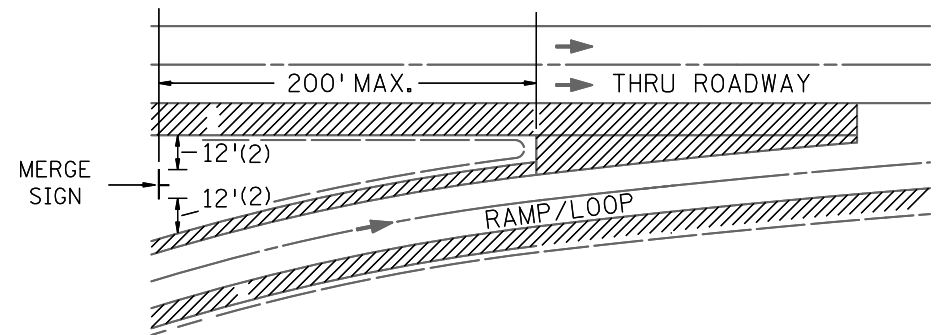
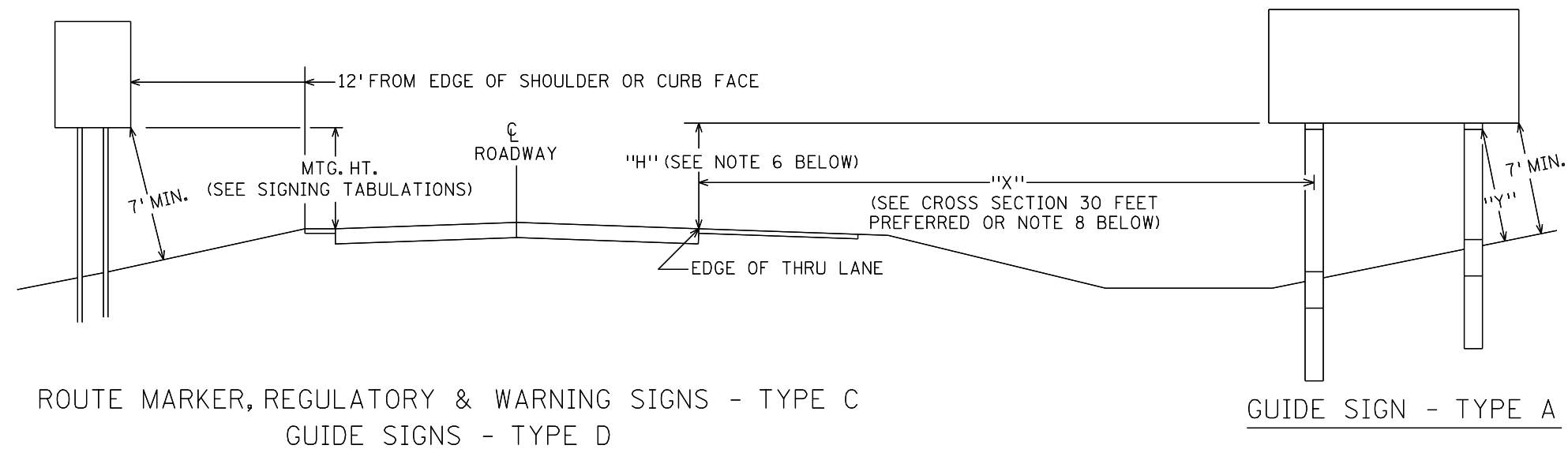
OH I94-503; 12.0" Radius, 2.0" Border, White on Green;
 [9] E Mod; [St Cloud] E Mod; [27] E Mod; [Fargo] E Mod;
 [192] E Mod;

- NOTES:
1. SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR ARROW, FRACTION AND OVERLAY DETAIL.
 2. CORNERS OF THE SIGN PANELS EXTENDING BEYOND THE CORNERS SHALL NOT BE TRIMMED.

GORE PLACEMENT



ROADSIDE PLACEMENT



SPECIFIC NOTES:

- (1) EXIT SIGNS
IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 100 FEET OF THE PAVED GORE, CONTACT THE PROJECT ENGINEER.
- (2) MERGE SIGNS
IF THESE OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, A 4 FOOT OFFSET IS ACCEPTABLE. IF THE 4 FOOT OFFSETS CANNOT BE ATTAINED WITHIN 200 FEET OF THE PAVED GORE, CONTACT THE PROJECT ENGINEER.

NOTES:

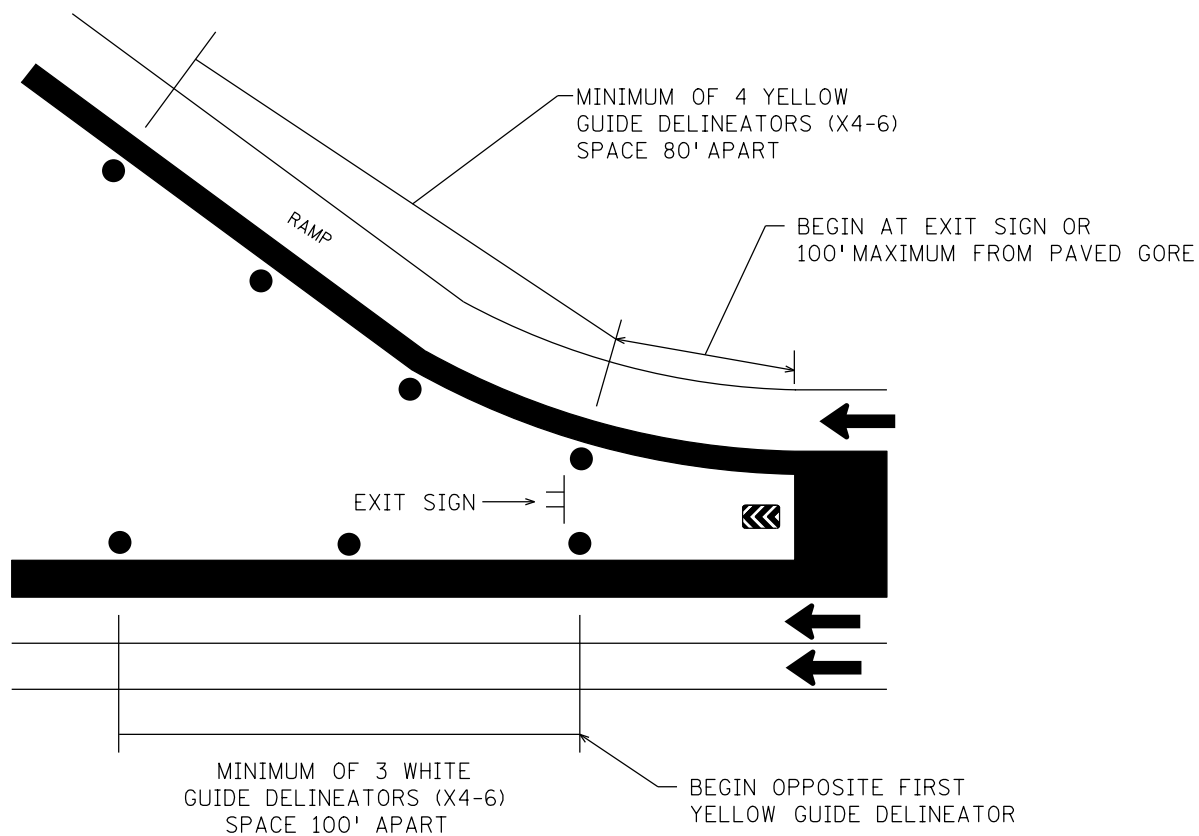
- 1. ALL TYPE C AND D MOUNTING HEIGHTS ARE MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE ELEVATION OF THE NEAR EDGE OF PAVEMENT IN RURAL AREAS OR TO THE TOP OF THE CURB OR IN THE ABSCENCE OF CURB, TO THE NEAR EDGE OF THE TRAVELED WAY.
- 2. SIGN FACES SHALL BE VERTICAL.
- 3. OVERHEAD SIGNS SHALL BE POSITIONED AT RIGHT ANGLES TO THE THRU ROADWAY UNLESS OTHERWISE NOTED.
- 4. TO AVOID SPECULAR GLARE, $\angle A$ SHALL BE APPROXIMATELY 93° FOR SIGNS LOCATED LESS THAN 30' FROM THE EDGE OF THRU LANE AND APPROXIMATELY 92° FOR SIGNS LOCATED 30' OR MORE FROM EDGE OF THRU LANE. THIS APPLIES TO SIGNS TYPE A, C, & D AND INCLUDES SIGNS IN THE GORE.
- 5. "Y" IS THE PERPENDICULAR DISTANCE FROM THE GROUND LINE TO THE FRICTION FUSE ON THE POST. THIS DISTANCE SHALL BE AT LEAST 7'.
- 6. WHERE "X" IS LESS THAN 30', "H" SHALL BE 7'. WHERE "X" IS 30' OR GREATER, MINIMUM AND PREFERRED "H" IS 5'.
- 7. LATERAL CLEARANCES GIVEN APPLY TO RIGHT AND OR LEFT SIDE INSTALLATION.
- 8. WHEN A TYPE A SIGN IS INSTALLED DIRECTLY BEHIND TRAFFIC BARRIER, THE LEFT EDGE OF THE SIGN PANEL SHALL BE LOCATED A MINIMUM OF 8 FEET BEHIND THE FACE OF THE TRAFFIC BARRIER.

SIGN PLACEMENT

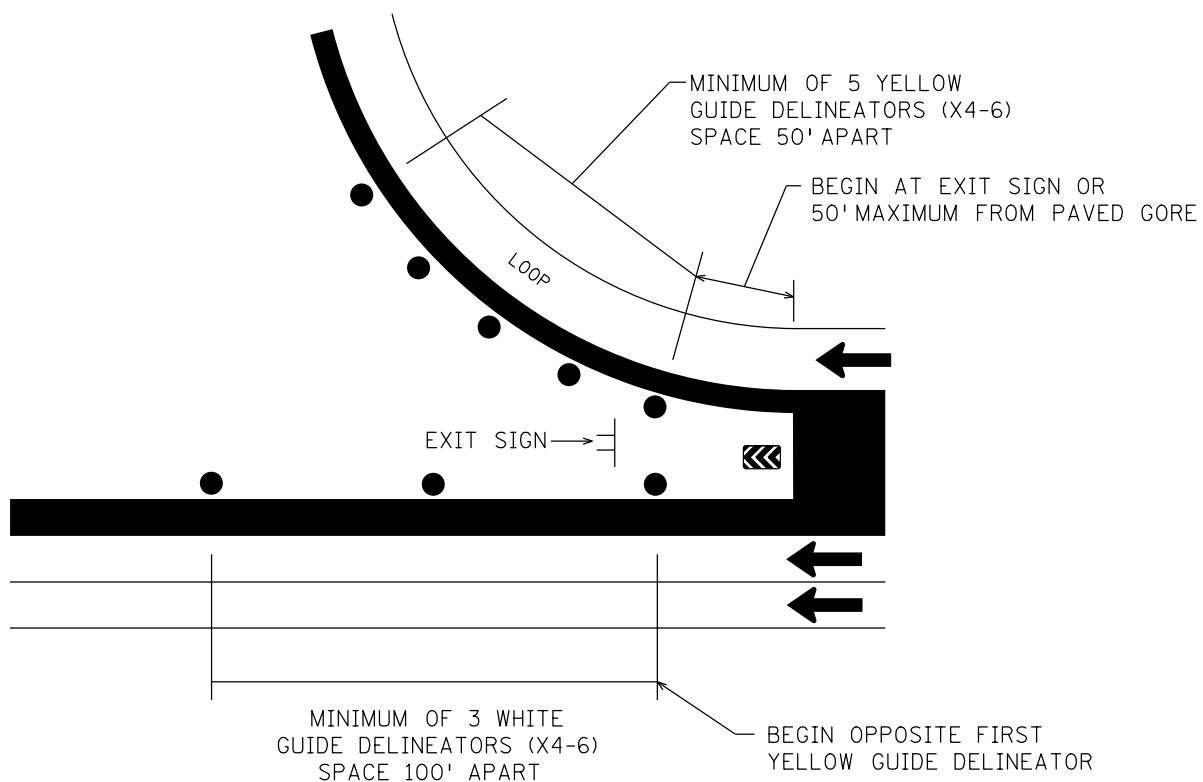
PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan TYPICALS
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

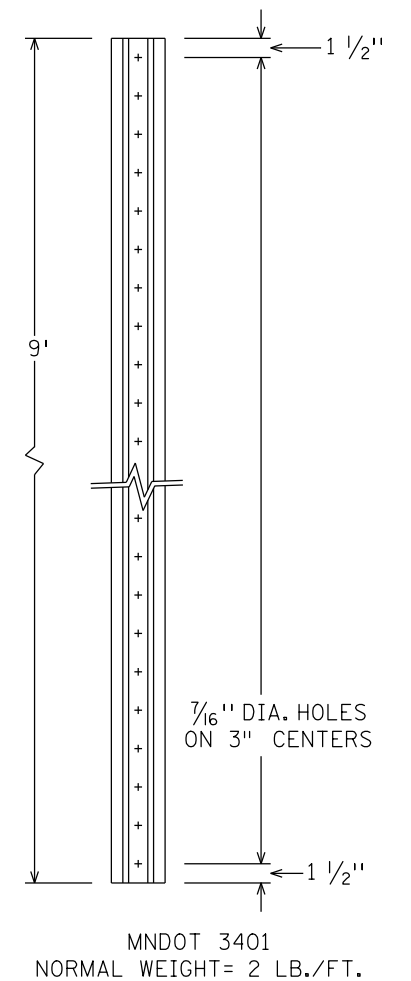
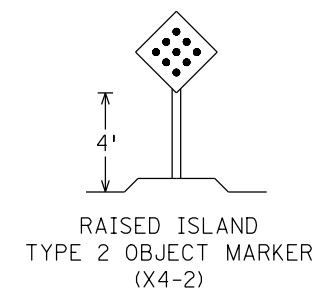
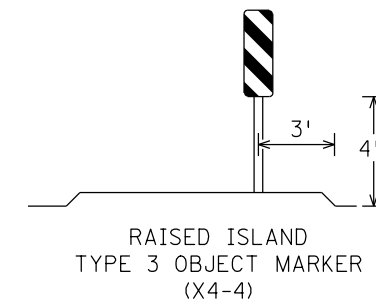
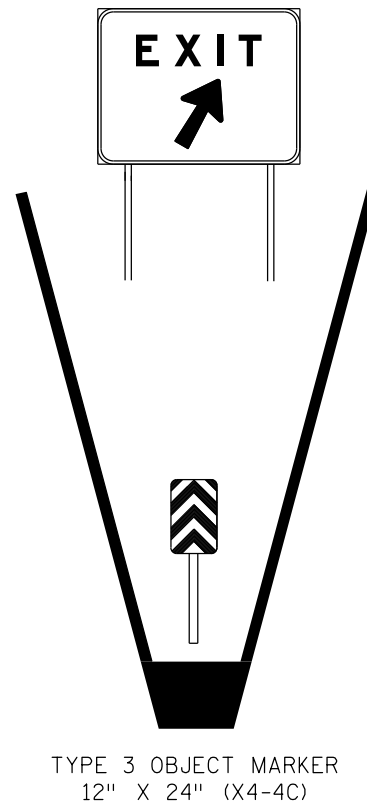
PLOTTED/REVISED: 1/28/2016



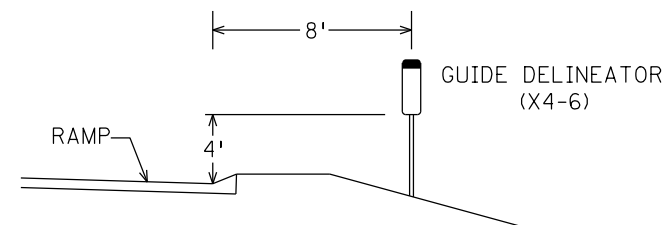
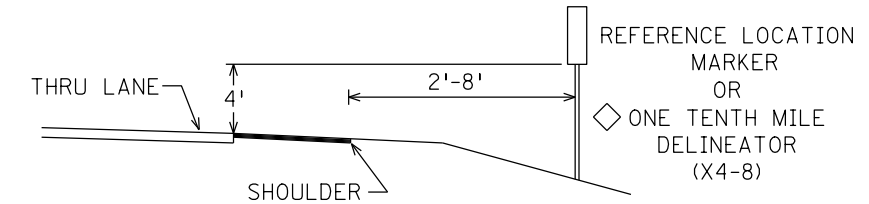
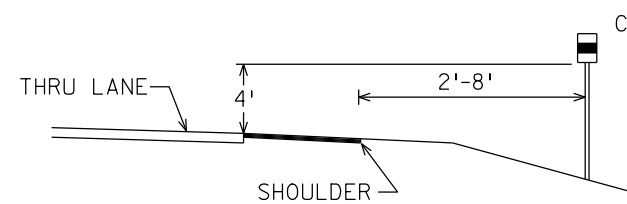
PLAN A
RAMP DELINEATION



PLAN B
LOOP DELINEATION



DELINEATOR POST



TYPICAL PLACEMENT

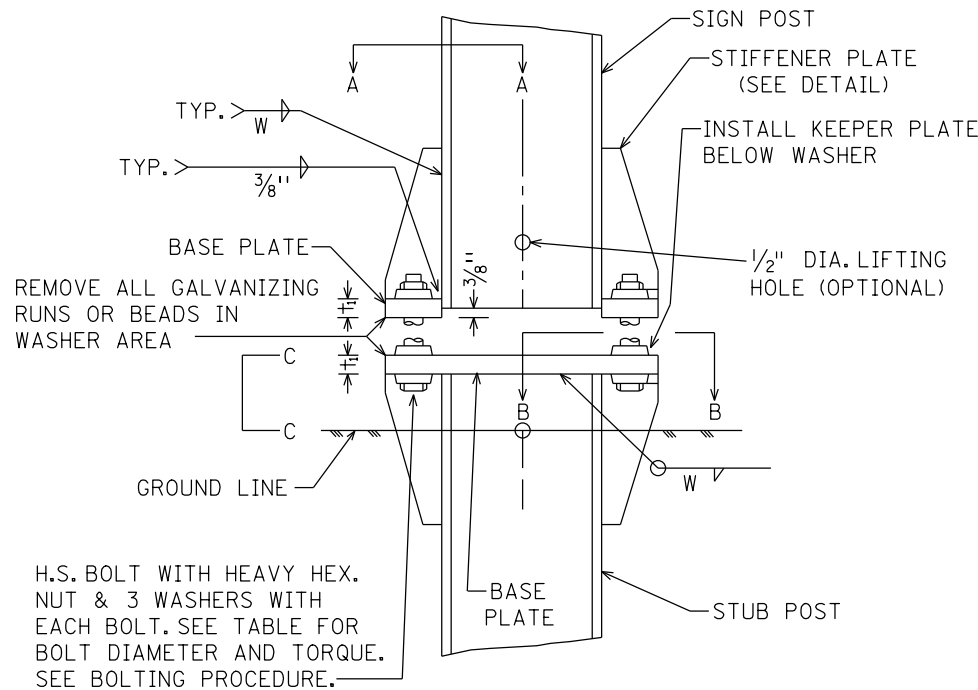
DELINEATORS AND MARKERS

DISTRICT #: METRO

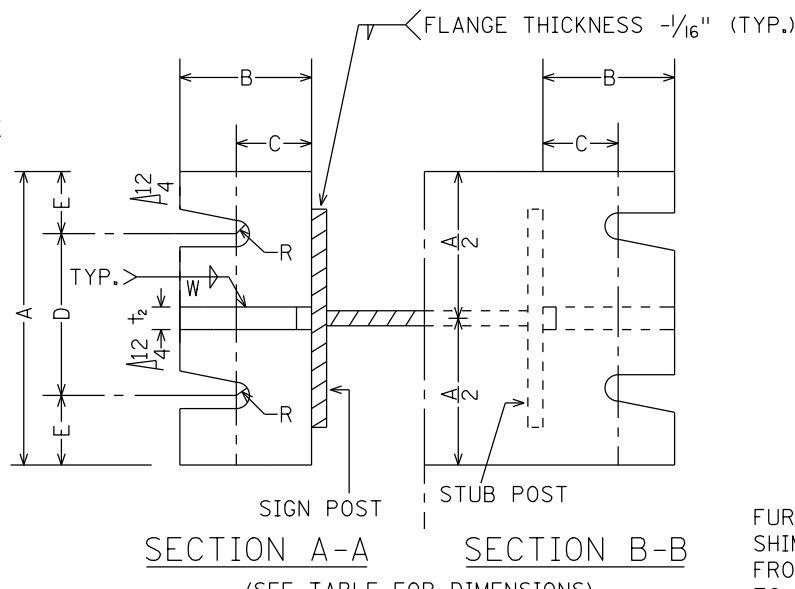
IPLOT NAME: Rural Sample Plan TYPICALS8

PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

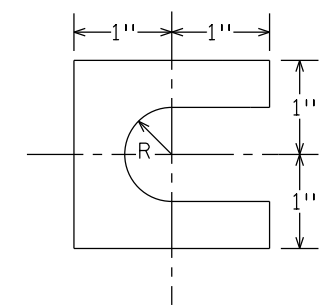
PLOTTED/REVISED: 1/28/2016



SIGN POST AND STUB POST ELEVATION



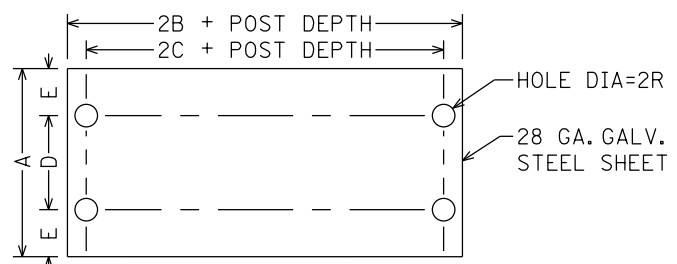
SECTIONS SHOWN ARE FOR INSTALLATIONS ON RIGHT SHOULDER AND IN GORE. PLATE SLOT BEVELS ARE OPPOSITE HAND FROM THAT SHOWN FOR INSTALLATIONS ON LEFT SHOULDER.



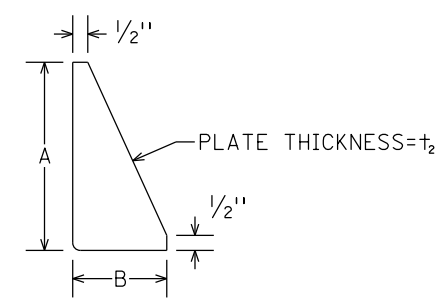
FURNISH TWO-.012"± THICK AND TWO-.032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M. B36.

BOLTING PROCEDURE - BASE CONNECTION

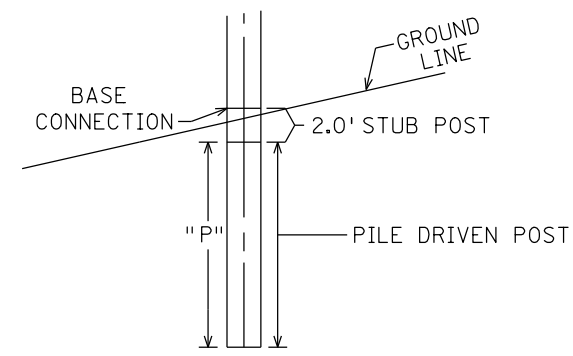
1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND WITH ONE OF THE FLAT WASHERS ON EACH BOLT BETWEEN PLATES.
2. SHIM AS REQUIRED TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS AND SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.



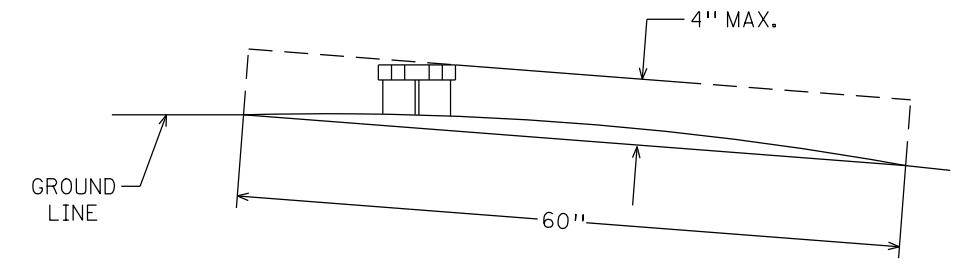
KEEPER PLATE



STIFFENER PLATE DETAIL
(SEE TABLE FOR DIMENSIONS)



H-PILE FOOTING



MAXIMUM PROJECTION OF STUB POST SHALL NOT EXTEND BEYOND A LINE, ABOVE AND 4" PARALLEL TO ANY CHORD, WHICH IS PERPENDICULAR TO (OR ALIGNED RADIALLY TO) THE CENTERLINE OF THE HIGHWAY AND HAS ITS (THE CHORD'S) END POINTS ON THE GROUND SURFACE ON OPPOSITE SIDES OF THE STUB POST.

DIMENSION POST SIZE	BASE CONNECTION DATA	FUSE AND HINGE PLATE DATA										FOOTING DATA											
		BOLT SIZE AND TORQUE	A	B	C	D	E	t ₁	t ₂	W	R	G	H	J	K	L	M	d ₁	d ₂	t ₃	BOLT DIA.	BOLT LENGTH	STUB POST LENGTH ①
W4X13	3/4" DIA. x 3-1/2" TORQUE=600" #	6"	2 1/2"	1 1/2"	3 1/2"	1 1/4"	1"	1/2"	1/4"	13/32"	2"	1 1/4"	4"	2 1/4"	7/8"	1"	1 1/16"	3/4"	3/8"	5/8"	2"	2'	12'
W5X16											2 1/2"	1 1/4"	5"	2 3/4"	1 1/8"	1 1/8"	1 3/16"	7/8"	3/8"	3/4"	2"	2'	12'
W6X20	7/8" DIA. x 4-1/4" TORQUE=800" #	8"	3"	1 3/4"	4"	2"	1 1/4"	1/2"	1/4"	15/32"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	1 3/8"	1 3/16"	1 1/8"	3/8"	3/4"	2"	2'	12'
W8X24											2 1/2"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	1 1/2"	1 5/16"	1 1/4"	1/2"	7/8"	2 1/2"	2'	12'
W8X28	1" DIA. x 5" TORQUE=1000" #	8"	3"	2"	4"	2"	1 1/2"	3/4"	5/16"	17/32"	2 1/2"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	1 5/8"	1 1/16"	1 1/8"	1/2"	1"	2 1/2"	2'	12'
W8X31											3"	1 3/4"	8"	5 1/2"	1 1/4"	2"	1 1/16"	1 1/2"	1/2"	1"	2 1/2"	2'	12'
② W10X39	1-1/8" DIA. x 5" TORQUE=1200" #	9"	3 1/2"	2"	5"	2"	1 1/2"	3/4"	5/16"	19/32"	3"	1 3/4"	8"	5 1/2"	1 1/4"	1 7/8"	1 3/16"	1 3/8"	1/2"	1 1/8"	2"	2'	12'

SPECIFIC NOTES:

- ① MEASURED FROM TOP OF BASE PLATE
- ② OLD BEAM DEPTH = 10". NEW REVISED BEAM DEPTH = 9-7/8". KEEPER PLATES MUST BE FABRICATED ACCORDINGLY

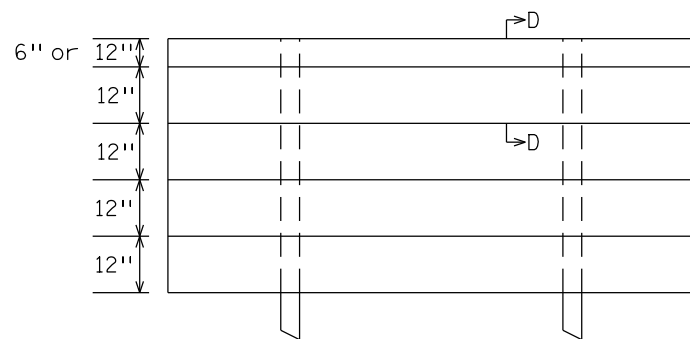
TYPE A SIGN STRUCTURAL DETAILS

H-PILE FOOTING
SHEET 1 OF 2

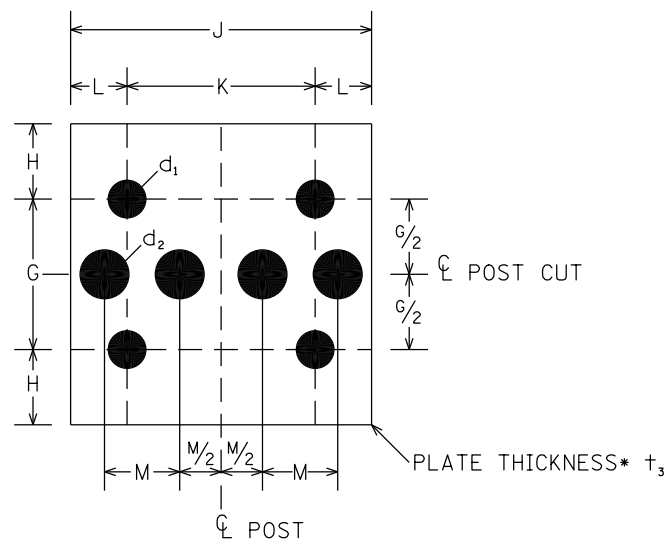
REVISED: 10-2-2013

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan TYPICALS2
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

PLOTTED/REVISED: 1/28/2016

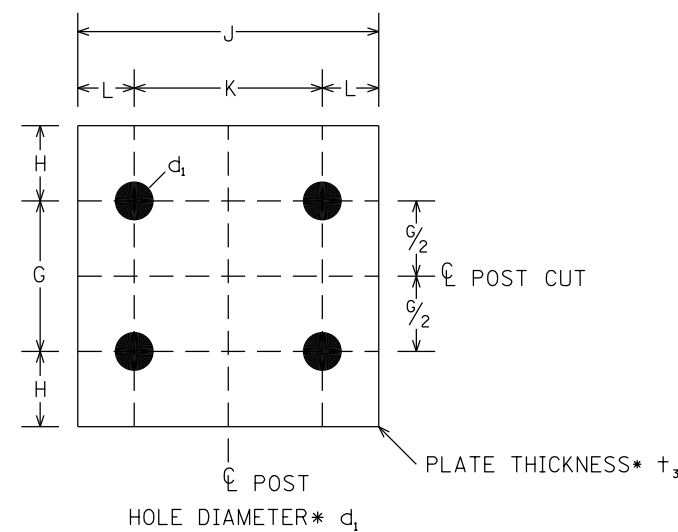


TYPICAL PANEL MOUNTING



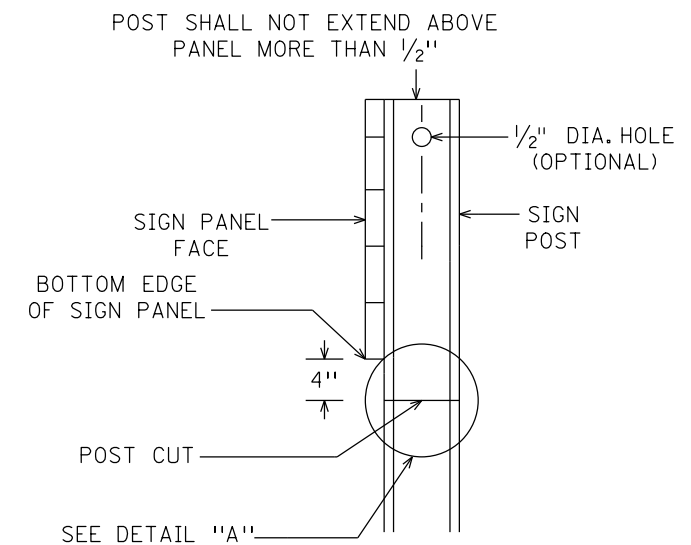
FRICTION FUSE PLATE DETAIL

(SEE TABLE ON SHEET 1 OF 2 FOR DIMENSIONS)

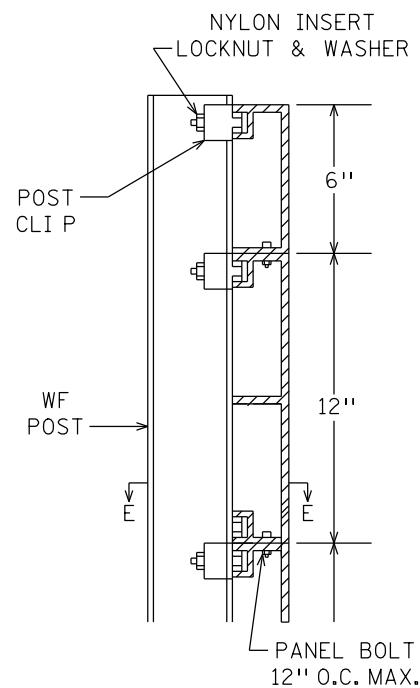


HINGE PLATE DETAIL

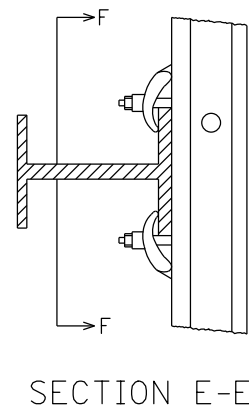
(SEE TABLE ON SHEET 1 OF 2 FOR DIMENSIONS)



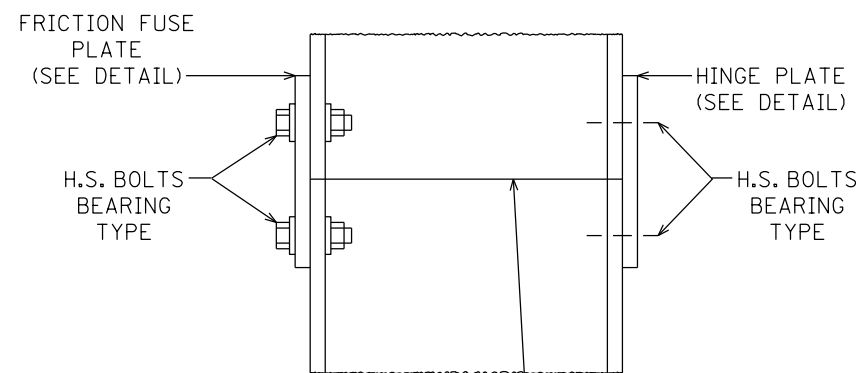
FRICTION FUSE
SIDE VIEW



SECTION D-D



SECTION E-E



DETAIL "A" FRICTION FUSE

POST SHALL BE SAW CUT BEFORE GALVANIZING.
USE H.S. BOLTS WITH HEX. HD., HEX. NUT,
AND TWO FLAT WASHERS.

CONTRACTOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TORQUE WRENCH TIGHTENED IN THE FIELD IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE. NUTS SHALL HAVE BEEN RETAPPED AND BOLT THREADS SHALL HAVE BEEN CLEANED WITH A 1/64" OVERSIZED RETHREADING DIE AFTER GALVANIZING. BEFORE TIGHTENING MAY BEGIN, THE TORQUE WRENCH SHALL BE CALIBRATED WITH A BOLT-TENSION-CALIBRATOR USING TYPICAL BOLT-NUT-WASHER ASSEMBLIES OF EACH SIZE AND LOT TO BE USED SO AS TO SHOW THE TORQUE NECESSARY TO OBTAIN THE FOLLOWING MINIMUM RESIDUAL TENSION IN EACH BOLT.

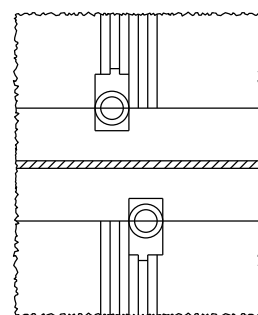
BOLT SIZE	MIN. RESIDUAL, BOLT TENSION
1/2" DIA.	12,050#
5/8" DIA.	19,200#
3/4" DIA.	28,400#
7/8" DIA.	39,250#
1" DIA.	51,500#
1-1/8" DIA.	56,450#

GENERAL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO MNDOT 3308. REINFORCING BARS SHALL CONFORM TO MNDOT 3301. SPIRALS SHALL CONFORM TO MNDOT 3305-NO SPLICES. HIGH STRENGTH BOLTS SHALL CONFORM TO A.S.T.M.-A325.
2. FORMS WILL BE REQUIRED FOR THE EXPOSED VERTICAL SURFACES OF THE FOOTINGS.
3. REFER TO "SIGN DATA" SHEET FOR SPECIFIC DATA ON EACH INDIVIDUAL SIGN INSTALLATION.
4. FRICTION FUSE PLATE SHALL BE INSTALLED ON SIDE OF POST FACING TRAFFIC.
5. ALL POST CUTS SHALL BE SAW CUTS. PLATES MAY BE SHEARED OR FLAME CUT USING A MECHANICALLY GUIDED CUTTING TORCH. EDGE PREPARATION SHALL BE IN ACCORDANCE WITH MNDOT 2471.3.C.4 AND MNDOT 2471.3.D4.

NOTE: POST CLIPS SHALL BE INSTALLED ON BOTH SIDES OF EACH POST AT EACH PANEL JOINT AS INDICATED.

SECTION F-F



TYPE A SIGN STRUCTURAL DETAILS

SHEET 2 OF 2

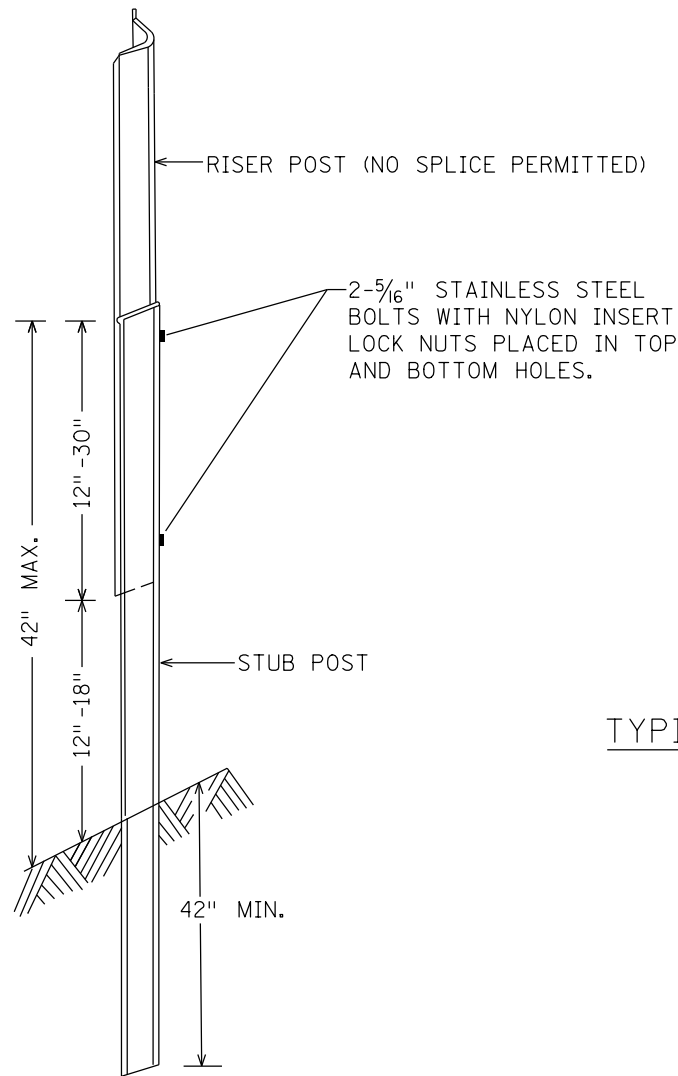
REVISED: 10-2-2013

DISTRICT #: METRO

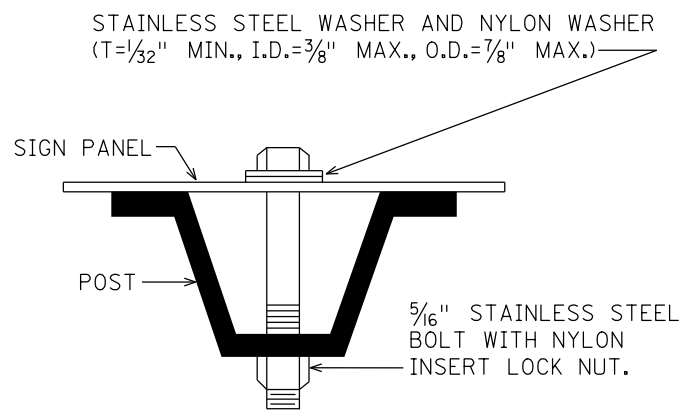
IPLOT NAME: Rural Sample Plan TYPICALS3

PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

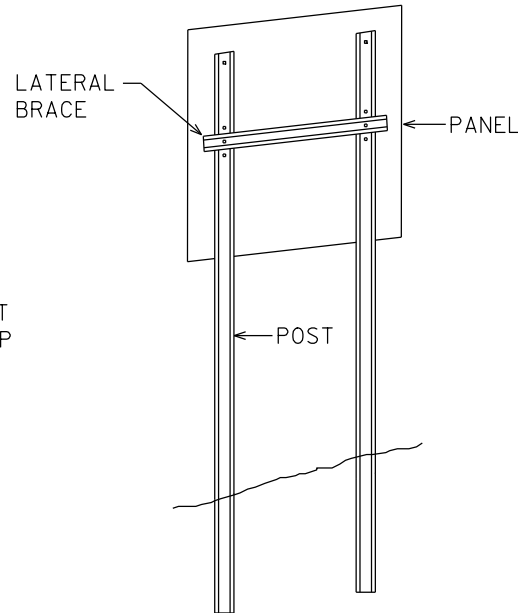
TYPE C & D POST



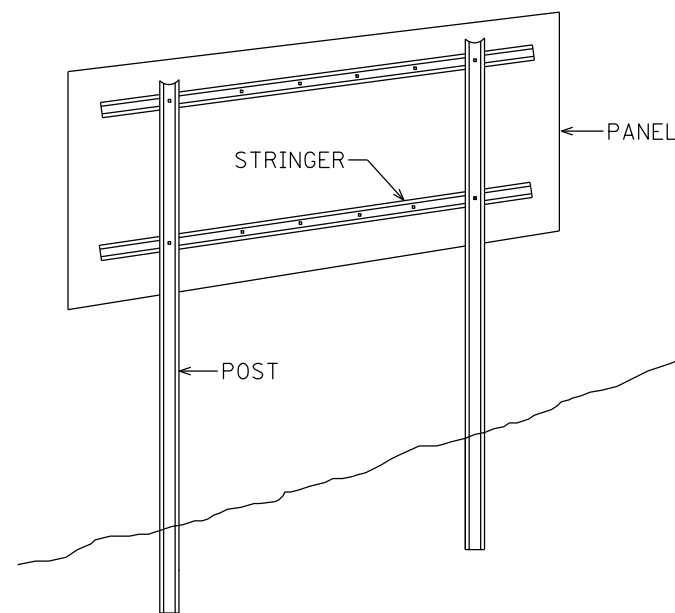
U POST BREAKAWAY SPLICE



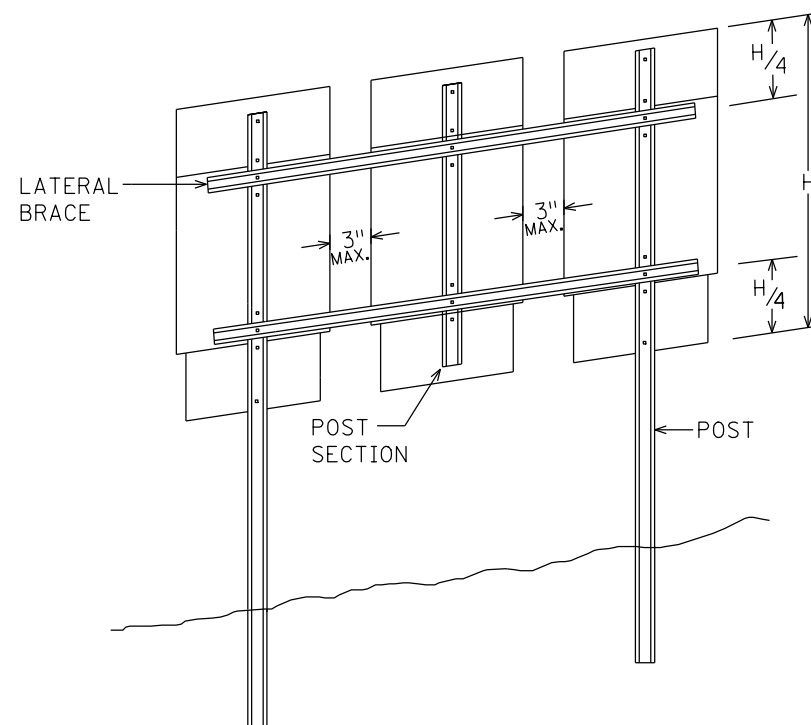
U POST MOUNTING
TYPE C SIGNS



TYPICAL TYPE C INSTALLATION



TYPICAL TYPE D INSTALLATION



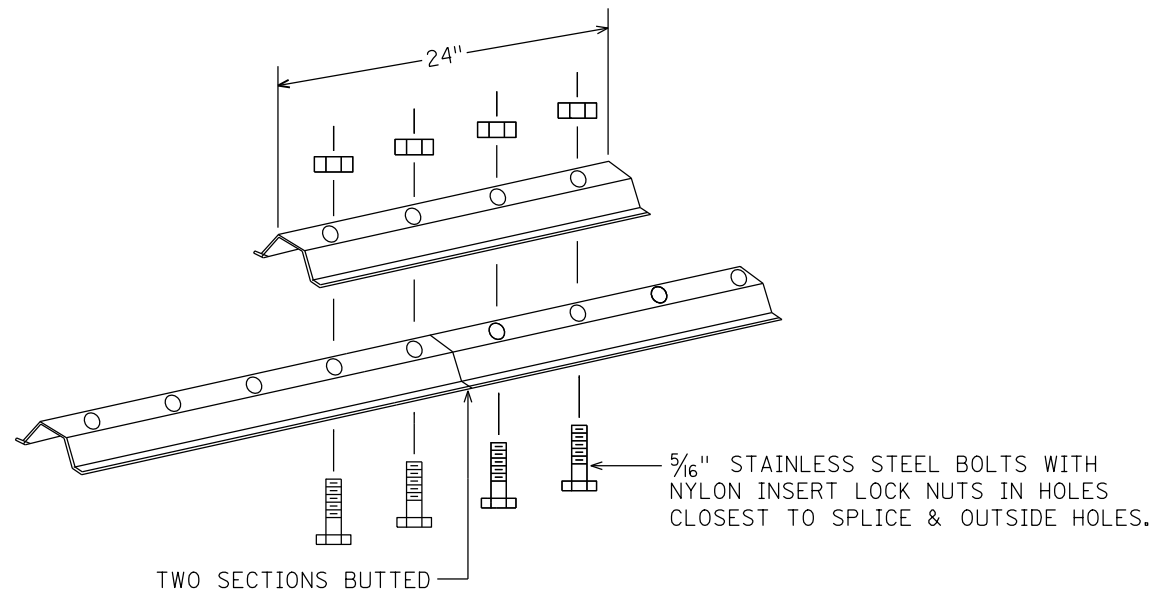
MODIFIED TYPE C INSTALLATION

NOTES:

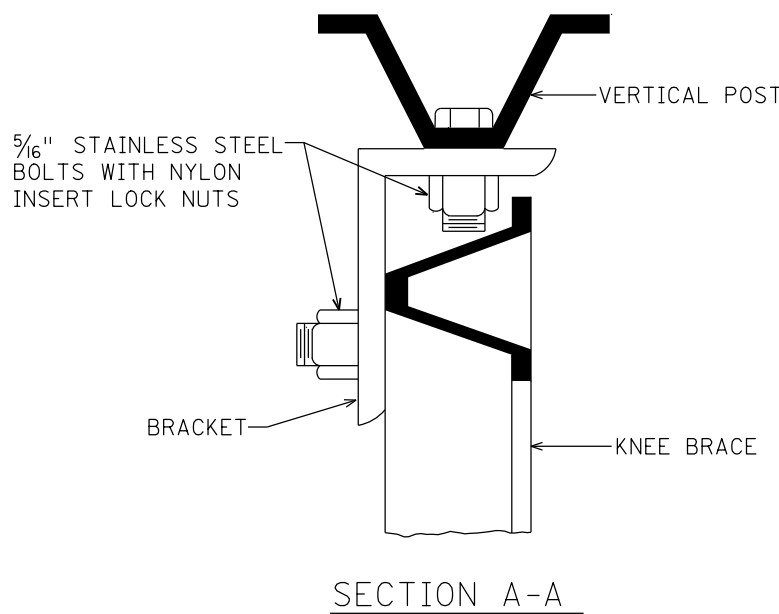
1. USE 3 LB/FT STUB POSTS. SHALL CONFORM TO MNDOT 3401.
2. USE 2.5 LB/FT RISER POSTS, STRINGERS, KNEE BRACES AND LATERAL BRACES. ALL SHALL CONFORM TO MNDOT 3401.
3. SEE SIGN DATA SHEETS FOR NUMBER OF POSTS, KNEE BRACES, POST LENGTHS AND SPACINGS, AS DETERMINED FROM TEM CHARTS 6.3 AND 6.4.
4. IF MORE THAN TWO POSTS ARE NEEDED, THE MINIMUM SPACING SHALL BE 45" BETWEEN POSTS.
5. TYPE D SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH THE TYPE D STRINGER AND PANEL - JOINT DETAIL (SEE MNDOT STANDARD SIGNS AND MARKINGS MANUAL).
6. MOUNTING (PUNCH CODE) FOR TYPE C SIGN PANELS SHALL BE AS INDICATED IN THE MNDOT STANDARD SIGNS AND MARKINGS MANUAL UNLESS OTHERWISE SPECIFIED.
7. ALL RISER (VERTICAL) U POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
8. USE STAINLESS STEEL 5/16" BOLTS, WASHERS AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
9. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
10. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 42".
11. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MNDOT 3306 AND GALVANIZED IN ACCORDANCE WITH MNDOT 3394.
12. COLLARS SHALL BE USED TO SHIM OVERLAYS AND LEGEND COMPONENTS AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MNDOT 3352.2A6.
13. 2 POST TYPE C SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
14. WHERE 2 SINGLE POST TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS.
15. WHERE 3 OR MORE TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND POST SECTION AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN MODIFIED TYPE C INSTALLATION.

TYPE C & D SIGN
STRUCTURAL DETAILS

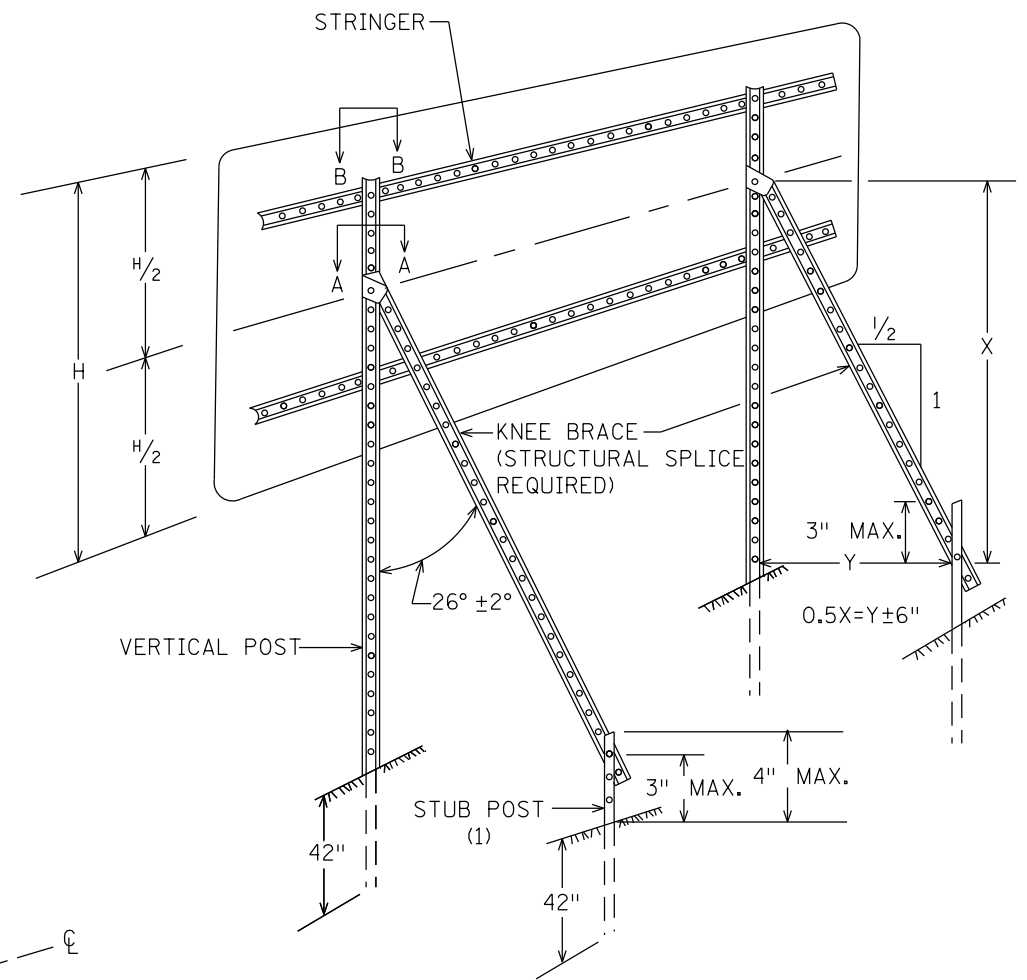
PLOTTED/REVISED: 1/28/2016



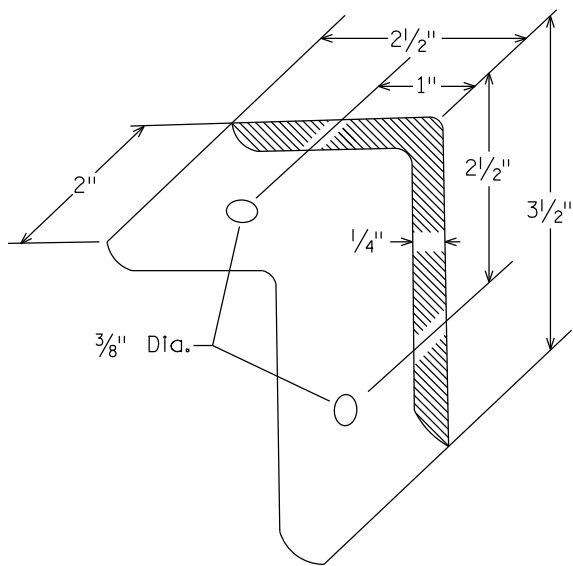
LATERAL BRACE OR STRINGER
SPlice DETAIL (EXPLODED VIEW)



SECTION A-A

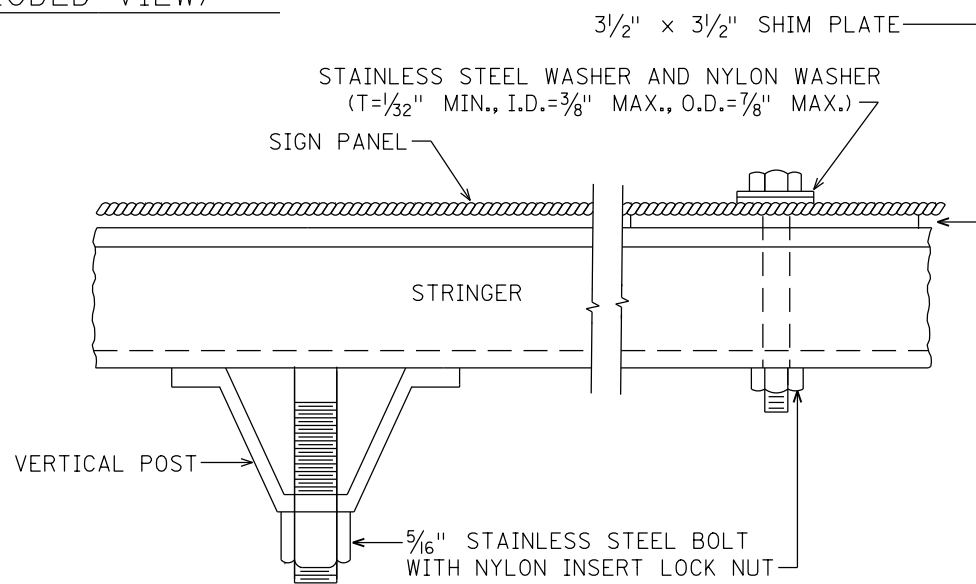


TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS

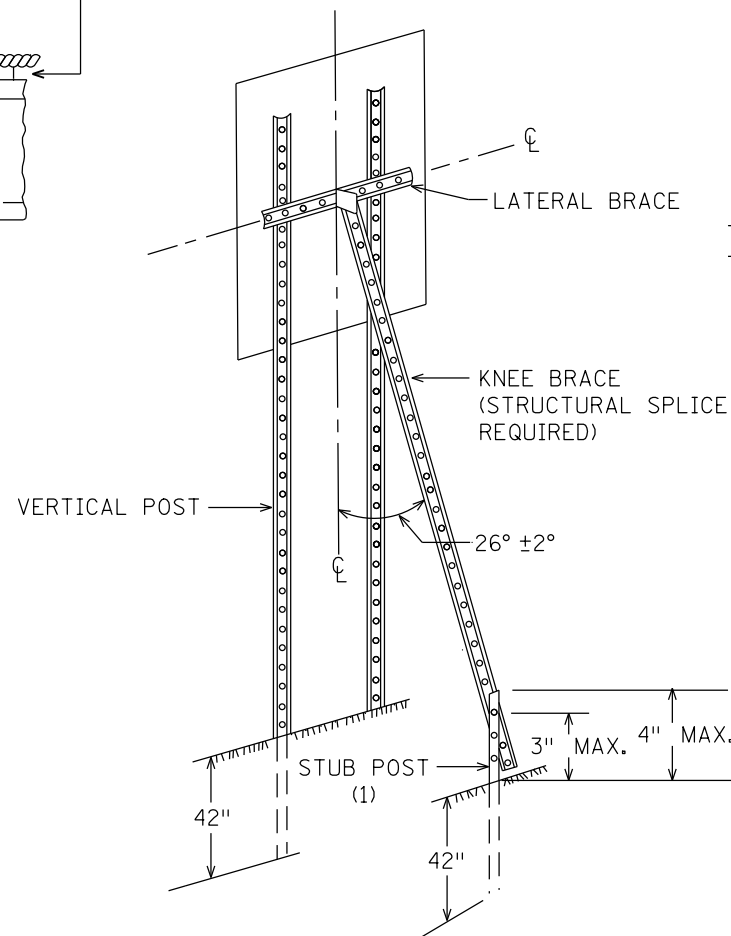


A-FRAME BRACKET

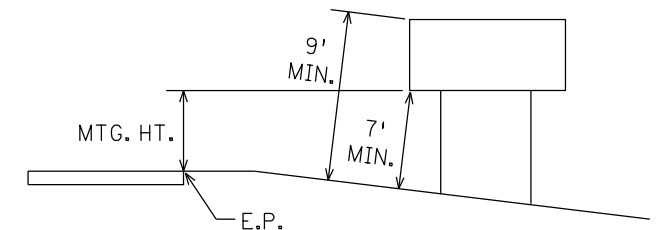
(STEEL MNDOT 3306 GALVANIZED PER MNDOT 3394)



SECTION B-B



TYPICAL "A-FRAME" INSTALLATION
TYPE "C" SIGNS

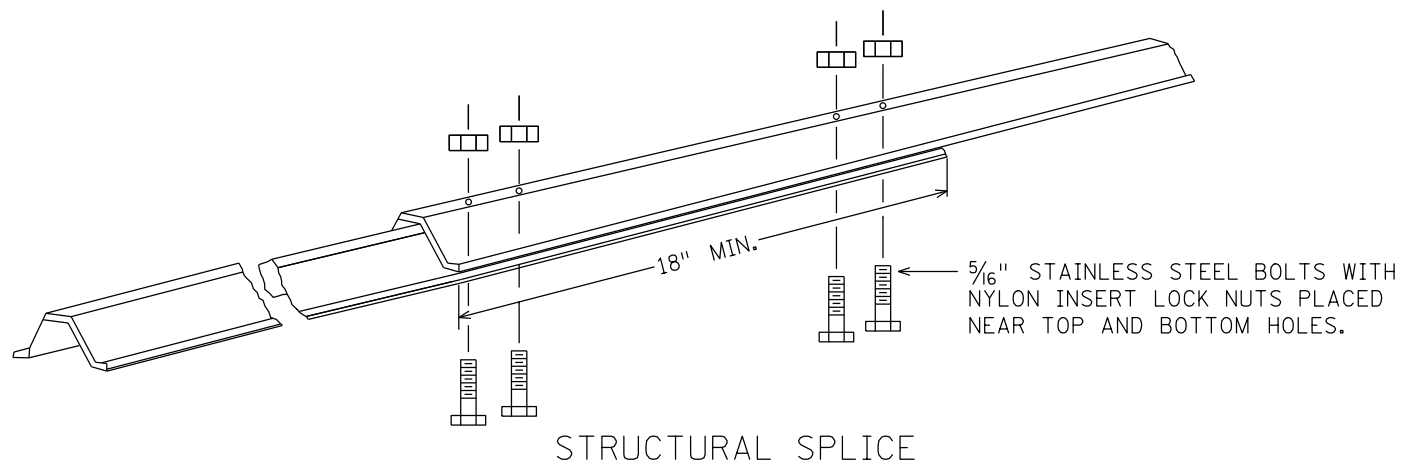


TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST. ATTACH STUB
POST AND KNEE BRACE BACK TO BACK.

TYPE C & D SIGN
STRUCTURAL DETAILS

Sheet 2 of 3

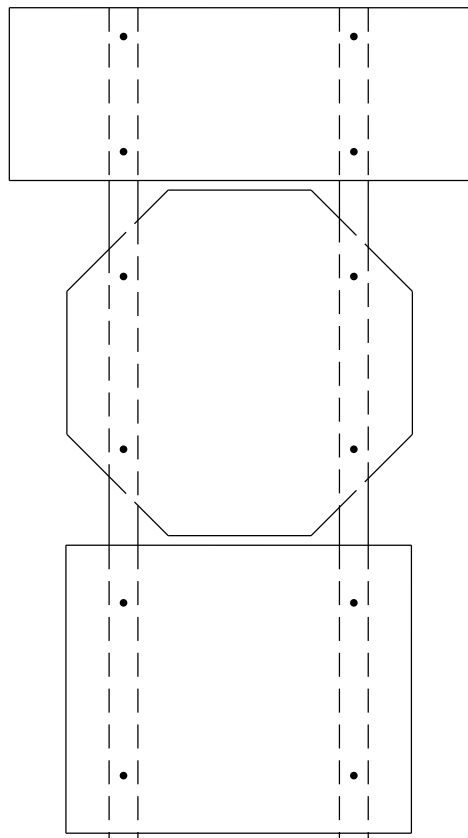


STRUCTURAL SPLICE

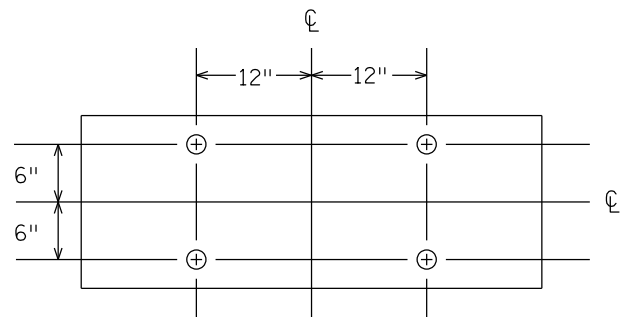
(USE WHEN IT IS NECESSARY TO FABRICATE THE CORRECT LENGTH OF POST FROM TWO PIECES)

REVISED: 12-4-2013

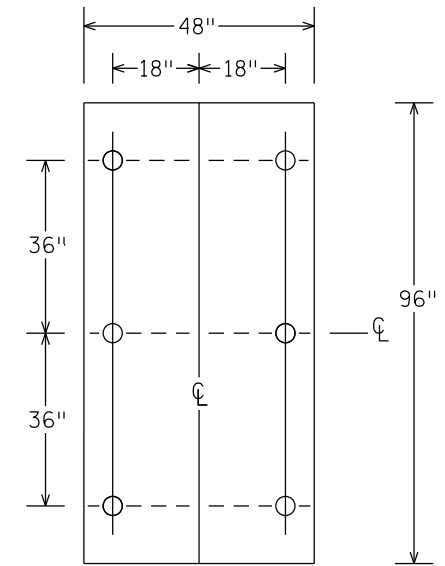
DISTRICT #: METRO
PLOT NAME: Rural Sample Plan TYPICALS5
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn



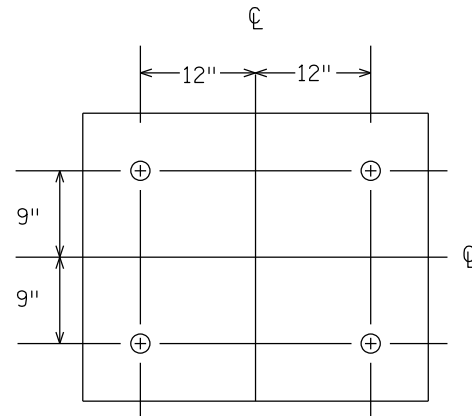
R6-1, R1-1 & (R6-3 OR R6-3a)
MOUNTING



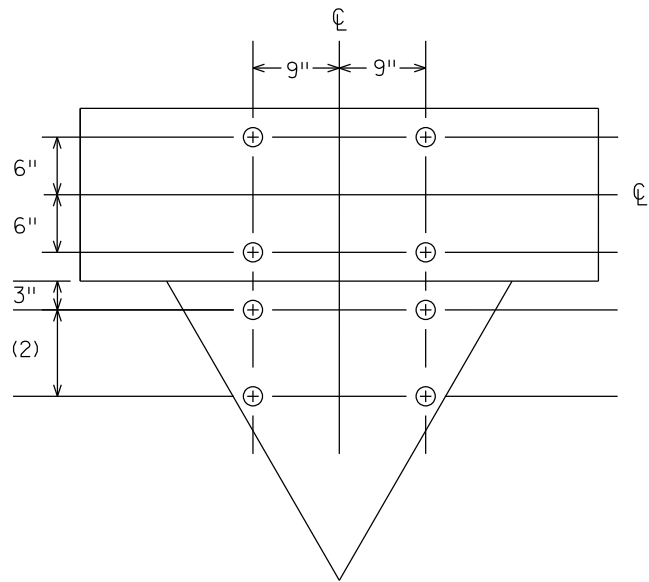
PUNCHING FOR R6-1 (54" x 18")



PUNCHING FOR R2-4b
SPEED LIMIT

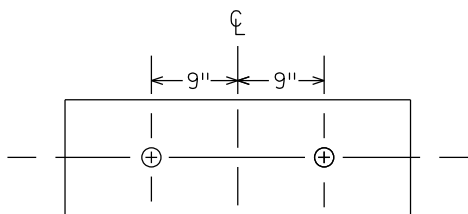


PUNCHING FOR R6-3 OR R6-3a (36" x 30")

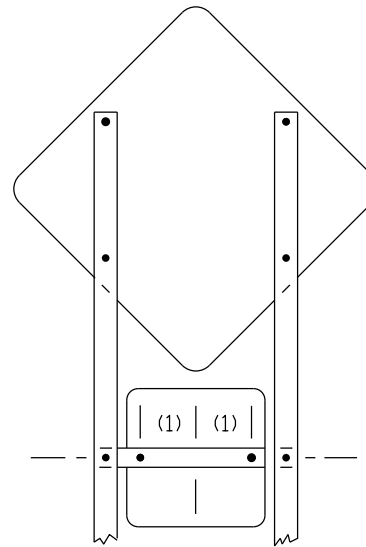


PUNCHING FOR R6-1 (54" x 18") AND
R1-2 (36" x 36" x 36" OR 48" x 48" x 48")

- (2) 9" FOR 36" x 36" x 36"
- 18" FOR 48" x 48" x 48"

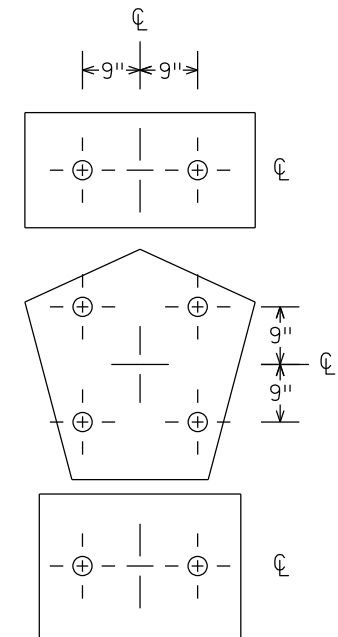


PUNCHING FOR R6-1 (36" x 12")



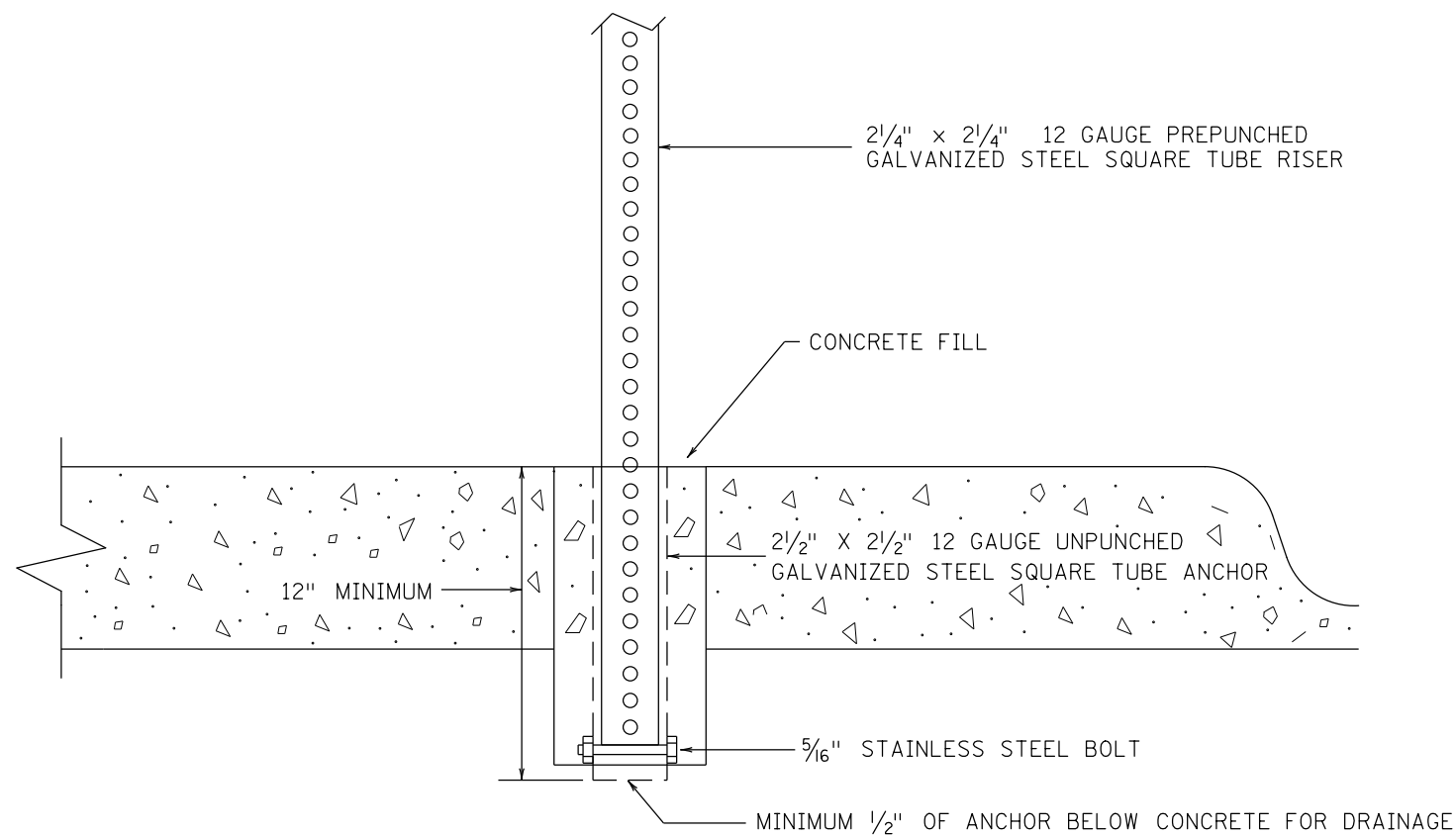
WARNING SIGN [30" x 30 OR 48" x 48"] AND
WARNING PLAQUE [18" x 18" OR 30" x 30"]
PUNCHING AND MOUNTING

- (1) 6" FOR WARNING PLAQUE (18" x 18")
- 12" FOR WARNING PLAQUE (30" x 30")



(M3-1A, M3-2A, M3-3A OR M3-4A) [36" x 18"] AND
M1-6 [36" x 36"] AND
(M5-1A, M5-2A, M6-1A, M6-2A, M6-3A M6-4A, M6-5A OR M6-6A) [30" x 24"]
PUNCHING

TYPE C & D SIGN
STRUCTURAL DETAILS

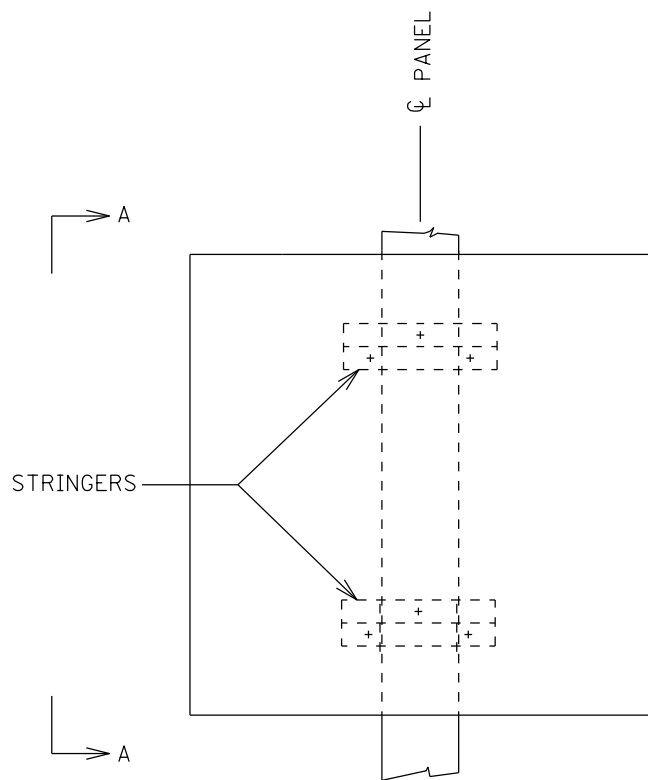


NOTES;

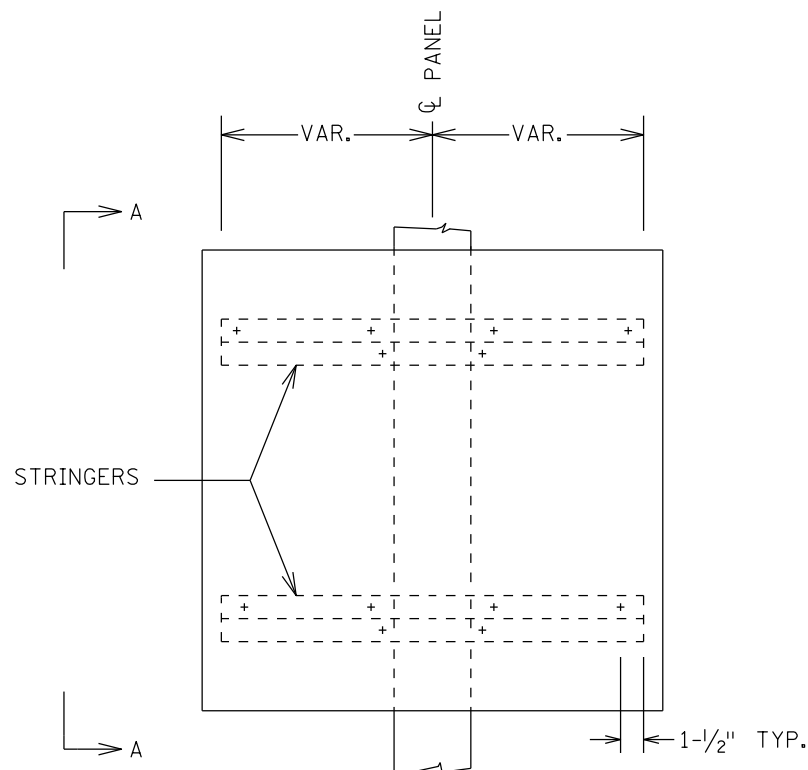
1. DRILL AN 8" DIAMETER HOLE THE FULL DEPTH OF THE ANCHOR.
2. DRILL 3/8" HOLES ON OPPOSITE SIDES OF THE UNPUNCHED GALVANIZED STEEL SQUARE TUBE ANCHOR APPROX. 1" FROM THE BOTTOM OF THE ANCHOR. INSERT A 5/16" STAINLESS STEEL BOLT THROUGH THE HOLES AND SECURE WITH A STAINLESS STEEL LOCK NUT WITH NYLON INSERT. THE PREPUNCHED GALVANIZED STEEL SQUARE TUBE RISER (TO BE INSERTED INSIDE THE UNPUNCHED GALVANIZED SQUARE TUBE ANCHOR) WILL REST ON BOLT.
3. INSERT THE ANCHOR IN THE HOLE.
4. AFTER INSTALLATION OF THE UNPUNCHED GALVANIZED STEEL SQUARE TUBE ANCHOR, FILL THE HOLE WITH A CONCRETE MIX APPROVED BY THE ENGINEER AND LEVEL OFF THE TOP OF CONCRETE.
5. MAXIMUM SIGN PANEL SIZE IS 42" WIDE X 48" HIGH.
6. SIGN PANEL TO BE MOUNTED 7 FT ABOVE THE GROUND.

TYPE C SIGNS, DELINEATORS &
MARKERS IN CONCRETE

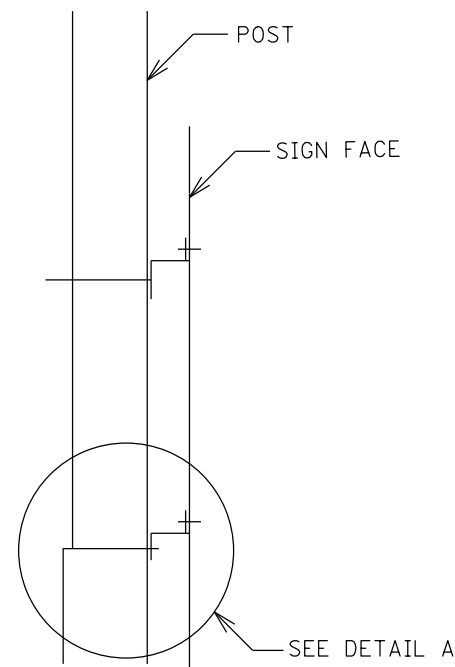
PLOTTED/REVISED: 1/28/2016



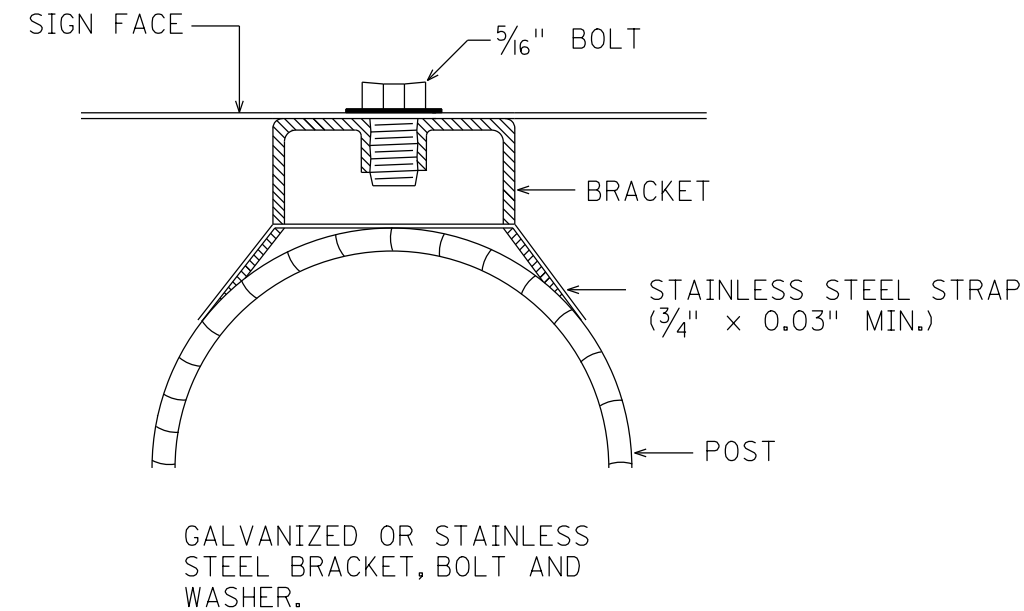
SINGLE POST PUNCHING
ELEVATION



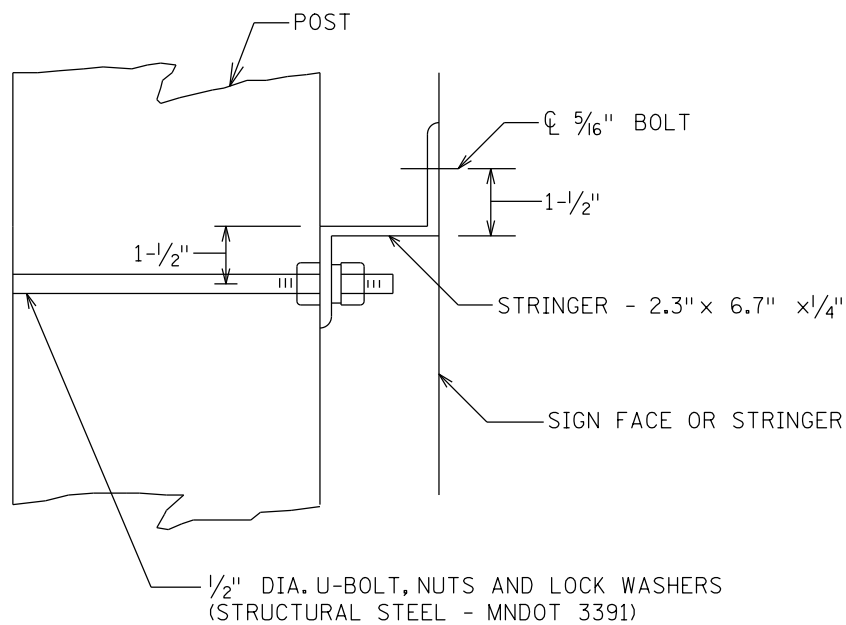
2-POST PUNCHING
ELEVATION



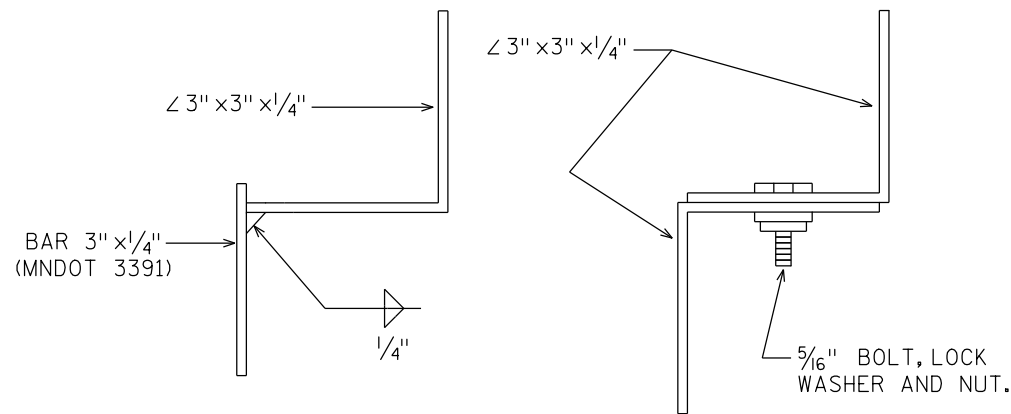
VIEW A-A



STRAP MOUNTING DETAIL FOR
OVERHEAD IDENTIFICATION AND
LIGHTING SYSTEM IDENTIFICATION PLATES



DETAIL A



DETAIL A STRINGER ALTERNATES

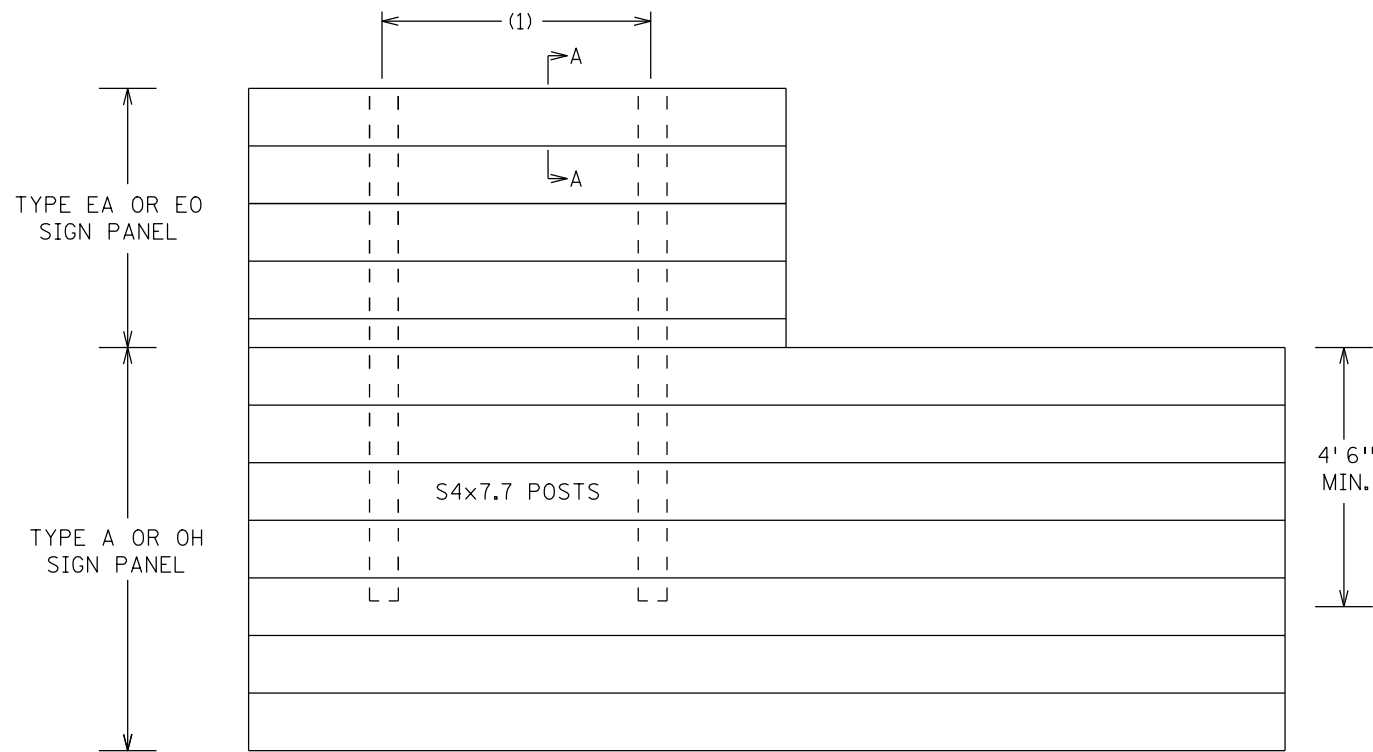
NOTES:

1. FOR DETAILS AND NOTES NOT SHOWN SEE "C" & "D" SIGN DETAILS.
2. FOR BACK TO BACK MOUNTINGS, ROTATE STRINGERS FOR ONE PANEL 180° FROM WHAT IS SHOWN SUCH THAT PANELS CAN BE MOUNTED AT SAME ELEVATION.
3. DETAIL A STRINGER MAY BE ONE OF THE THREE DESIGNS DETAILED OR AN APPROVED EQUAL. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH MNDOT 3306 AND GALVANIZED IN ACCORDANCE WITH MNDOT 3394. FASTENERS SHALL BE IN ACCORDANCE WITH MNDOT 3391.2B AND SHALL BE GALVANIZED EITHER BY THE HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A153, OR BY THE MECHANICAL PROCESS IN ACCORDANCE WITH ASTM B695, CLASS 50 OR GREATER.

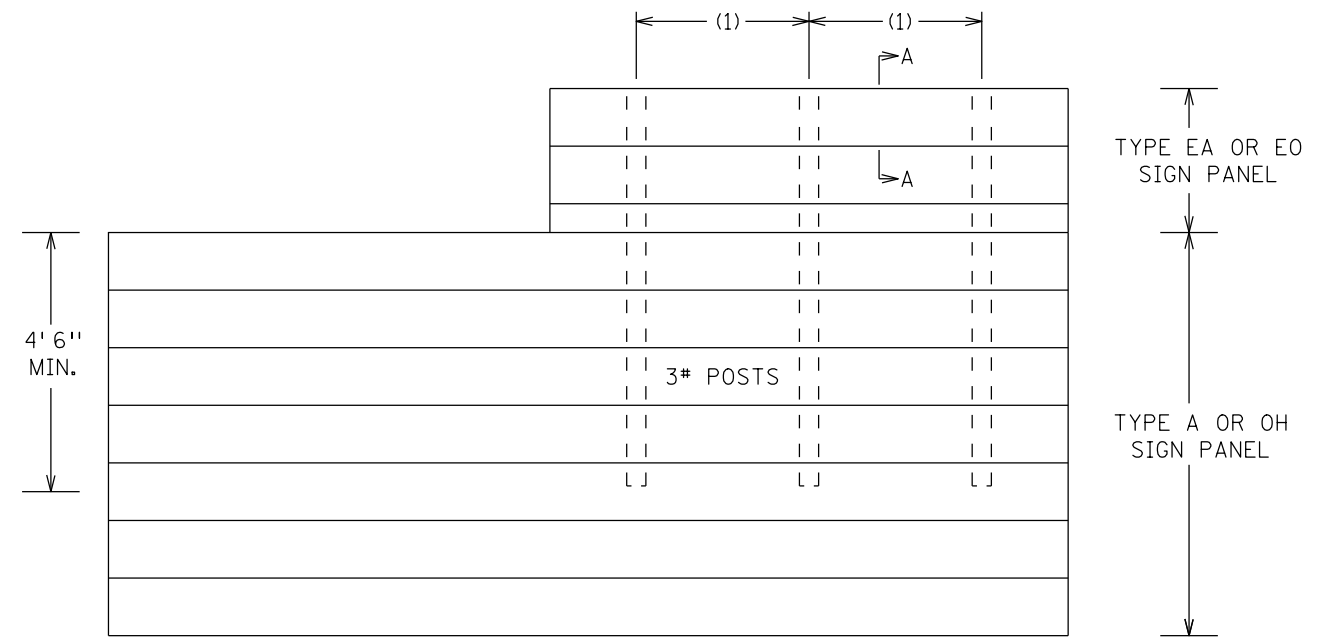
SIGN TYPE C AND D STRUCTURAL
STEEL MOUNTING SYSTEM
FOR ROUND SUPPORTS

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan TYPICALS10
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

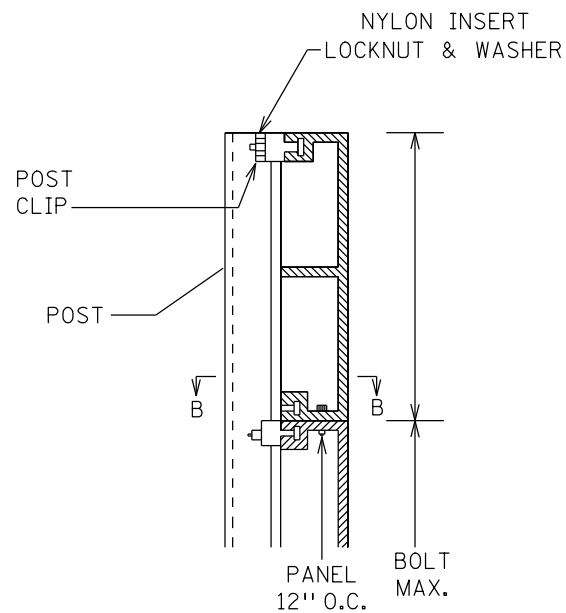
PLOTTED/REVISED: 1/28/2016



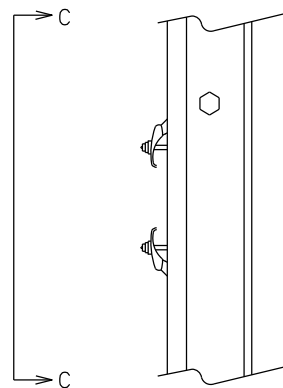
LEFT JUSTIFIED PANEL MOUNTING



RIGHT JUSTIFIED PANEL MOUNTING

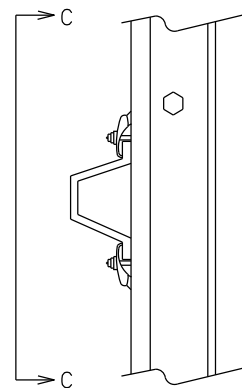


SECTION A-A



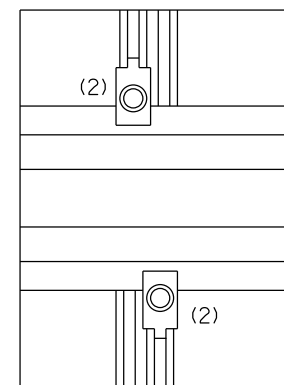
SECTION B-B

S4x7.7 POST



SECTION B-B

3# POST
(Mn/DOT 3401)



VIEW C-C

SPECIFIC NOTES:

- (1) SEE TABULATION SHEET FOR NUMBER AND SPACING OF POSTS. SPACING AND LOCATION CAN BE ADJUSTED WHERE NECESSARY.
- (2) POST CLIPS SHALL BE ATTACHED ON BOTH SIDES OF EACH POST AT EACH PANEL JOINT AS INDICATED.

GENERAL NOTE:

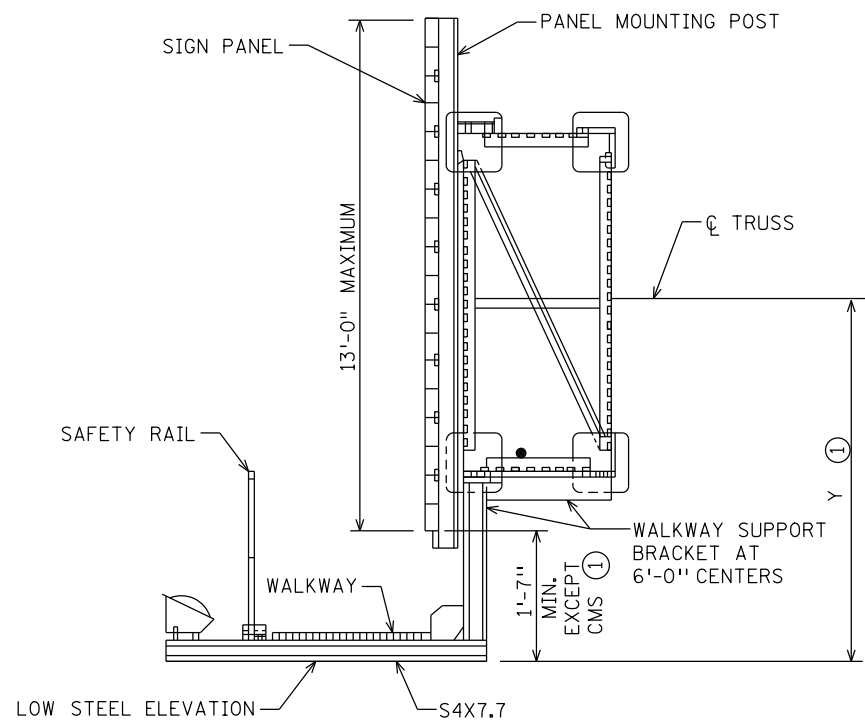
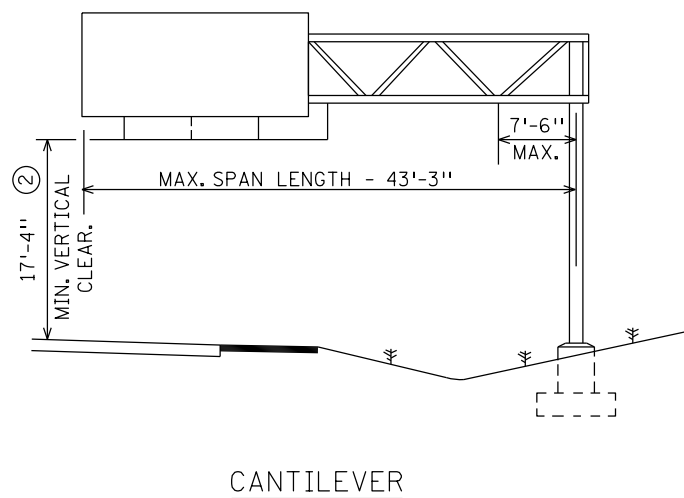
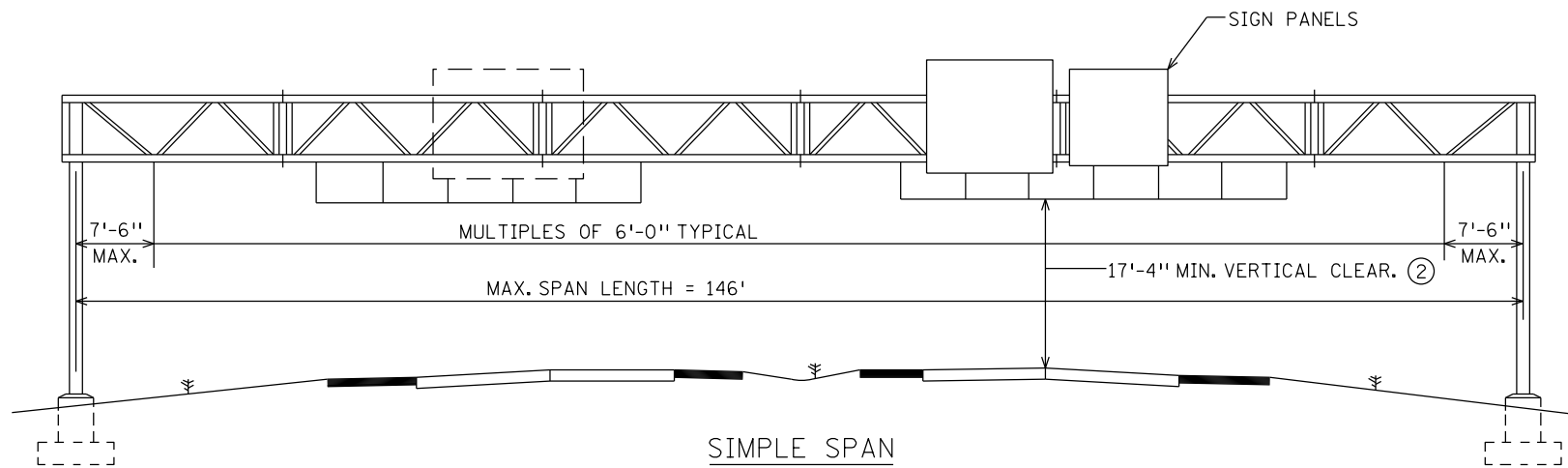
- 1. TYPE EA OR EO SIGN PANEL SHALL BE LEFT JUSTIFIED FOR LEFT EXITS AND RIGHT JUSTIFIED FOR RIGHT EXITS ON TYPE A OR OH SIGN PANEL.

TYPE EA & EO SIGN
STRUCTURAL DETAILS

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 I/PLOT NAME: Rural Sample Plan TYPICALS12
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

REV. 10-2-2013



SPECIFIC NOTES:

- ① DIMENSION Y IS CONSTANT AND BASED ON THE DEEPEST SIGN PANEL ABOVE THAT WALKWAY. WHEN STANDARD SIGN PANEL(S) AND CMS ARE MOUNTED ON THE SAME SPAN, DIMENSION Y SHALL BE GOVERNED BY THE CMS.
- ② MINIMUM CLEARANCE WILL BE MEASURED FROM THE HIGHEST ELEVATION OF PAVEMENT, SHOULDERS, AND MOUNTABLE CURBS, OR IF INSURMOUNTABLE CURBS ARE USED, THE HIGHEST ELEVATION BETWEEN CURB LINES.

GENERAL NOTES:

DESIGN SPECIFICATIONS:

TRUSS, POST, & HARDWARE:
 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS DATED 1999.

LOADING:

WIND LOAD 90 M.P.H. NORMAL TO SIGN FACE IN COMBINATION WITH OTHER LOADS OUTLINED IN THE DESIGN SPECIFICATIONS.

UNIT STRESSES:

CONCRETE----- F_c = 1,600 PSI
 REINFORCEMENT STEEL----- F_s = 24,000 PSI
 FOOTING SOIL PRESSURE----- 1-1/4 TONS PER SQ. FT.

MATERIALS:

STRUCTURAL STEEL (EXCEPT POST, TUBES)- MNDOT 3306
 POST STEEL----- VARIES
 HIGH STRENGTH BOLTS----- MNDOT 3391.2B
 ANCHOR RODS----- MNDOT 3385
 CASTINGS----- MNDOT 3322
 REINFORCEMENT
 BARS----- MNDOT 3301
 SPIRAL----- MNDOT 3305 NO SPLICES
 WALKWAY GRATING----- FEDERAL SPECIFICATIONS RR-G-661b, TYPE 1, STEEL
 CONCRETE----- MNDOT 2461 (MIX 3Y43)

FINISH:

ALL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION EXCEPT REINFORCEMENT BARS, LOWER PORTION OF ANCHOR RODS, ALUMINUM, AND OTHER NON FERROUS INCIDENTALS. GALVANIZING SHALL CONFORM TO MNDOT 3392 OR MNDOT 3394 AS APPLICABLE. BEARING SURFACES MUST BE SMOOTH.

FABRICATION:

FABRICATION OF STRUCTURAL METALS SHALL BE IN ACCORDANCE WITH MNDOT 2471, MNDOT 2564 AND THE APPLICABLE SPECIAL PROVISIONS. ALL WELDING TO BE CONTINUOUS. ALL CONTACT SURFACES MUST BE COMPLETELY SEALED.

INSPECTION:

INSPECTION BEFORE AND AFTER GALVANIZING PER MNDOT 1511 AND MNDOT 2471.

INDEX OF STANDARD SIGN DRAWINGS

DRAWING	TITLE
ST-1	GENERAL ELEVATION AND NOTES
ST-2	CAMBER, POST IDENTIFICATION AND ESTIMATED QUANTITIES
ST-3	FOUNDATIONS AND ANCHOR RODS
ST-4	TRUSS/POST CONNECTION & BASEPLATE
ST-5	SIGN TRUSS DETAILS - TYPE A
ST-6	SIGN TRUSS DETAILS - TYPE B
ST-7	SIGN TRUSS DETAILS - TYPE C
ST-8	WALKWAY DETAILS
ST-9	FOLDING HANDRAIL
ST-10	SIGN PANEL AND PANEL MOUNTING POST DETAILS
ST-11	ELECTRICAL DETAILS
ST-12	ELECTRICAL DETAILS
ST-13	ELECTRICAL DETAILS (CMS SIGNS)

SECTION

SIGN HEIGHT	Y ①	
6'-6"	4'-4"	CMS (NEW LED)
7'-0"	4'-7"	
7'-6"	4'-10"	CMS (LED)
8'-0"	5'-1"	
8'-6"	5'-4"	CMS (DRUM)
9'-0"	5'-7"	
9'-6"	5'-10"	
10'-0"	6'-1"	
10'-6"	6'-4"	
11'-0"	6'-7"	
11'-6"	6'-10"	
12'-0"	7'-1"	
12'-6"	7'-4"	
13'-0"	7'-7"	

STANDARD OVERHEAD SIGN SUPPORTS
 INTERIM DESIGN B

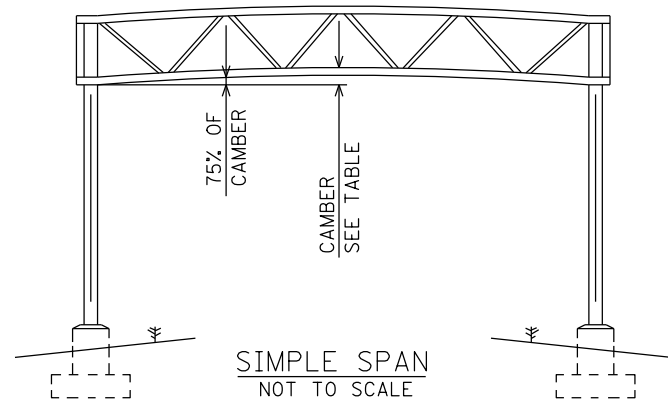
GENERAL ELEVATIONS
 AND NOTES

DRAWING ST-1

SIMPLE SPAN

SIMPLE SPAN TRUSS CAMBER												
SPAN	40	50	60	70	80	90	100	110	120	130	140	150
CAMBER	1/4	7/16	5/8	13/16	1 1/16	1 3/8	1 11/16	2	2 3/8	2 13/16	3 1/4	3 3/4
DL DEFLECTION	0	1/16	1/16	1/8	1/4	3/8	9/16	1 3/16	1 1/8	1 1/2	2 1/16	2 11/16
RESIDUAL CAMBER	1/4	3/8	9/16	1 1/16	1 3/16	1	1 1/8	1 3/16	1 1/4	1 5/16	1 3/16	1 1/16

NOTE:
CAMBER AND DEFLECTIONS SHOWN ARE AT Q SPAN. THE DEFLECTIONS AND CAMBER AT THE QUARTER POINTS SHALL BE APPROXIMATELY 75% OF THESE VALUES.



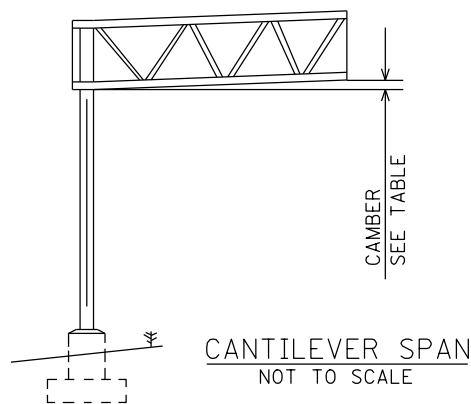
TRUSS QUANTITIES		
USE LENGTH FROM Q POST WHEN CALCULATING TOTAL WEIGHTS.		
TRUSS TYPE A	TRUSS TYPE B	TRUSS TYPE C
123 LBS./FT.	168 LBS./FT.	196 LBS./FT.

CANTILEVER SPAN

CANTILEVER SPAN TRUSS CAMBER					
SPAN	15'	20'	30'	40'	45'
CAMBER	1/8	1/4	9/16	1 1/16	1 1/4
DL DEFLECTION	0	0	1/16	3/16	1/4
RESIDUAL CAMBER	1/8	1/4	9/16	7/8	1

NOTE:
CAMBER AND DEFLECTIONS SHOWN ARE SHOWN AT END OF CANTILEVER.

WHEN ERECTING CANTILEVER TRUSSES, THE POSTS SHALL BE SET 1/8" PER FOOT OUT OF PLUMB TO COMPENSATE FOR THE BENDING OF THE POSTS.



PANEL MOUNTING POST QUANTITIES INCLUDES MOUNTING ANGLES	
PANEL HEIGHT	WEIGHT/POST
6'-6"	70
7'-0"	74
7'-6"	78
8'-0"	82
8'-6"	86
9'-0"	90
9'-6"	93
10'-0"	97
10'-6"	101
11'-0"	105
11'-6"	160
12'-0"	166
12'-6"	172
13'-0"	178

WALKWAY SUPPORT QUANTITIES

USE MAXIMUM PANEL HEIGHT ON SPAN TO CALCULATE QUANTITIES. WHEN CONVENTIONAL SIGN PANEL(S) AND CMS ARE MOUNTED ON THE SAME SPAN, QUANTITIES SHALL BE GOVERNED BY THE CMS.

	PANEL HEIGHT	TRUSS TYPE (WEIGHT/SUPPORT)		
		A	B	C
CMS(NEW LED)	6'-6"	99	105	113
	7'-0"	101	107	115
	7'-6"	103	109	117
CMS(LED)	8'-0"	105	111	119
	8'-6"	107	113	121
CMS(DRUM)	9'-0"	109	115	123
	9'-6"	111	117	125
	10'-0"	113	119	127
	10'-6"	115	121	129
	11'-0"	135	142	151
	11'-6"	138	144	153
	12'-0"	141	147	156
	12'-6"	143	150	159
	13'-0"	146	153	162

FOR FOUNDATION QUANTITIES SEE DRAWING ST-3

WALKWAY WEIGHTS:

- USE 3'-4 3/4" WIDE GRATING @ 44 LBS/FT.
- WEIGHT INCLUDES HANDRAIL (12 LBS/FT.) AND FIXTURE MOUNTING CHANNELS (4 LBS/FT.).

TABLE 1 - POST IDENTIFICATION					
POST IDENTIFICATION NUMBER	BASEPLATE DESIGN	PERMISSIBLE PIPE SECTIONS			
		MIN. YIELD=35 KSI		MIN. YIELD=42 KSI	
		OUTSIDE DIAMETER (INCH)	WALL THICKNESS (INCH)	OUTSIDE DIAMETER (INCH)	WALL THICKNESS (INCH)
1	A	N.A.	N.A.	18	0.250
2	A	18	0.375	18	0.312
3	A	18	0.500	18	0.375
4	A	18	0.562	18	0.500
5	B	18	0.938	18	0.750
6	B	20	0.594	20	0.500
7	B	N.A.	N.A.	20	0.812

WALL THICKNESS IS MINIMUM, THINNER WALLS WILL NOT BE APPROVED

POST IDENTIFICATION NOTES:

POST MATERIAL SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS:
ASTM A709, GRADE 36
ASTM A53, GRADE B
API 5L, GRADES B, X42, X46, X52, X56, X60, X65

CONTRACTOR SHALL DEMONSTRATE THAT THE POST MATERIAL MEETS THE REQUIREMENTS OF ONE OF THE ABOVE CITED SPECIFICATIONS AND THE MINIMUM YIELD STRENGTH.

NO SPLICES OF ANY KIND WILL BE PERMITTED IN POSTS INTENDED FOR USE IN CANTILEVER TYPE STRUCTURES (BRIDGE TYPE BC).

ONE OF TWO POSTS FOR SIMPLE SPAN STRUCTURES (BRIDGE TYPE S) MAY INCORPORATE ONE WELDED CIRCUMFERENTIAL BUTT SPLICE CONFORMING TO AWS D1.1 DETAIL B-U2 IN THE UPPER 1/3 OF ITS LENGTH. BACK UP RINGS FOR THESE WELDED SPLICES SHALL BE COMMERCIAL PRODUCTS. BUTT WELDS REQUIRE RADIOGRAPHIC INSPECTION (MNDOT 2471.3).

ALL RADIOGRAPHIC INSPECTIONS AND MAGNETIC PARTICLE TESTING REPORTS AND RADIOGRAPHIC FILMS SHALL BECOME THE PROPERTY OF THE DEPARTMENT.

SEE DRAWING ST-4 FOR BASEPLATE DETAILS.

POST QUANTITIES					
POST TYPE	CANTILEVER		SIMPLE SPAN		
	TRUSS TYPE A	TRUSS TYPE B	TRUSS TYPE A	TRUSS TYPE B	TRUSS TYPE C
	1	1880+47 LBS/FT	1910+47 LBS/FT	1870+47 LBS/FT	1890+47 LBS/FT
2	1880+59 LBS/FT	1910+59 LBS/FT	1870+59 LBS/FT	1890+59 LBS/FT	1915+59 LBS/FT
3	1880+71 LBS/FT	1910+71 LBS/FT	1870+71 LBS/FT	1890+71 LBS/FT	1915+71 LBS/FT
4	1880+94 LBS/FT	1910+94 LBS/FT	1870+94 LBS/FT	1890+94 LBS/FT	1915+94 LBS/FT
5	2470+138 LBS/FT	2500+138 LBS/FT	2460+138 LBS/FT	2480+138 LBS/FT	2505+138 LBS/FT
6	N/A	2500+104 LBS/FT	N/A	2545+104 LBS/FT	2570+104 LBS/FT
7	N/A	2500+167 LBS/FT	N/A	2545+167 LBS/FT	2570+167 LBS/FT

QUANTITIES INCLUDE ANCHORAGE ASSEMBLY AND TRUSS CONNECTION PLATES. PAY LENGTH OF POSTS IS FROM THE BOTTOM OF THE BASE PLATE (ELEV. A) TO THE TOP OF THE TRUSS. POST QUANTITIES ARE BASED ON GRADE 42 STEEL. NO ADJUSTMENTS WILL BE MADE IN THE QUANTITIES FOR THE USE OF GRADE 35 STEEL POSTS.

STANDARD OVERHEAD SIGN SUPPORTS INTERIM DESIGN B

CAMBER, POST IDENTIFICATION AND ESTIMATED QUANTITIES

DRAWING ST-2

PLOTTED/REVISED: 1/28/2016

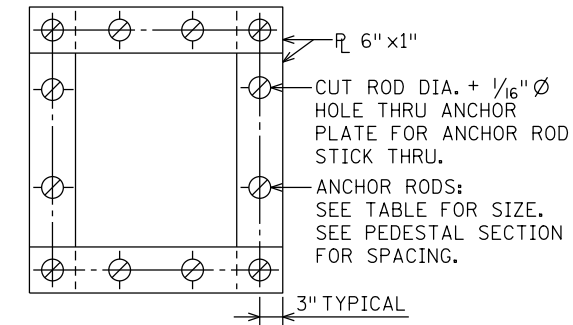
DISTRICT #: METRO
I/PLOT NAME: Rural Sample Plan TYPICALS13
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

REV. 10-2-2013

PLOTTED/REVISED: 1/28/2016

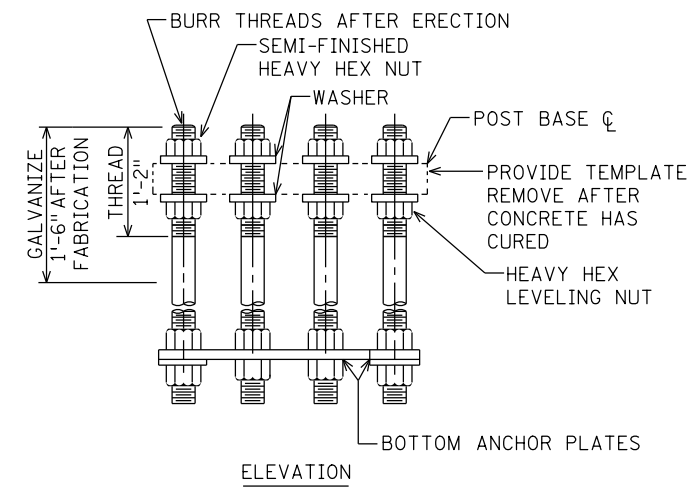
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 IPLOT NAME: Rural Sample Plan TYPICALS14
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REV. 10-2-2013

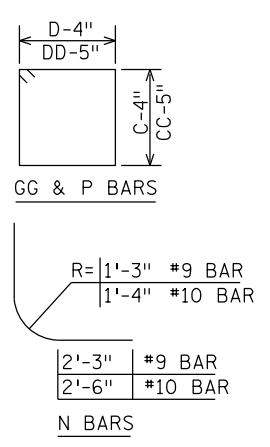


NOTE: ANCHOR PLATES SHOWN TYPICAL FOR ALL ANCHOR ROD SPACING.

ANCHOR PLATE PLAN

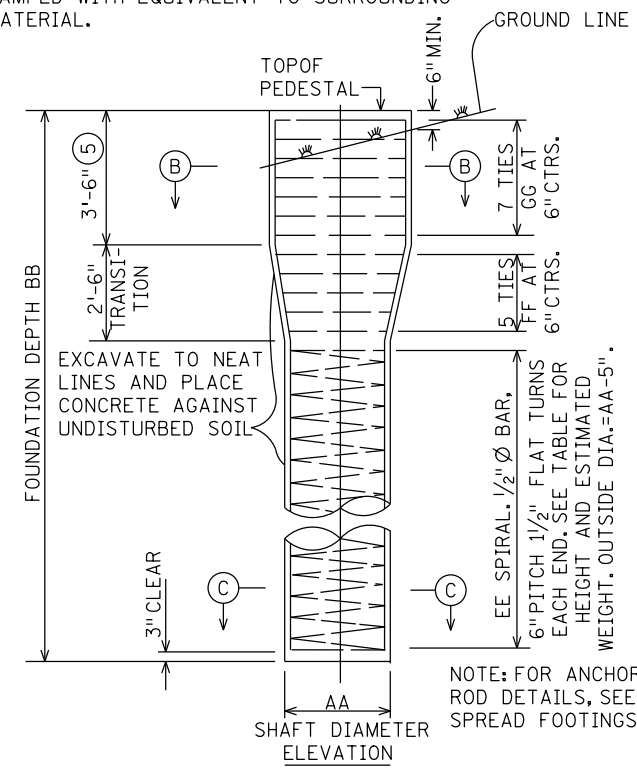


ANCHOR ROD DETAILS

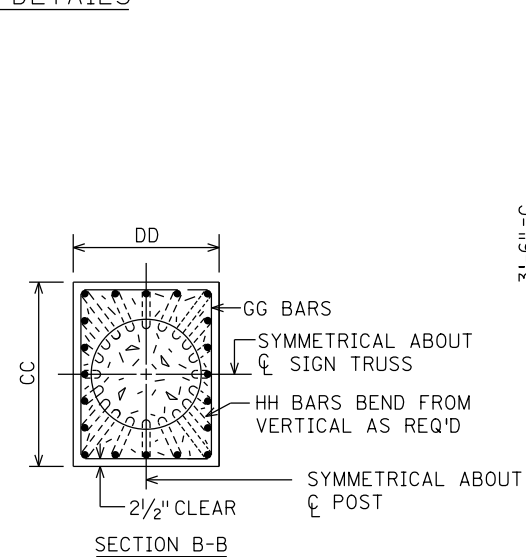


J, K, L, M, FF AND HH ARE STRAIGHT BARS
 BAR BENDING DIAGRAMS

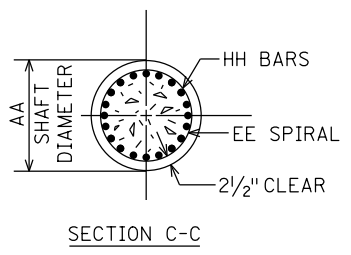
NOTE (5): MUST BE FORMED A MINIMUM OF 6" BELOW THE GROUND SURFACE. THE EXCAVATED AREA FOR FORMING SHALL BE BACKFILLED AND TAMPED WITH EQUIVALENT TO SURROUNDING MATERIAL.



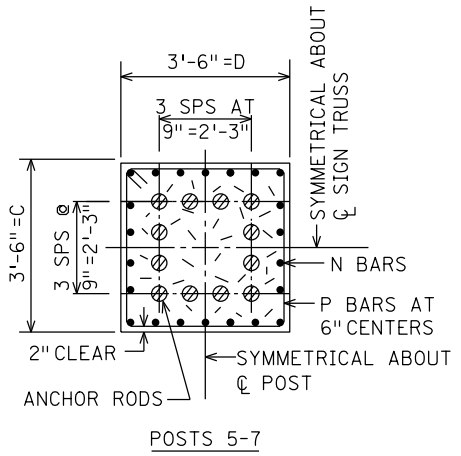
DRILLED SHAFT



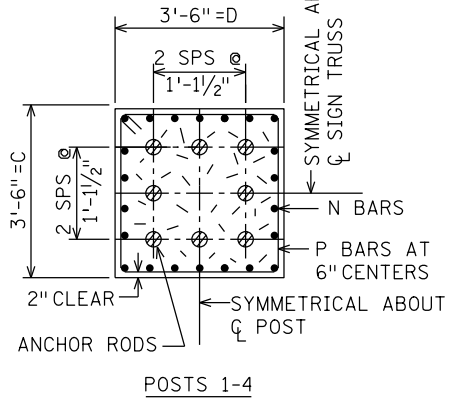
SECTION B-B



SECTION C-C

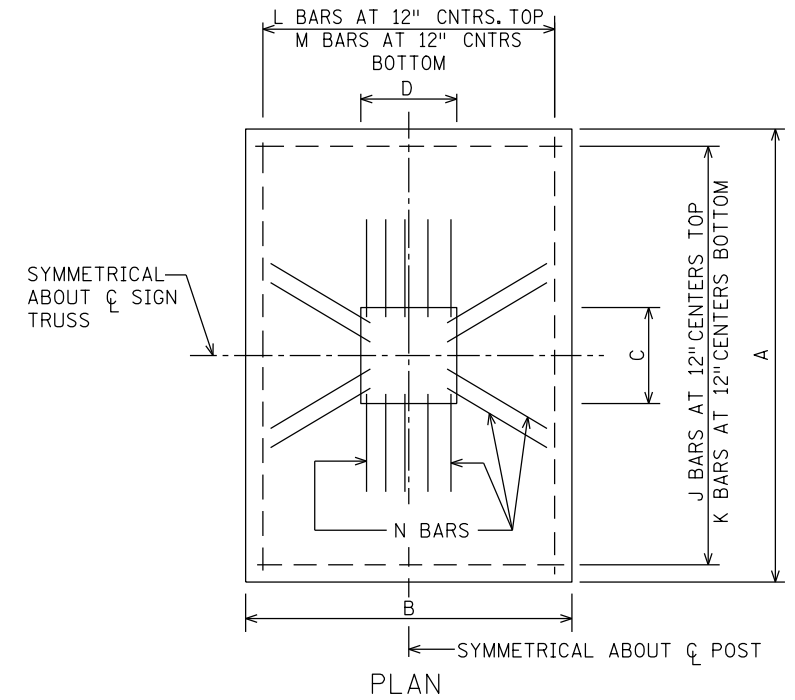


POSTS 5-7

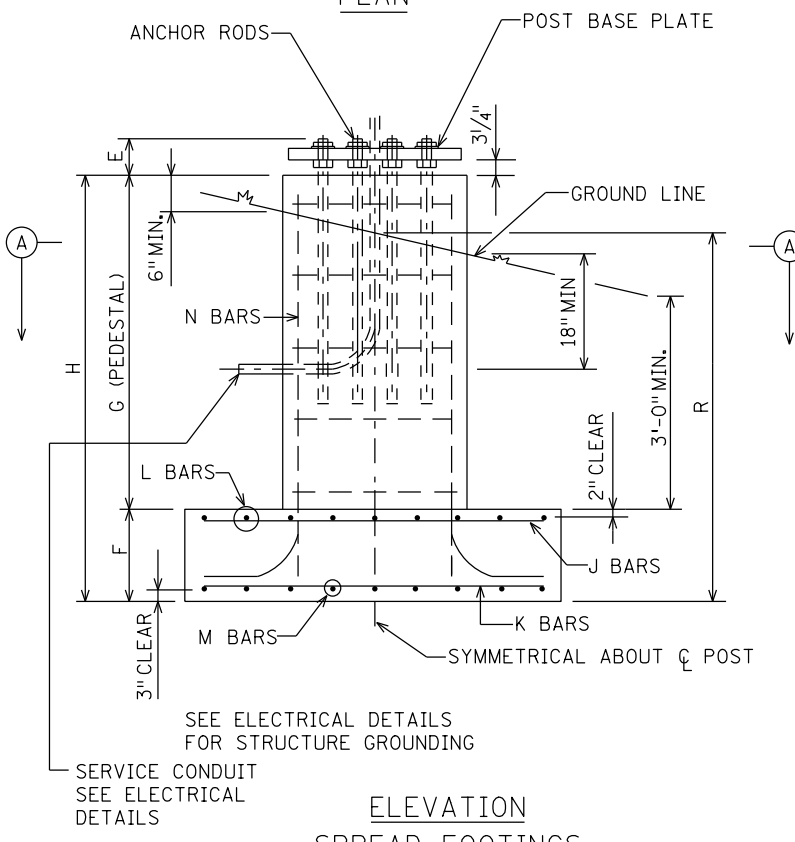


POSTS 1-4

PEDESTAL CROSS SECTIONS A-A



PLAN



ELEVATION
 SPREAD FOOTINGS

SPECIFIC NOTES:

- ① G IS IN FEET, ROUND UP TO WHOLE NUMBER, E.G. G=4.10/26=8.2 NO. REQ'D=9.
- ② G AND R ARE IN FEET.
- ③ BEND AS REQUIRED TO FORM A CLOSED LOOP.
- ④ FOR STRUCTURE STEEL SEE SPREAD FOOTING.
- ⑤ MUST BE FORMED A MIN. OF 6" BELOW THE GROUND SURFACE. THE SOIL EXCAVATED FOR FORMING SHALL BE BACKFILLED AND TAMPED TO EQUIVALENT COMPACTION AS SURROUNDING MATERIAL.
- ⑥ SPECIAL LARGE RADIUS BENDS ARE REQUIRED. SEE "BAR BENDING DIAGRAMS" FOR SIZES OF RADII.

GENERAL NOTES:

1. SEE THE FORMAT SHEET FOR FOOTING LOCATIONS. POST DESIGNATIONS, TOP OF PEDESTAL ELEVATIONS AND BOTTOM OF FOOTING ELEVATIONS.
2. ALL CONCRETE SHALL CONFORM TO CONCRETE MIX 3Y43 (MNDOT 2461).
3. ALL BAR DIMENSIONS ARE OUT TO OUT OF BARS.
4. ALL SPREAD FOOTINGS HAVE AN ALLOWABLE DESIGN BEARING PRESSURE OF 1 1/4 T PER SQUARE FOOT.
5. DRILLED SHAFTS SHALL BE USED ONLY WHEN SPECIFIED IN THE CONTRACT PLANS.
6. THE DRILLED SHAFTS HAVE AN ALLOWABLE DESIGN LATERAL BEARING PRESSURE OF 250 LBS. PER SQ. FT. PER FOOT OF DEPTH.
7. UNLESS OTHERWISE NOTED, ALL REINFORCEMENT BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH MNDOT3301. SPIRAL BARS AND J, K, L, & M BARS NEED NOT BE EPOXY COATED.
8. THE FOLLOWING TORQUE VALUES SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS FOR OVERHEAD SIGN STRUCTURES:

ANCHOR BOLT DIAMETER	TORQUE (FT./LBS.)
2 1/4"	375
2 1/2"	450

THE CONTRACTOR SHALL BURR THE THREADS OF THE ANCHOR BOLTS IN ACCORDANCE WITH MNDOT 2402.3H AFTER TORQUEING NUTS.

POST NO.	DIMENSIONS				REINFORCING BARS				ESTIMATED QUANTITIES (4)	
	AA	BB	CC	DD	EE	FF (3)	GG	HH	CONCRETE CY	REIN STEEL LBS.
1-4	3'-0" Ø	23'-0"	3'-6"	3'-6"	16'-6" x 197 LBS.	5 #5x 14'-1"	7 #5x 14'-1"	20 #9x 22'-7"	6.9	1910
5-7	4'-0" Ø	29'-0"	4'-0"	4'-0"	22'-6" x 362 LBS.	5 #5x 16'-1"	7 #5x 16'-1"	24 #10x 28'-7"	14.1	3490

SUMMARY OF ESTIMATED QUANTITIES			
CONCRETE CY (2)	REIN. STEEL LBS. (2)	ANCH. ASSM. LBS	ST. EXC. C.Y. (2)
9.3 + 0.46 G	945 + 98G	781	7.4 R
16.7 + 0.46 G	2333 + 133G	1320	12.1 R

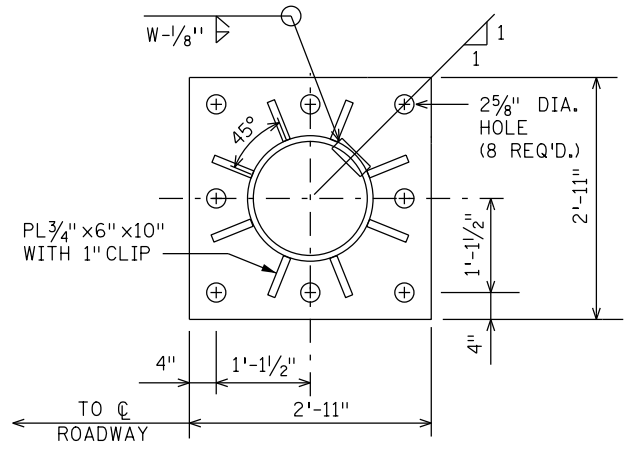
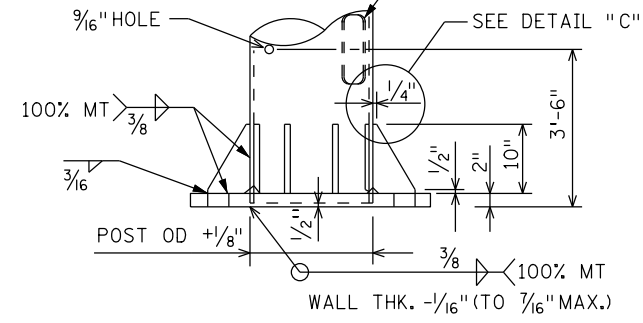
POST NO.	SPREAD FOOTINGS																														
	ANCHOR RODS				J REIN. BARS				K REIN. BARS				L REIN. BARS				M REIN. BARS				(6) N REIN. BARS				P REIN. BARS (1)						
A	B	C	D	E	F	NO. REQ'D	DIA.	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH	NO. REQ'D	SIZE	LENGTH		
1-4	14'-0"	9'-0"	3'-6"	3'-6"	8 1/2"	2'-0"	8	2 1/4"	3'-10 1/2"	14	#4	8'-6"	14	#6	8'-6"	10	#5	13'-6"	10	#7	13'-6"	20	#9	H + 2'-6"	2G	#5	14'-3"				
5-7	18'-0"	12'-6"	3'-6"	3'-6"	9"	2'-0"	12	2 1/2"	4'-0"	19	#4	12'-0"	19	#6	12'-0"	13	#6	17'-6"	13	#10	17'-6"	24	#10	H + 2'-9"	2G	#5	14'-3"				

STANDARD OVERHEAD SIGN SUPPORTS
 INTERIM DESIGN B

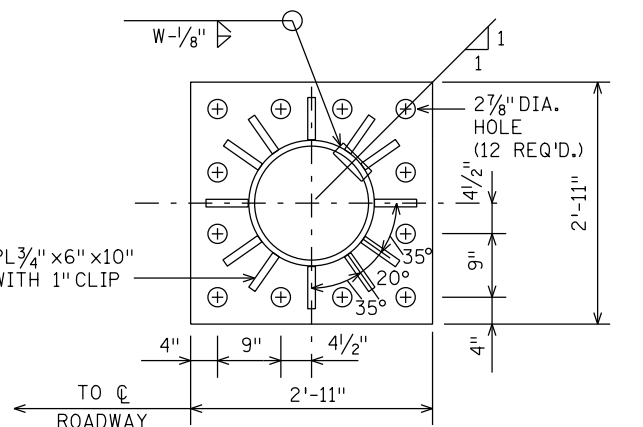
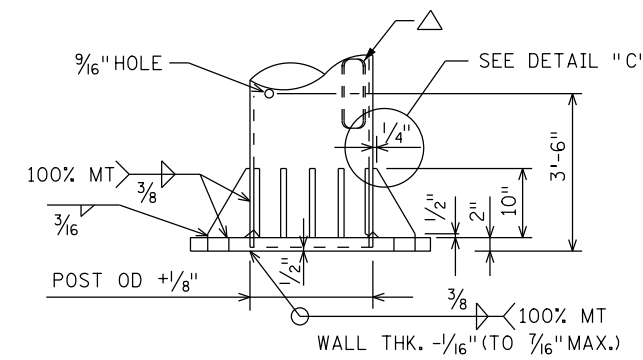
FOUNDATIONS AND
 ANCHOR RODS

DRAWING ST-3

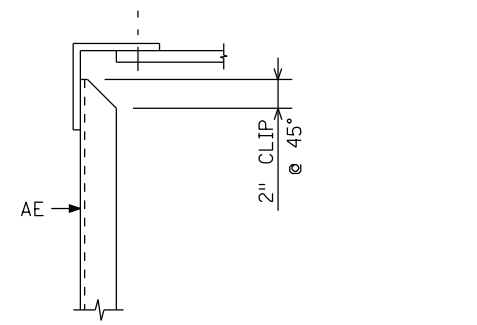
PLOTTED/REVISED: 1/28/2016



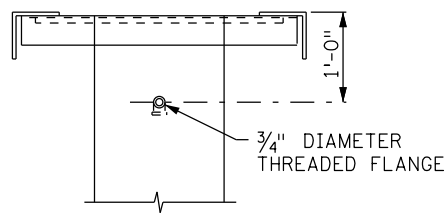
PLAN & ELEVATION - BASEPLATE TYPE A
POST NO. 1 THRU 4



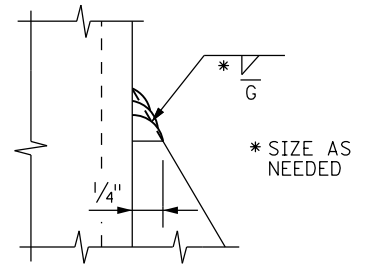
PLAN & ELEVATION - BASEPLATE TYPE B
POST NO. 5 THRU 7



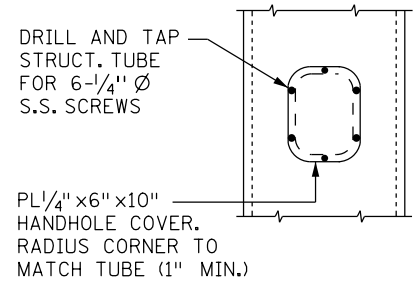
VIEW A-A



VIEW B-B
(TYPE 'E' POSTS)

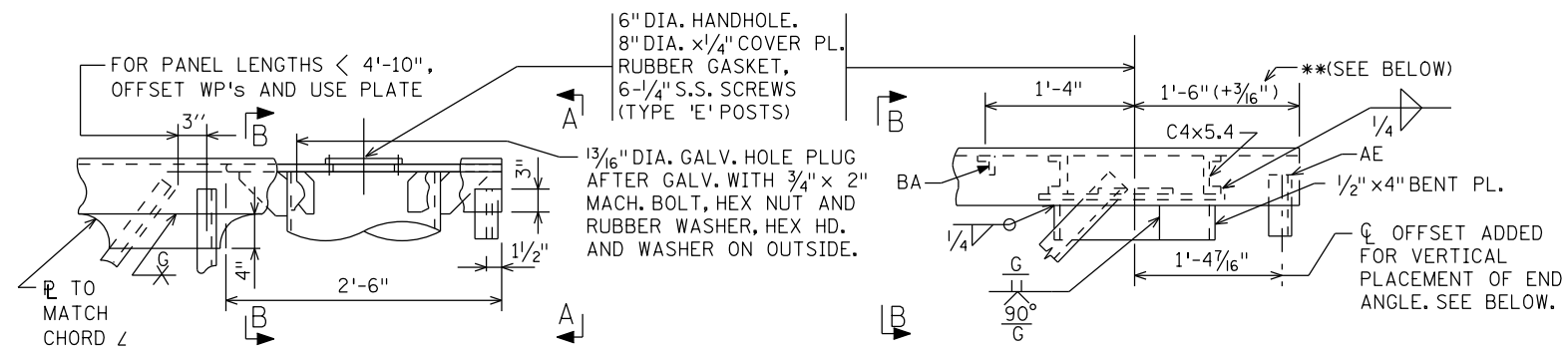


DETAIL "C"

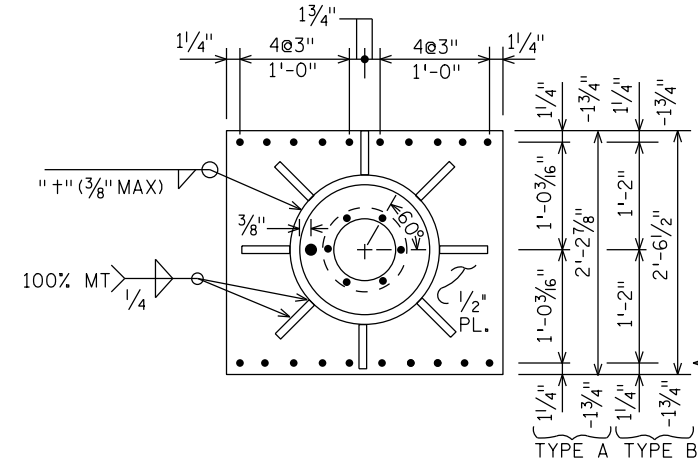


HANDHOLE & COVER PLATE DETAIL
(TYPE 'E' POSTS)

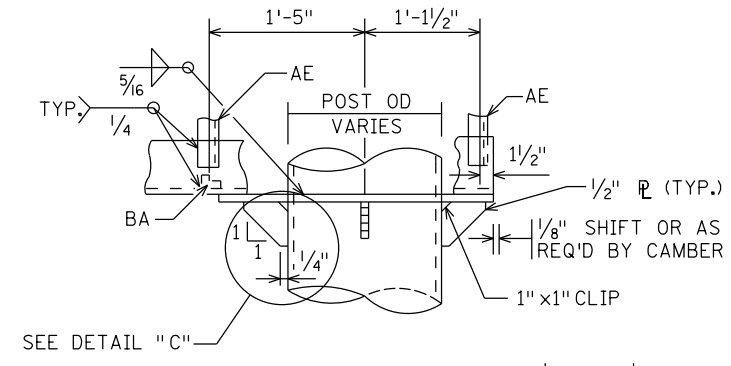
△ = FOR TYPE 'E' POST ONLY: LOCATE 45° AWAY FROM TRAFFIC. 10" x 6" x 1/2" x 0'-2" STRUCTURAL TUBE OR EQUAL W/1/4" RUBBER GASKET.



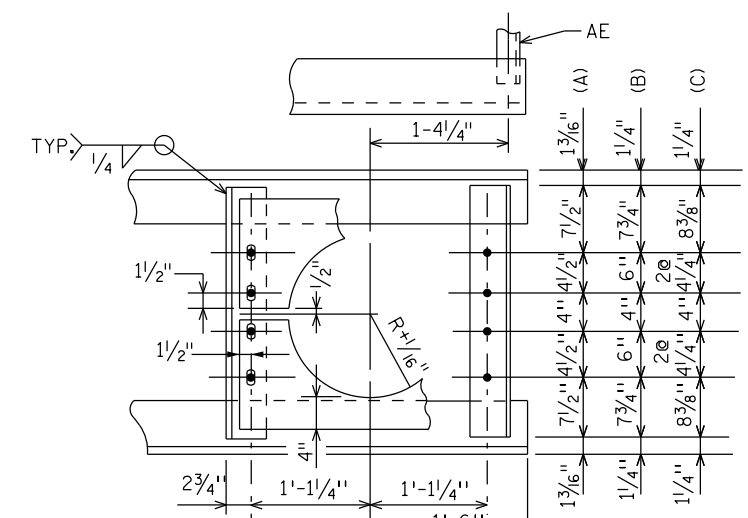
UPPER JUNCTION



CANTILEVER TRUSS



LOWER JUNCTION



SIMPLE TRUSS

NOTE: CHOKER PLATES AND HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

STANDARD OVERHEAD SIGN SUPPORTS INTERIM DESIGN B
TRUSS/POST CONNECTION & BASEPLATES
DRAWING ST-4

DISTRICT #: METRO

IPLOT NAME: Rural Sample Plan TYPICALS15

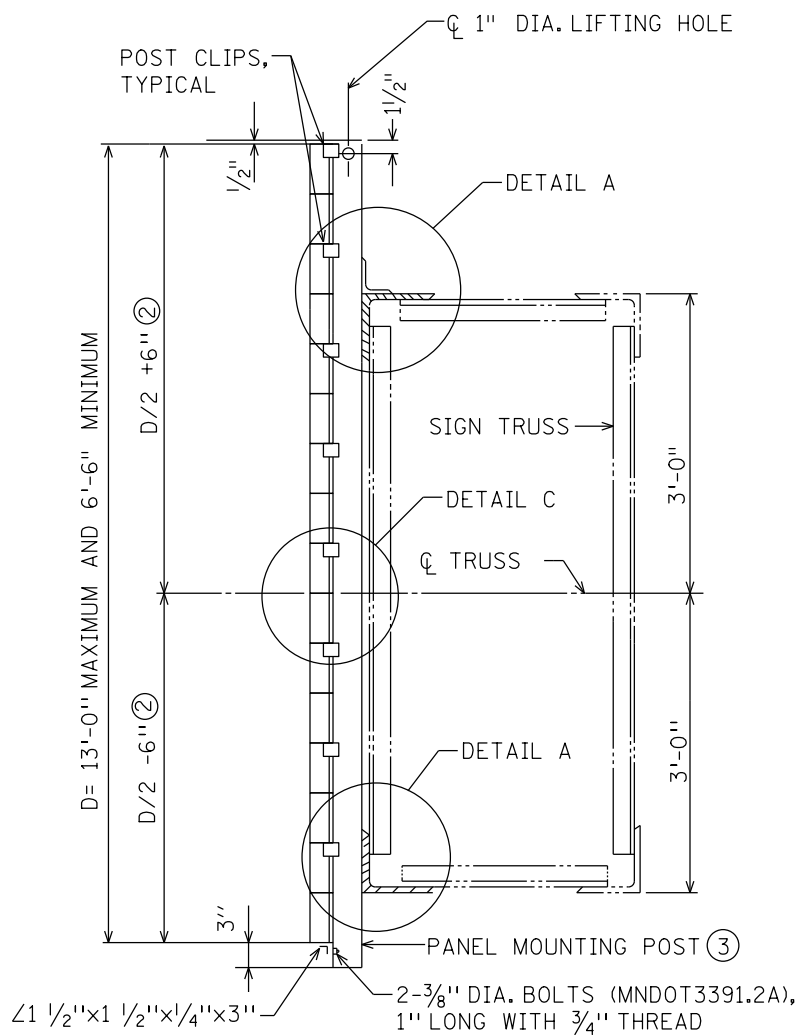
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REV. 10-2-2013

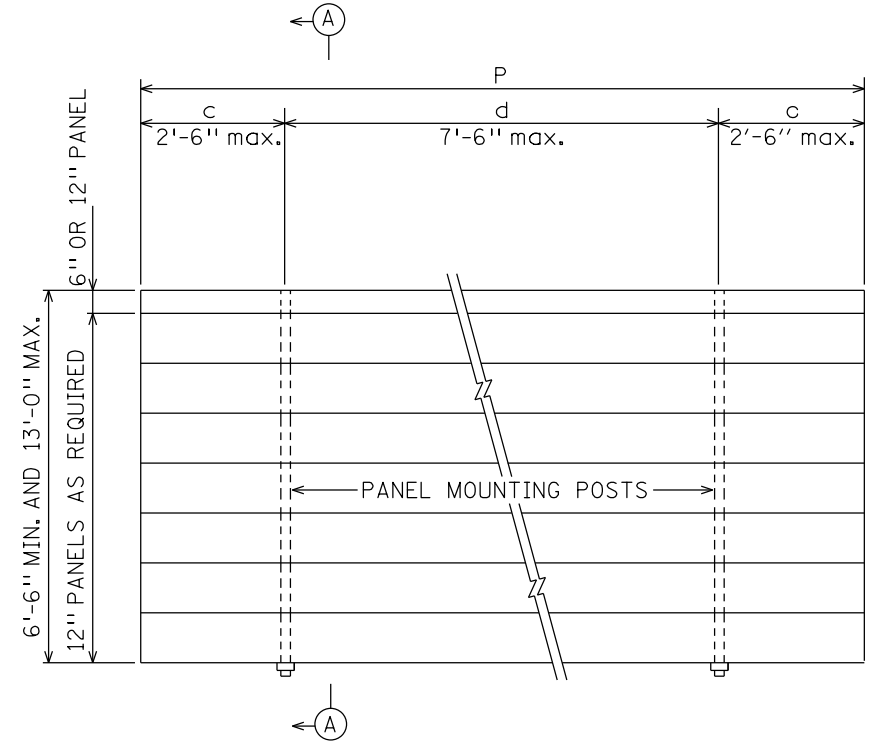
PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
 IPLOT NAME: Rural Sample Plan TYPICALSIT
 PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

REV. 10-2-2013



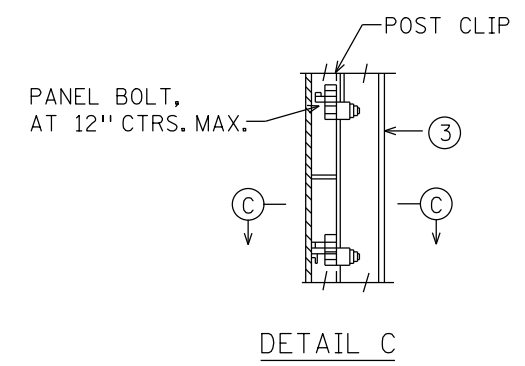
SECTION A-A



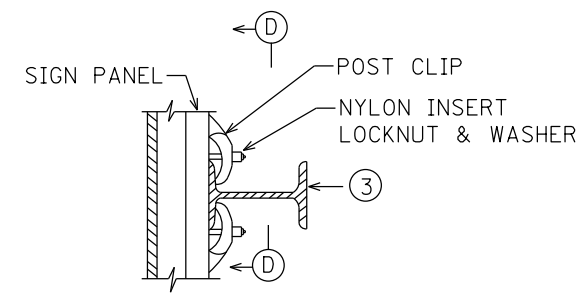
SIGN PANEL ELEVATION

PANEL MOUNTING POST	
NO. OF POSTS	
2	P=144" OR LESS, c=.207P, d=.586P
3	P=150" THRU 204", c=.145P, d=.355P
4	P=210" THRU 276", c=.107P, d=.262P
5	P=282" THRU 348", c=.084P, d=.208P
6	P=354" THRU 420", c=.070P, d=.172P
7	P=426" THRU 492", c=.059P, d=.147P

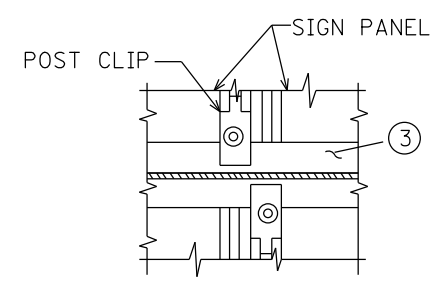
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.



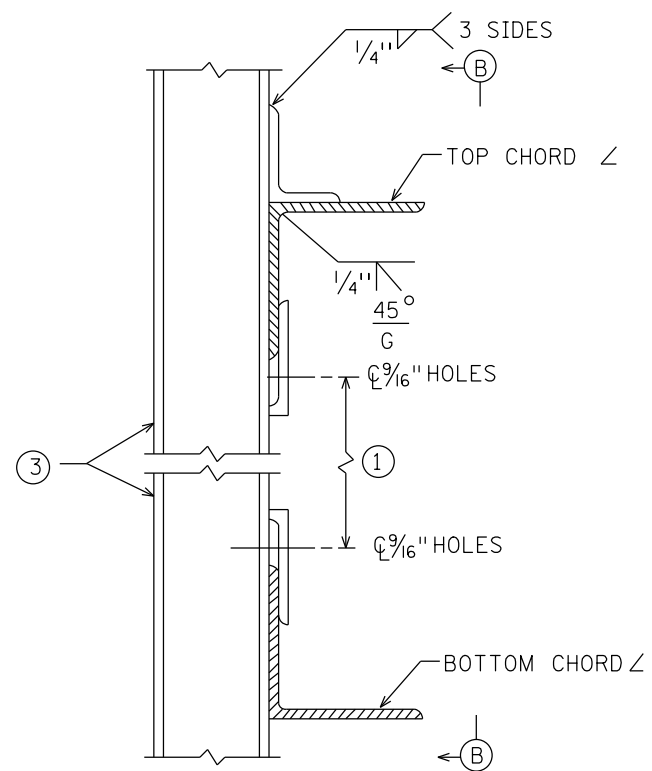
DETAIL C



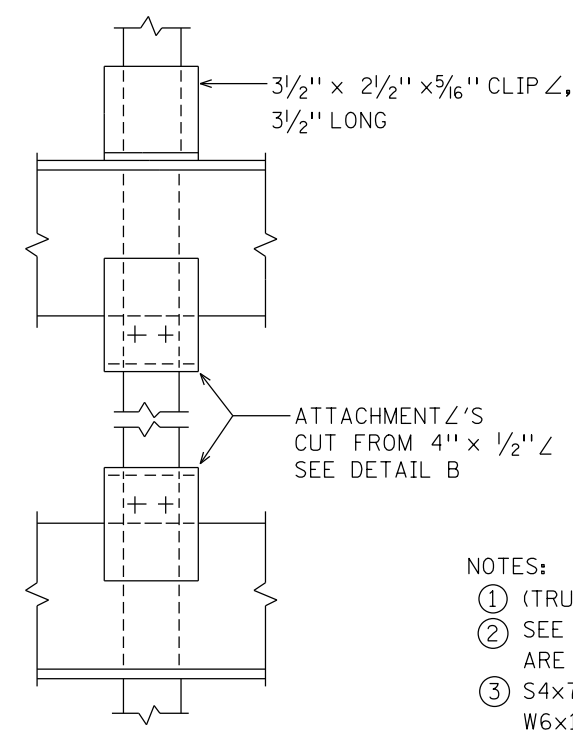
SECTION C



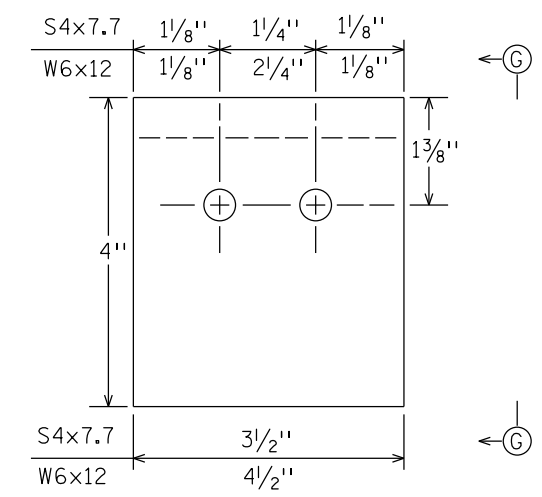
SECTION D-D



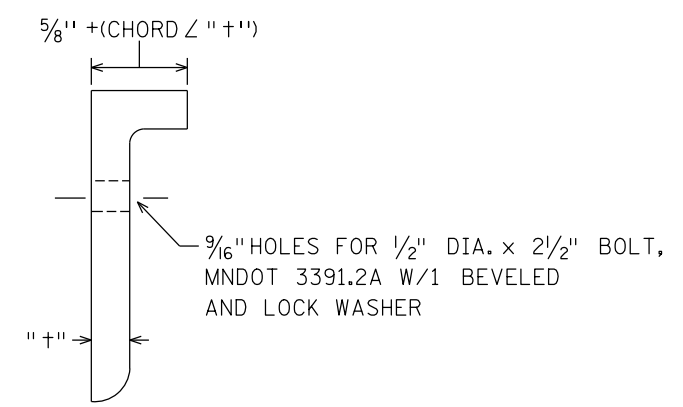
DETAIL A



VIEW B-B



DETAIL B

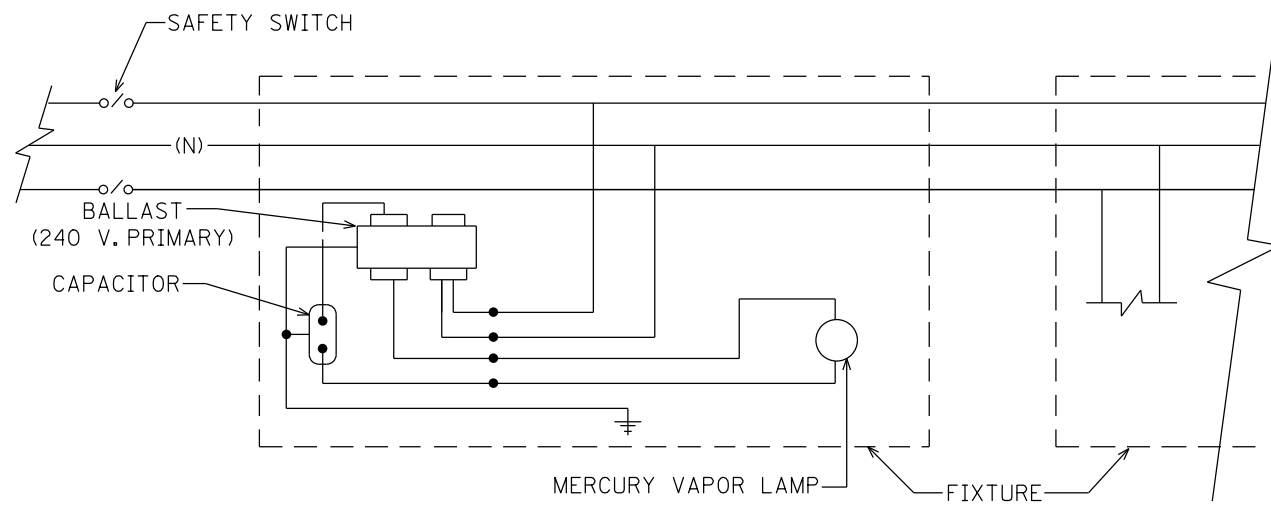


VIEW G-G

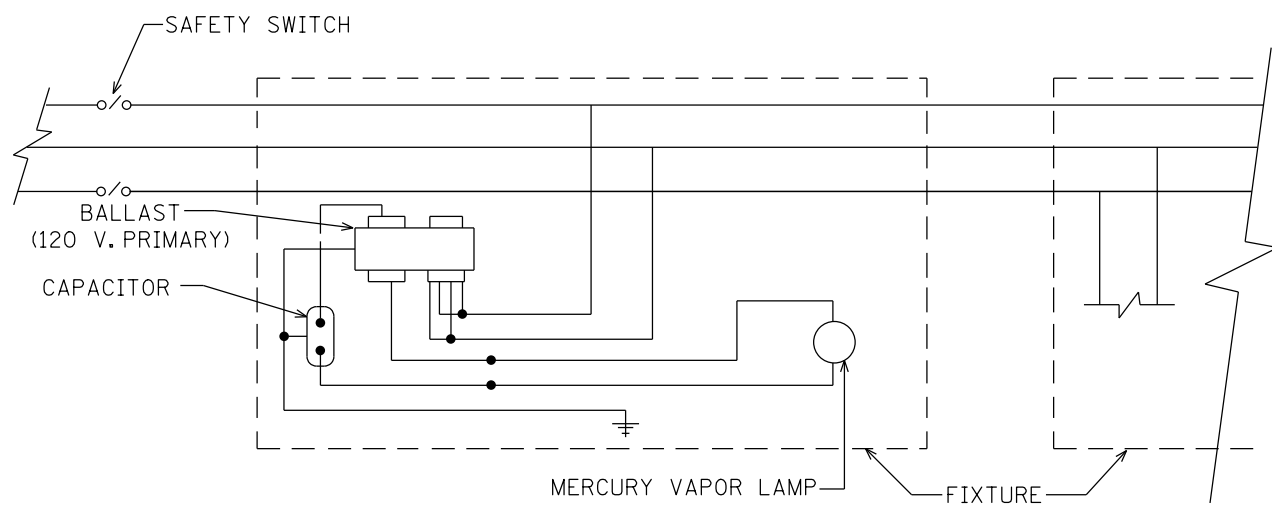
- NOTES:
- ① (TRUSS DEPTH)-(TOP & BOTTOM CHORD Z LEGS)-1/4"
 - ② SEE NOTE 1 ON ST-1 WHEN STANDARD PANELS AND CMS ARE MOUNTED ON THE SAME SPAN
 - ③ S4x7.7 FOR SIGN HEIGHTS ≤ 11'-0"
 W6x12 FOR SIGN HEIGHTS OVER 11'-0"

STANDARD OVERHEAD SIGN SUPPORTS INTERIM DESIGN B
SIGN PANEL AND PANEL MOUNTING POST DETAILS
DRAWING ST-10

PLOTTED/REVISED: 1/28/2016

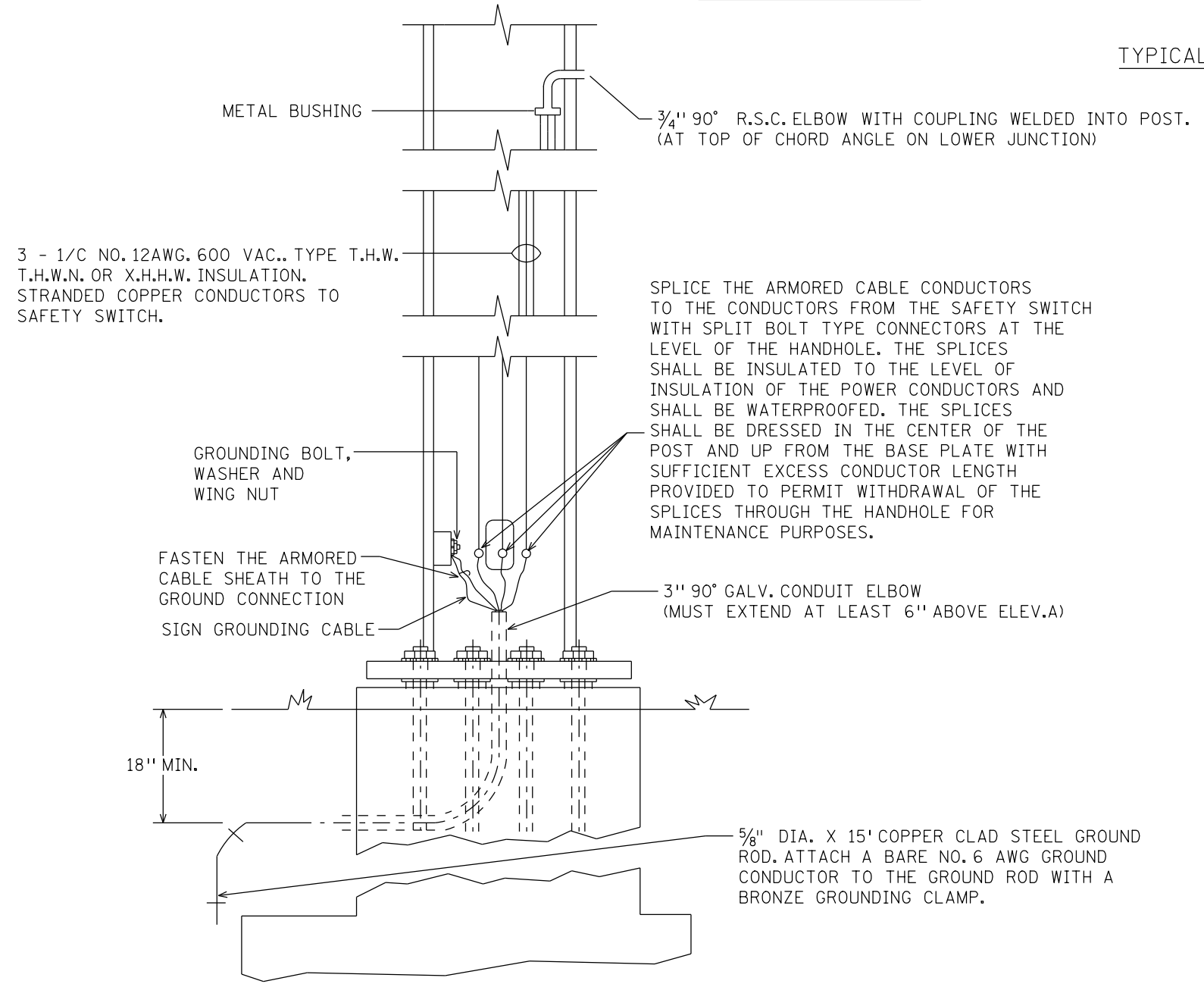


240/480 V. CIRCUIT



120/240 V. CIRCUIT

TYPICAL CIRCUIT DIAGRAMS



SIGN BASE DETAIL

ELECTRICAL NOTES:

1. WHEN SIGN LIGHTING SYSTEMS HAVE BEEN COMPLETED, THE CONTRACTOR SHALL, WITHOUT FURTHER COMPENSATION, CONDUCT BURNING AND RESISTANCE TESTS FOR FINAL ACCEPTANCE. THE RESISTANCE TO GROUND OF EACH UNGROUNDED CONDUCTOR SHALL BE NOT LESS THAN 8 MEGOHMS.
2. ALL FITTINGS, HUBS, UNIONS, BUSHINGS, ETC. SHALL BE SUPPLIED AS PART OF CONDUIT, CONDUIT ENTERING SIGN POSTS SHALL HAVE INSULATED GROUNDING BUSHINGS INSTALLED BEFORE PULLING WIRE.
3. CONDUIT ON STRUCTURE SHALL BE SURFACED MOUNTED, STRAPPED AT EVERY ANGLE BRACE WITH U-BOLT TYPE CLAMPS.
4. SUCCESSIVE LIGHTING FIXTURES SHALL BE CONNECTED ON ALTERNATE SIDES OF THE 3-WIRE CIRCUIT.
5. THE CABLE SHEATH SHALL EXTEND AT LEAST 4" ABOVE THE TOP OF THE CONDUIT END AND THE TAPE ARMOR OF ARMORED CABLE SHALL BE CONNECTED TO THE GROUNDING BOLT IN THE SIGN POSTS.
6. WIRING FROM THE SAFETY SWITCH TO LIGHTING FIXTURES SHALL BE 1/2 NO. 12 AWG AND SHALL BE RUN IN 3/4" R.S.C. ALL SPLICING SHALL BE ACCOMPLISHED WITH A WIRE NUT AND WATERPROOF COATING. ALL CONDUIT CONNECTIONS SHALL BE RAIN TIGHT.

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

ELECTRICAL DETAILS

DRAWING ST-12

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan TYPICALS19
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan TYPICALS.dgn

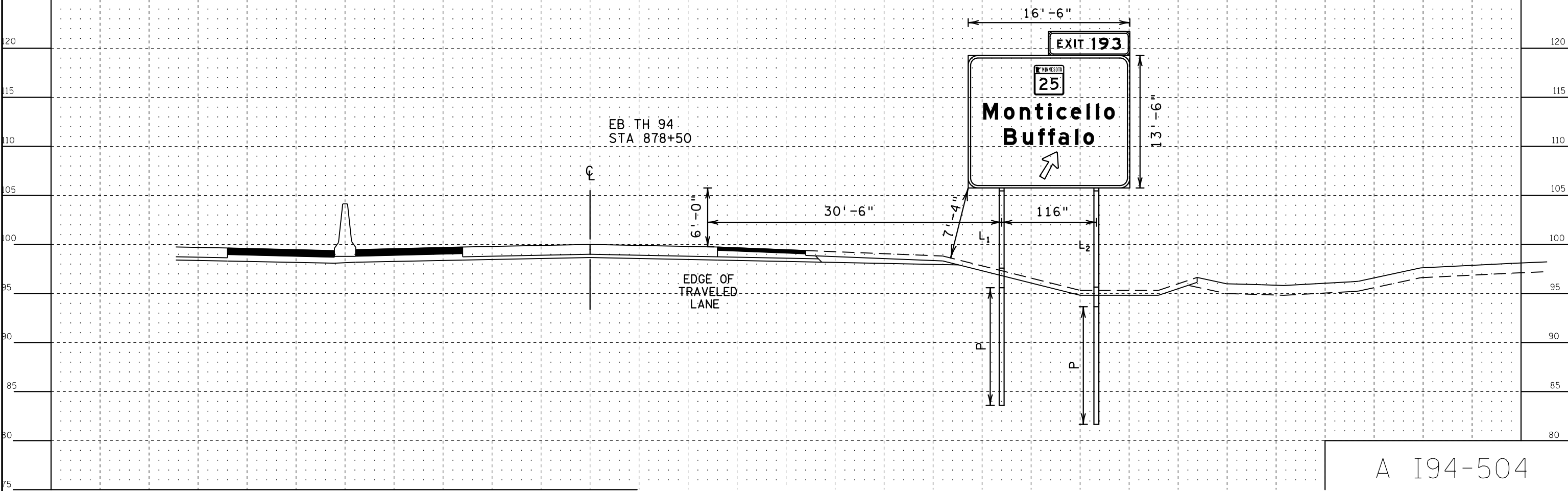
REV. 10-2-2013

PLOTTED/REVISED: 1/28/2016

SIGN A I94-504

E.B. TH. 94
STA. 878+50

POST TYPE		W8X24
POST LENGTH L ₁		22.0 FT.
POST LENGTH L ₂		23.5 FT.
PILE FOOTING P		12.0 FT.



A I94-504

LICENSED PROFESSIONAL ENGINEER

DISTRICT #: METRO

IPLOT NAME: Rural Sample Plan X-SECT

PATH & FILENAME: IP_PWP\d1633825Rural Sample Plan X-SECT.dgn

OH 194-627

W.B. T.H. 94

STA. 914+00

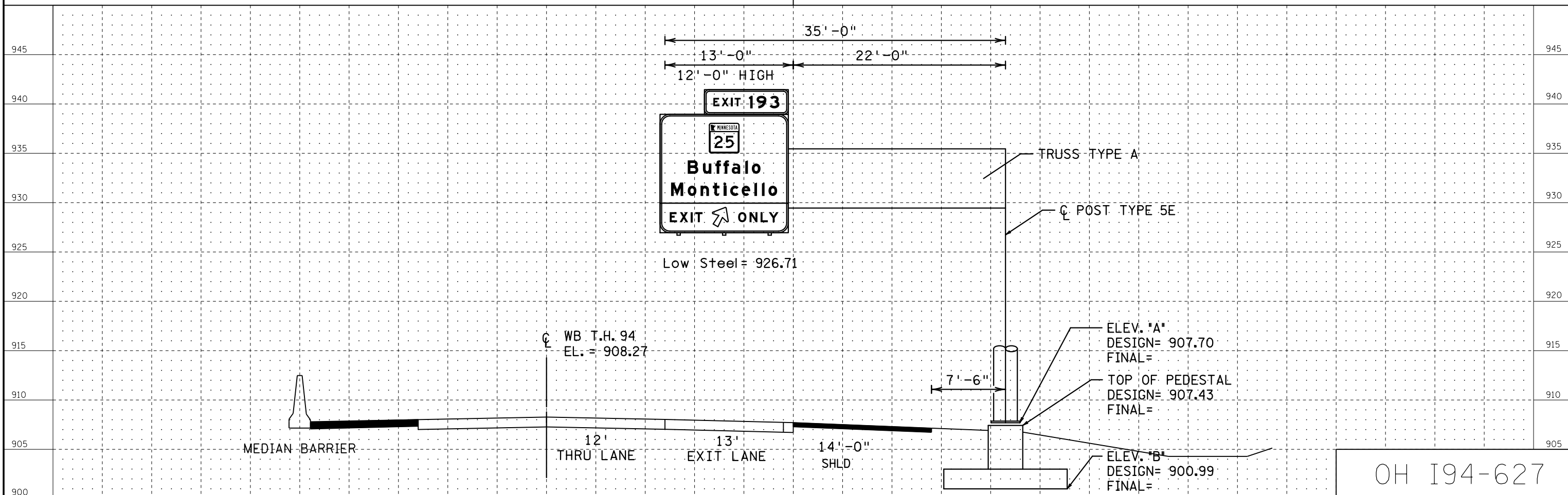
QUANTITIES

	<u>DESIGN</u>	<u>FINAL</u>
POST STEEL	6300 POUNDS	_____
TRUSS STEEL	4305 POUNDS	_____
WALKWAY SUPPORT STEEL	0 POUNDS	_____
WALKWAY GRATING STEEL	0 POUNDS	_____
PANEL MOUNTING POST STEEL	498 POUNDS	_____
CONCRETE (SPREAD) FOOTING	18.7 CU YDS	_____

NOTES: 1. LOW STEEL IS BOTTOM OF PANEL MOUNTING POSTS.

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan X-SECT1
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan X-SECT.dgn



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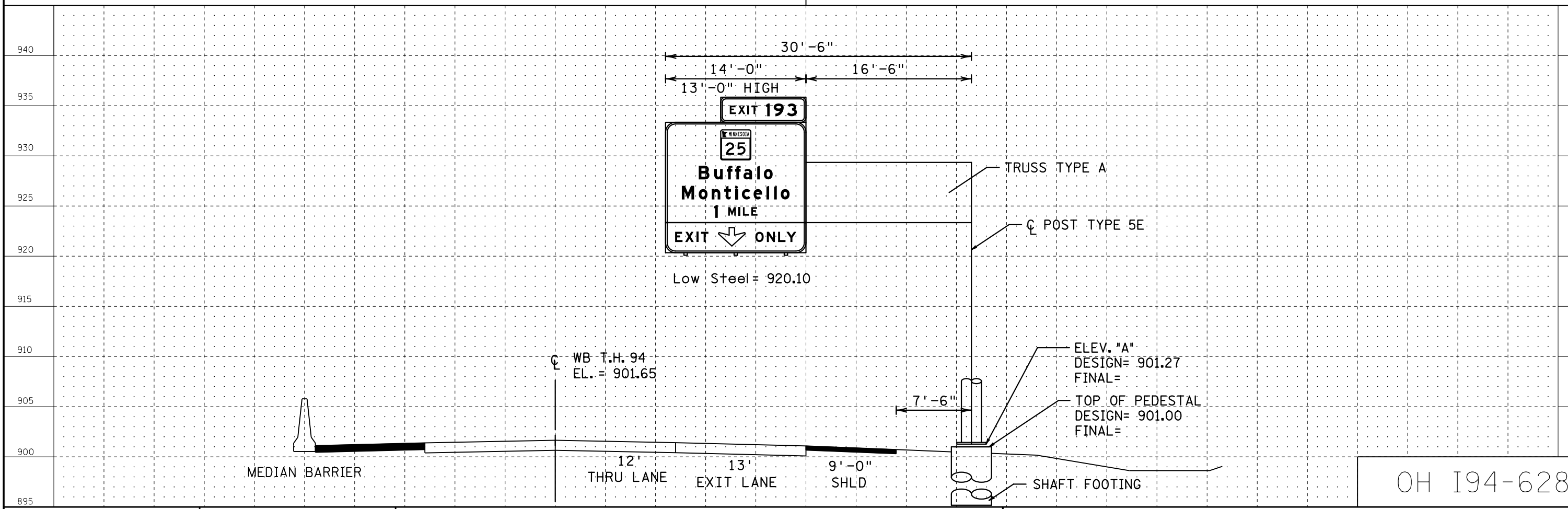
QUANTITIES

	<u>DESIGN</u>	<u>FINAL</u>
POST STEEL	6345 POUNDS	_____
TRUSS STEEL	3752 POUNDS	_____
WALKWAY SUPPORT STEEL	0 POUNDS	_____
WALKWAY GRATING STEEL	0 POUNDS	_____
PANEL MOUNTING POST STEEL	534 POUNDS	_____
CONCRETE (SHAFT) FOOTING	14.1 CU YDS	_____

NOTE: 1. LOW STEEL IS BOTTOM OF PANEL MOUNTING POSTS.

PLOTTED/REVISED: 1/28/2016

DISTRICT #: METRO
PLOT NAME: Rural Sample Plan X-SECT2
PATH & FILENAME: IP_PWP-d1633825Rural Sample Plan X-SECT.dgn



OH 194-628