PLOTTED/REVISED: 12/1/2015

DISTRICT *: METRO
IPLOT NAME: POST TRUSS TABLES
PATH & FILENAME: IP_PWPdl4412\INST DRAWINGS_STD*.dgn

REV. 10-2-2013

TABLE 1 - TRUSS TYPE SELECTION
CANTILEVER STRUCTURE TYPE WITH CONVENTIONAL SIGNS

SIGN AREA	CANTILEVER LENGTH (FEET)													
(SQ. FT.)	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44
350							A	A	A	A	B	B	B	B	B
330							A	A	A	A	B	B	B	B	B
310						A	A	A	A	A	B	B	B	B	B
290					A	A	A	A	A	A	A	A	B	B	B
270				A	A	A	A	A	A	A	A	A	B	B	B
250			A	A	A	A	A	A	A	A	A	A	B	B	B
230		A	A	A	A	A	A	A	A	A	A	A	A	B	B
210		A	A	A	A	A	A	A	A	A	A	A	A	A	B
190	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
170	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
150	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
130	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
110	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
90	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
70	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
50	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

"A" INDICATES TRUSS TYPE A. "B" INDICATES TRUSS TYPE B.
SEE DRAWINGS ST-5 THROUGH ST-7 FOR TRUSS DETAILS.

TABLE 2 - TRUSS TYPE SELECTION
SIMPLE SPAN STRUCTURE WITH CONVENTIONAL SIGNS

SIGN AREA	SPAN LENGTH (FEET)																														
(SQ. FT.)	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	146
1000										B	C	C	C	C	C	C	C	C	NA	NA	NA	NA	NA	NA
900									B	B	C	C	C	C	C	C	C	C	NA	NA	NA	NA	NA	NA
800								A	B	B	B	C	C	C	C	C	C	C	NA	NA	NA	NA	NA	NA
700							A	A	A	B	B	B	C	C	C	C	C	C	C	NA	NA	NA	NA	NA
600						A	A	A	A	B	B	B	C	C	C	C	C	C	C	C	NA	NA	NA	NA
500					A	A	A	A	A	A	B	B	B	B	C	C	C	C	C	C	C	C	C	NA
400			A	A	A	A	A	A	A	A	A	A	B	B	B	B	C	C	C	C	C	C	C	C
300	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	C	C	C	C	C	C
200	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	C	C	C
100	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	C	C

"A" INDICATES TRUSS TYPE A. "B" INDICATES TRUSS TYPE B.
"C" INDICATES TRUSS TYPE C. "NA" NOT ALLOWED.
SEE DRAWINGS ST-5 THROUGH ST-7 FOR TRUSS DETAILS.

TABLE 3 - TRUSS TYPE SELECTION
SIMPLE SPAN STRUCTURE WITH CHANGEABLE MESSAGE SIGNS (DRUM)

NO. OF	SPAN LENGTH (FEET)																		
CMS SIGNS	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
1	A	A	A	A	B	B	B	B	C	C	C	C	C	C	C	C	C	C	C
* 2							B	B	B	C	C	C	C	C	C	C	C	C	C

"A" INDICATES TRUSS TYPE A. "B" INDICATES TRUSS TYPE B.
"C" INDICATES TRUSS TYPE C.

* THIS ASSUMES THAT THE CMS's ARE ON THE OPPOSITE SIDES OF THE TRUSS.

TABLE 4 - TRUSS TYPE SELECTION
SIMPLE SPAN STRUCTURE WITH CHANGEABLE MESSAGE SIGNS (LED)

NO. OF	SPAN LENGTH (FEET)																														
CMS SIGNS	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140
1	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	C	C	C	C	C	C
* 2									A	A	A	A	A	B	B	B	B	C	C	C	C	NA	NA

"A" INDICATES TRUSS TYPE A. "B" INDICATES TRUSS TYPE B.
"C" INDICATES TRUSS TYPE C. "NA" NOT ALLOWED.

* THIS ASSUMES THAT THE CMS's ARE ON THE OPPOSITE SIDES OF THE TRUSS.

TABLE 5 - POST SELECTION - CHANGEABLE MESSAGE SIGN (LED) ON SIMPLE SPAN SIGN STRUCTURE

NO. OF	CMS AREA	POST HT.	SPAN LENGTH (FEET)																												
CMS UNITS	(SQ. FT.)	(FT.)	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140								
1	261	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1								
		24	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4									
		26	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	4	4	4									
		28	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	6									
		30	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	6	6	6	6									
● 2	522	16							1	1	1	1	1	2	2	2	2	2	3	3											
		24							2	3	3	3	4	4	4	4	4	6	6	6											
		26							3	3	3	4	4	4	4	6	6	6	6	6											
		28							3	4	4	4	4	6	6	6	6	6	6	5											
		30							4	4	4	4	5	6	6	6	6	5	5	5											

TYPE A TRUSS ← TYPE B TRUSS → TYPE C TRUSS

● CMS's ATTACHED ON OPPOSITE SIDES OF THE TRUSS.

TRUSS SELECTION PROCEDURE

1. THESE STANDARD PLANS ARE SUITABLE ONLY FOR SIMPLE SPAN AND CANTILEVERED OVERHEAD SIGN STRUCTURES. WITH ONLY A SINGLE TYPE OF SIGN (CMS OR CONVENTIONAL) ATTACHED TO THE STRUCTURE. THE FOLLOWING CONDITIONS ARE NOT PRESENTED IN THIS PLAN SET AND WILL REQUIRE ADDITIONAL DESIGN ATTENTION.
   - INSTALLATION OF 2 CMS's ON THE SAME SIDE OF THE TRUSS.
   - BUTTERFLY, CONTINUOUS OR A COMBINATION OF SIMPLE AND CANTILEVERED STRUCTURES.
   - ANY COMBINATION OF CMS AND CONVENTIONAL SIGNS.
2. DETERMINE THE TYPE OF STRUCTURE FOR WHICH THE TRUSS IS TO BE USED FOR. REFER TO PLANS FOR BRIDGE TYPE BC OR BRIDGE TYPE S.

   CANTILEVERED SIGN STRUCTURE - BRIDGE TYPE BC
   SIMPLE SPAN SIGN STRUCTURE - BRIDGE TYPE S
3. DETERMINE THE TABLE WHICH CORRESPONDS TO THE STRUCTURE TYPE UNDER CONSIDERATION.
   TABLE 1 - CANTILEVER W/CONVENTIONAL SIGNS
   TABLE 2 - SIMPLE SPAN W/CONVENTIONAL SIGNS
   TABLE 3 - SIMPLE SPAN W/DRUM CMS
   TABLE 4 - SIMPLE SPAN W/LED-CMS
   THIS TABLE IS TO BE USED FOR STEPS 4 &5.
4. DETERMINE THE AREA OF ALL THE SIGNS WHICH ARE TO BE PLACED ON THE SIGN STRUCTURE. THE SIGN AREA IS DEFINED AS THE SUMMATION OF THE INDIVIDUAL SIGN HEIGHTS MULTIPLIED BY THE SIGN WIDTHS. USE THIS VALUE TO ENTER THE APPROPRIATE TABLE FROM THE LEFT COLUMN. IF THE TOTAL SIGN AREA FALLS BETWEEN TWO VALUES, USE THE LARGER VALUE. (BE SURE TO INCLUDE EXIT SIGNS IN TOTAL AREA.
5. DETERMINE THE SPAN LENGTH OR CANTILEVER LENGTH AND ENTER THE APPROPRIATE TABLE ALONG THE TOP. IF THE SPAN LENGTH FALLS BETWEEN TWO VALUES, USE THE LARGER VALUE. THIS SPAN LENGTH IDENTIFIES THE VERTICAL COLUMN FROM WHICH A TRUSS WILL BE SELECTED.

EXAMPLE:

SIGN AREA:	250 SQ. FT.
SPAN LENGTH:	102 FT
TYPE:	SIMPLE SPAN
SIGN TYPE:	CONVENTIONAL

TRUSS TYPE: B

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

POST/TRUSS SELECTION TABLES

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

NOTE: FOR CMS (LED) POST SELECTION SEE POST/TRUSS SELECTION TABLES (TABLE 5)

TABLE 6 - POST SELECTION - CHANGEABLE MESSAGE SIGN (DRUM) ON SIMPLE SPAN SIGN STRUCTURE

NO. OF CMS UNITS	CMS AREA (SQ. FT.)	POST HT. (FT.)	SPAN LENGTH (FEET) 30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
1	252	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
		24	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	4
		26	1	1	1	1	1	2	2	2	3	3	3	3	3	3	4	4	4	4	4
		28	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	4	4	4
		30	1	1	1	2	2	2	3	3	3	4	4	4	4	4	4	4	6	6	6
● 2	504	16	X	X	X	X	X	1	1	1	2	2	2	2	2	3	3	3	4	4	4
		24	X	X	X	X	X	3	3	3	4	4	4	6	6	6	6	6	6	6	6
		26	X	X	X	X	X	3	4	4	4	4	6	6	6	6	5	5	5	5	5
		28	X	X	X	X	X	4	4	4	4	6	6	6	6	5	5	5	5	5	5
		30	X	X	X	X	X	4	4	4	6	6	6	6	5	5	5	5	7	7	7

TYPE A TRUSS ← TYPE B TRUSS → TYPE C TRUSS

● CMS's ATTACHED ON OPPOSITE SIDES OF THE TRUSS.

TABLE 7 - POST SELECTION - SIMPLE SPAN SIGN STRUCTURE

SIGN AREA (SQ. FT.)	POST HT. (FT.)	SPAN LENGTH (FEET) 30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	146
1000	16											3	3	3	4	4	4	4	4	4					
	24											6	6	6	5	5	5	7	7	7					
	26											5	5	5	5	5	7	7	7	7					
	28											5	5	5	7	7	7	7	7	7					
	30											7	7	7	7	7	7	7	7	7					
900	16										2	2	3	3	3	4	4	4	4	4					
	24										6	6	6	6	5	5	5	5	5	5					
	26										6	6	6	5	5	5	5	7	7	7					
	28										6	5	5	5	5	7	7	7	7	7					
	30										5	5	5	7	7	7	7	7	7	7					
800	16								2	2	2	2	3	3	3	3	4	4	4	4					
	24								4	4	4	6	6	6	6	6	5	5	5	5					
	26								4	6	6	6	6	6	5	5	5	5	7	7					
	28								5	6	6	6	5	5	5	5	7	7	7	7					
	30								5	6	6	5	5	5	7	7	7	7	7	7					
700	16							1	1	2	2	2	2	3	3	3	3	4	4	4	4				
	24							3	4	4	4	4	6	6	6	6	6	6	5	5	5				
	26							4	4	4	6	6	6	6	5	5	5	5	5	7	7				
	28							4	4	5	6	6	6	5	5	5	5	5	7	7	7				
	30							5	5	5	6	6	5	5	5	5	7	7	7	7	7				
600	16						1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	3		
	24						3	3	3	4	4	4	4	6	6	6	6	6	6	6	6	5	7		
	26						3	3	4	4	4	4	6	6	6	6	6	5	5	5	5	7			
	28						4	4	4	4	5	6	6	6	6	5	5	5	5	5	7	7			
	30						4	4	4	5	5	6	6	6	5	5	5	5	7	7	7	7			
500	16				1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	
	24				2	2	3	3	3	3	3	4	4	4	4	6	6	6	6	6	6	6	6	6	
	26				2	2	3	3	3	4	4	4	4	6	6	6	6	6	6	6	6	5	5	5	
	28				3	3	3	4	4	4	4	4	6	6	6	6	6	5	5	5	5	5	5	5	
	30				3	4	4	4	4	4	5	6	6	6	6	5	5	5	5	5	5	7	7		
400	16			1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	24			1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	4	4	6	6	6	6
	26			1	2	2	2	3	3	3	3	3	4	4	4	4	4	6	6	6	6	6	6	6	6
	28			1	2	2	2	3	3	3	4	4	4	4	4	6	6	6	6	6	5	6	6	5	5
	30			2	2	2	3	3	3	4	4	4	4	6	6	6	6	6	5	5	5	5	5	5	5
300	16		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	24		1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4
	26		1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	6
	28		1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4	4	6	6	6	6	6	6
	30		1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	4	6	6	6	6	6	6	6
200	16		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	24		1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3
	26		1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4
	28		1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	4	4	6
	30		1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	6
100	16		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	24		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	26		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3
	28		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3
	30		1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4	

TYPE A TRUSS ← TYPE B TRUSS → TYPE C TRUSS

TABLE 8 - POST SELECTION - CANTILEVER SIGN STRUCTURE

SIGN AREA (SQ. FT.)	POST HT. (FT.)	CANTILEVER LENGTH (FEET) 16	18	20	22	24	26	28	30	32	34	36	38	40	42	44
350	16							4	4	5	5	5	5	7	7	
	24							5	5	5	5	7	7	7	7	
	26							5	5	5	5	7	7	7	7*	
	28							5	5	5	5	7	7	7	7*	
	30							5	5	5	5	7	7	7	7*	
330	16							4	4	5	5	5	5	7	7	
	24							5	5	5	5	5	7	7	7	
	26							5	5	5	5	7	7	7	7	
	28							5	5	5	5	7	7	7	7*	
	30							5	5	5	5	7	7	7	7*	
310	16						3	4	4	5	5	6	5	5	7	
	24						4	5	5	5	5	5	7	7	7	
	26						4	5	5	5	5	5	7	7	7	
	28						5	5	5	5	5	7	7	7	7	
	30						5	5	5	5	5	7	7	7	7	
290	16					3	3	4	4	4	5	5	5	5	7	
	24					4	4	5	5	5	5	5	7	7	7	
	26					4	5	5	5	5	5	5	7	7	7	
	28					5	5	5	5	5	5	7	7	7	7	
	30					5	5	5	5	5	5	7	7	7	7	
270	16				2	2	3	3	4	4	5	5	5	5	7	
	24				3	4	4	4	5	5	5	5	5	7	7	
	26				4	4	4	5	5	5	5	5	7	7	7	
	28				4	4	5	5	5	5	5	5	7	7	7	
	30				4	5	5	5	5	5	5	5	7	7	7	
250	16			1	2	2	3	3	4	4	4	5	5	5	5	5
	24			3	3	4	4	4	5	5	5	5	5	7	7	7
	26			3	3	4	4	4	5	5	5	5	5	7	7	7
	28			3	4	4	4	5	5	5	5	5	5	7	7	7
	30			4	4	4	5	5	5	5	5	5	5	7	7	7
230	16		1	1	2	2	2	3	3	4	4	4	5	5	5	5
	24		2	2	3	3	4	4	4	5	5	5	5	5	7	7
	26		2	3	3	3	4	4	4	5	5	5	5	5	7	7
	28		3	3	3	4	4	4	5	5	5	5	5	5	7	7
	30		3	3	4	4	4	5	5	5	5	5	5	5	7	7
210	16		1	1	1	2	2	3	3	4	4	4	5	5	5	5
	24		2	2	2	3	3	4	4	4	5	5	5	5	5	5
	26		2	2	3	3	4	4	4	5	5	5	5	5	5	7
	28		2	3	3	3	4	4	5	5	5	5	5	5	7	7
	30		3	3	3	4	4	5	5	5	5	5	5	5	7	7
190	16	1	1	1	1	2	2	2	3	3	4	4	4	5	5	5
	24	1	1	2	2	2	3	3	4	4	4	5	5	5	5	5
	26	1	2	2	2	3	3	4	4	4	5	5	5	5	5	5
	28	2	2	2	3	3	3	4	4	4	5	5	5	5	5	5
	30	2	2	3	3	3	4	4	4	5	5	5	5	5	5	5
170	16	1	1	1	1	1	2	2	3	3	3	4	4	5	5	5
	24	1	1	1	2	2	3	3	3	4	4	4	5	5	5	5
	26	1	1	2	2	2	3	3	4	4	4	5	5	5	5	5
	28	1	2	2	2	3	3	4	4	4	4	5	5	5	5	5
	30	2	2	2	3	3	3	4	4	4	5	5	5	5	5	5
150	16	1	1	1	1	1	2	2	3	3	3	4	4	5	5	5
	24	1	1	1	1	2	2	3	3	3	4	4	4	5	5	5
	26	1	1	1	2	2	2	3	3	4	4	4	5	5	5	5
	28	1	1	2	2	2	3	3	3	4	4	4	5	5	5	5
	30	1	2	2	2	3	3	3	4	4	4	4	5	5	5	5
130	16	1	1	1	1	1	1	1	2	2	3	3	4	4	4	5
	24	1	1	1	1	1	2	2	3	3	3	4	4	4	5	5
	26	1	1	1	1	2	2	2	3	3	4	4	4	5	5	5
	28	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5
	30	1	1	1	2	2	3	3	3	4	4	4	5	5	5	5
110	16	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4
	24	1	1	1	1	1	2	2	2	3	3	3	4	4	4	5
	26	1	1	1	1	1	2	2	2	3	3	3	4	4	4	5
	28	1	1	1	1	2	2	2	3	3	3	4	4	4	5	5
	30	1	1	1	1	2	2	2	3	3	4	4	4	5	5	5
90	16	1	1	1	1	1	1	1	1	2	2	2	3	3	3	4
	24	1	1	1	1	1	1	2	2	2	3	3	3	4	4	4
	26	1	1	1	1	1	1	2	2	2	3	3	4	4	4	5
	28	1	1	1	1	1	2	2	2	3	3	3	4	4	4	5
	30	1	1	1	1	1	2	2	2	3	3	4	4	4	5	5
70	16	1	1	1	1	1	1	1	1	1	2	2	3	3	3	4
	24	1	1	1	1	1	1	1	1	2	2	3	3	4	4	4
	26	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4
	28	1	1	1	1	1	1	2	2	2	3	3	3	4	4	4
	30	1	1	1	1	1	1	2	2	2	3	3	4	4	4	4
50	16	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3
	24	1	1	1	1	1	1	1	1	1	2	2	3	3	3	4
	26	1	1	1	1	1	1	1	1	2	2	3	3	3	4	4
	28	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4
	30	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4

TYPE B TRUSS ← → TYPE A TRUSS

* USE ONLY 20" Ø x .812" WALL (42 KSI) OPTION.

POST SELECTION PROCEDURE

1. THESE STANDARD PLANS ARE SUITABLE ONLY FOR SIMPLE SPAN AND CANTILEVERED OVERHEAD SIGN STRUCTURES. WITH ONLY A SINGLE TYPE OF SIGN (CMS OR CONVENTIONAL) ATTACHED TO THE STRUCTURE. THE FOLLOWING CONDITIONS ARE NOT PRESENTED IN THIS PLAN SET AND WILL REQUIRE ADDITIONAL DESIGN ATTENTION.
   - INSTALLATION OF 2 CMS's ON THE SAME SIDE OF THE TRUSS.
   - BUTTERFLY, CONTINUOUS OR A COMBINATION OF SIMPLE AND CANTILEVERED STRUCTURES.
   - ANY COMBINATION OF CMS AND CONVENTIONAL SIGNS.
2. DETERMINE THE TYPE OF STRUCTURE FOR WHICH THE POST(S) ARE TO BE USED FOR. REFER TO PLANS FOR BRIDGE TYPE BC OR BRIDGE TYPE S.

   CANTILEVERED SIGN STRUCTURE - BRIDGE TYPE BC
   SIMPLE SPAN SIGN STRUCTURE - BRIDGE TYPE S
3. DETERMINE THE TABLE WHICH CORRESPONDS TO THE STRUCTURE TYPE UNDER CONSIDERATION. TABLE 5, 6, 7 OR 8 IS TO BE USED FOR STEPS 4 THROUGH 7.
4. DETERMINE THE AREA OF ALL THE SIGNS WHICH ARE TO BE PLACED ON THE SIGN STRUCTURE. THE SIGN AREA IS DEFINED AS THE SUMMATION OF THE INDIVIDUAL SIGN HEIGHTS MULTIPLIED BY THE SIGN WIDTHS. USE THIS VALUE TO ENTER THE APPROPRIATE TABLE FROM THE LEFT COLUMN. IF THE TOTAL SIGN AREA FALLS BETWEEN TWO VALUES, USE THE LARGER VALUE. (BE SURE TO INCLUDE EXIT SIGNS IN TOTAL AREA).
5. DETERMINE THE POST HEIGHT APPLICABLE FOR THE STRUCTURE UNDER CONSIDERATION. THE POST HEIGHT IS DEFINED AS THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE BASEPLATE TO THE TOP OF THE TRUSS. USING THE VALUES BRACKETED WITHIN THE SIGN AREA FROM STEP 4, LOCATE THE POST HEIGHT. IF THE ACTUAL HEIGHT FALLS BETWEEN TWO VALUES, USE THE LARGER VALUE. THIS POST HEIGHT IDENTIFIES THE HORIZONTAL ROW FROM WHICH A POST WILL BE SELECTED.
6. DETERMINE THE SPAN LENGTH OR CANTILEVER LENGTH AND ENTER THE APPROPRIATE TABLE ALONG THE TOP. IF THE SPAN LENGTH FALLS BETWEEN TWO VALUES, USE THE LARGER VALUE. THIS SPAN LENGTH IDENTIFIES THE VERTICAL COLUMN FROM WHICH A POST WILL BE SELECTED.
7. DETERMINED THE POST IDENTIFICATION NUMBER BY READING ACROSS THE ROW FROM THE IDENTIFIED POST HEIGHT AND DOWN THE COLUMN FROM THE IDENTIFIED SPAN LENGTH. THE INTERSECTION OF THIS ROW AND COLUMN WILL UNIQUELY IDENTIFY THE APPROPRIATE POST IDENTIFICATION NUMBER.
8. USE THE POST IDENTIFICATION NUMBER TO DETERMINE THE RANGE OF PIPE REQUIREMENTS AVAILABLE FROM THE POST IDENTIFICATION TABLE (TABLE 1, DRAWING ST-2).

EXAMPLE:
- SIGN AREA: 250 SQ. FT.
- POST HEIGHT: 27 FT.
- SPAN LENGTH: 75 FT.
- TYPE: SIMPLE SPAN
- SIGN TYPE: CONVENTIONAL

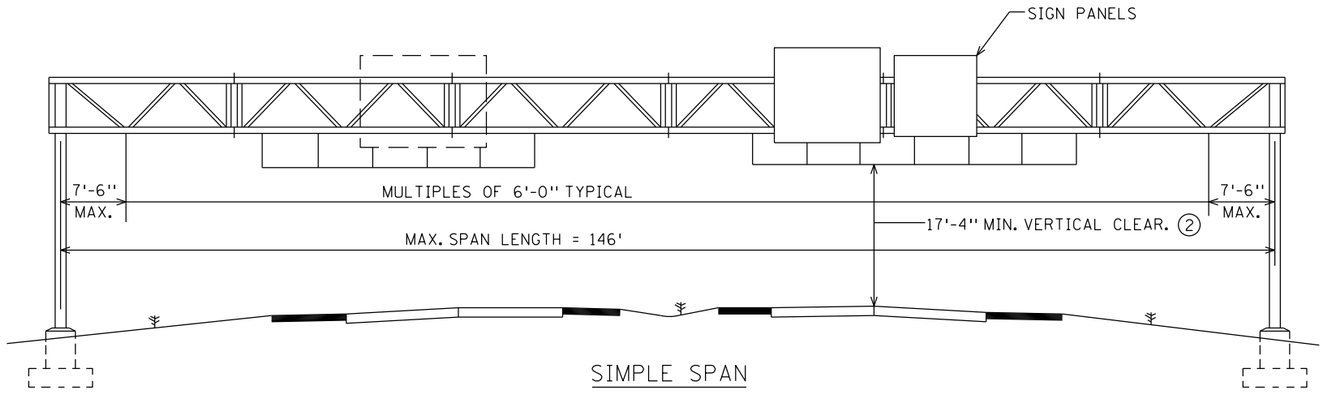
POST IDENTIFICATION NUMBER: 3

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

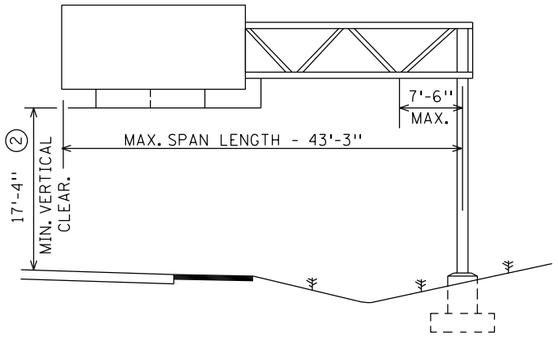
POST SELECTION TABLES

STATE PROJ. NO. | SHEET NO. | OF | SHEETS

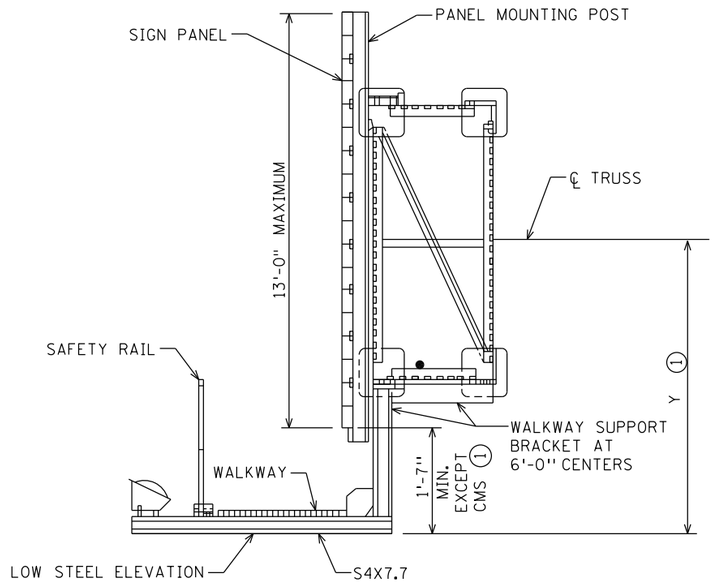
PLOTTED/REVISED: 12/1/2015
DISTRICT *; METRO
IPLOT NAME: POST TABLE
PATH & FILENAME: IP_PWPdl4412INST DRAWINGS_STD*.dgn
REV. 10-2-2013



SIMPLE SPAN



CANTILEVER



SECTION

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)

SIGN HEIGHT	Y (1)
6'-6"	4'-4"
7'-0"	4'-7"
7'-6"	4'-10"
8'-0"	5'-1"
8'-6"	5'-4"
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"

CMS

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---------- Fc = 1,600 PSI
REINFORCEMENT STEEL---------- Fs = 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 3G52)

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.

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

GENERAL ELEVATIONS AND NOTES

DRAWING ST-1

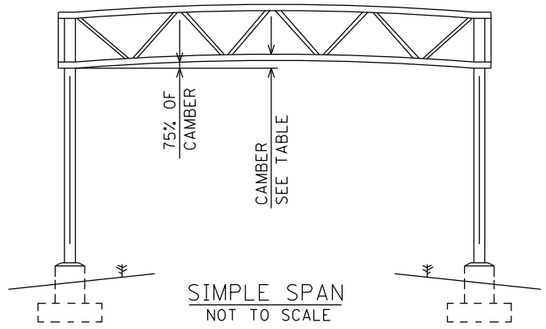
STATE PROJ. NO. SHEET NO. OF SHEETS

PLOTTED/REVISED: 12/1/2015
DISTRICT *: METRO
IPLOT NAME: st1
PATH & FILENAME: IP_PWPdl624788\ST DRAWINGS_STD*.dgn
REV. 10-28-2015

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	13/16	1 1/8	1 1/2	2 1/16	2 11/16
RESIDUAL CAMBER	1/4	3/8	9/16	11/16	13/16	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 ℄ SPAN. THE DEFLECTIONS AND CAMBER AT THE QUARTER POINTS SHALL BE APPROXIMATELY 75% OF THESE VALUES.



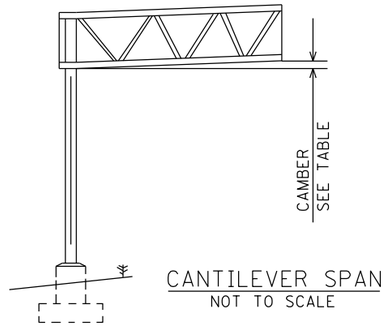
SIMPLE SPAN
NOT TO SCALE

CANTILEVER SPAN

CANTILEVER SPAN TRUSS CAMBER					
SPAN	15'	20'	30'	40'	45'
CAMBER	1/8	1/4	5/8	1 1/16	1 1/4
DL DEFLECTION	0	0	1/16	3/16	1/4
RESIDUAL CAMBER	1/8	1/4	3/16	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.



CANTILEVER SPAN
NOT TO SCALE

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.

FOR FOUNDATION QUANTITIES SEE DRAWING ST-3

WALKWAY WEIGHTS:

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

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

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

POST QUANTITIES

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.

	CANTILEVER		SIMPLE SPAN		
POST TYPE	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	1915+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

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

CAMBER, POST IDENTIFICATION AND ESTIMATED QUANTITIES

DRAWING ST-2

STATE PROJ. NO. SHEET NO. OF SHEETS

PLOTTED/REVISED: 12/1/2015
DISTRICT #: METRO
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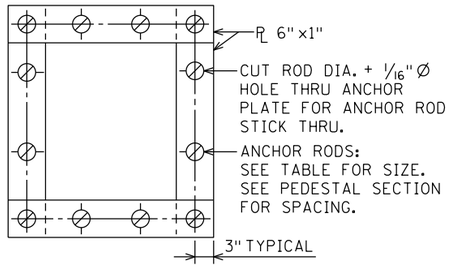
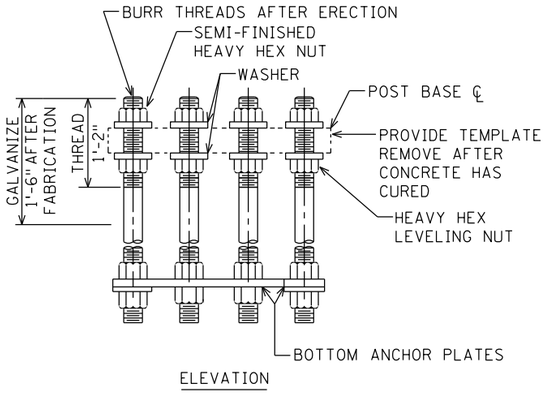
REV. 10-2-2013

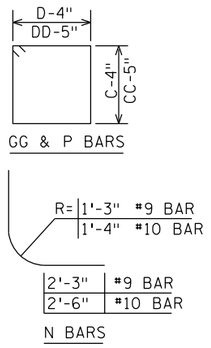


NOTE: ANCHOR PLATES SHOWN TYPICAL FOR ALL ANCHOR ROD SPACING.

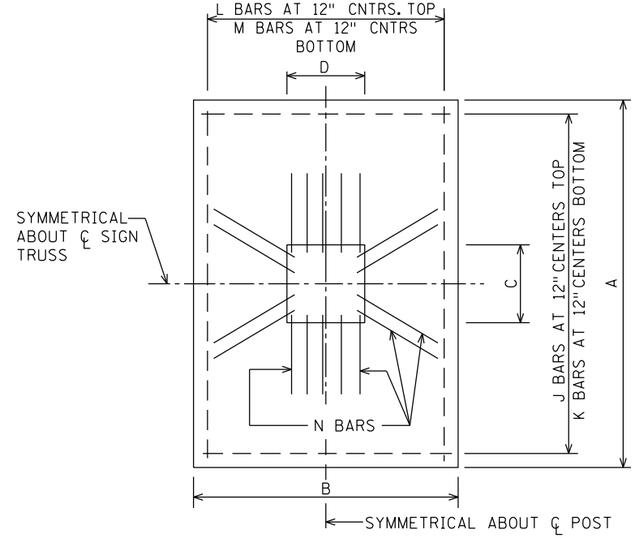
ANCHOR PLATE PLAN



ELEVATION



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



PLAN

SPECIFIC NOTES:

1. G IS IN FEET. ROUND UP TO WHOLE NUMBER. E.G. G=4.10/2G=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 MATERAL.
6. SPECIAL LARGE RADIUS BENDS ARE REQUIRED. SEE "BAR BENDING DIAGRAMS" FOR SIZES OF RADII.

GENERAL NOTES:

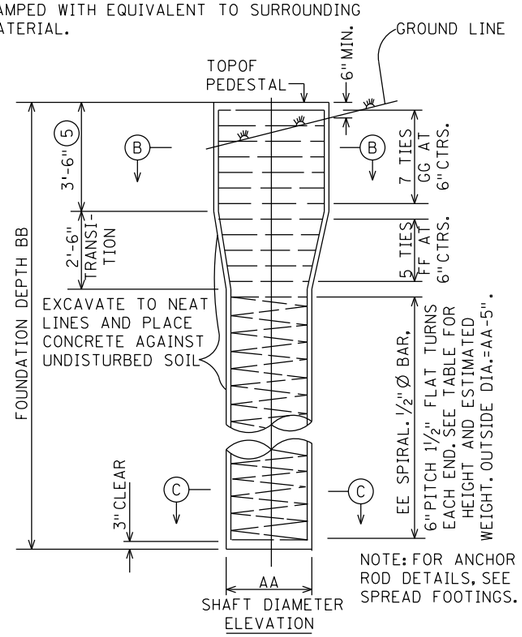
1. SEE THE FORMAT SHEET FOR FOOTING LOCATIONS. POST DESIGNATIONS, TOP OF PEDESTAL ELEVATIONS AND BOTTOM OF FOOTING ELEVATIONS.
2. ALL CONCRETE SHALL CONFORM TO CONCRETE MIX 3Y43 (MNDOT 2461).
3. ALL BAR DIMENSIONS ARE OUT TO OUT OF BARS.
4. ALL SPREAD FOOTINGS HAVE AN ALLOWABLE DESIGN BEARING PRESSURE 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.

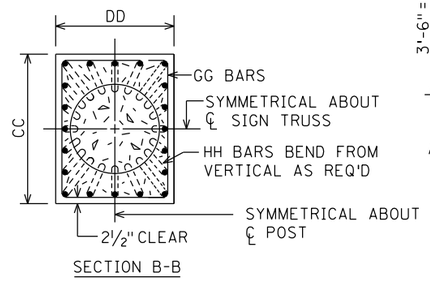
ANCHOR ROD DETAILS

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.

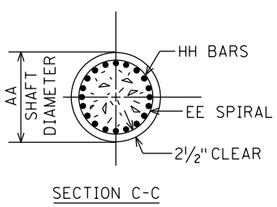


ELEVATION

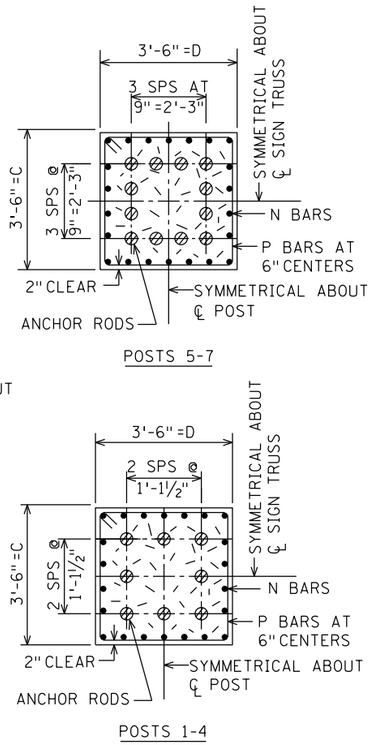
DRILLED SHAFT



SECTION B-B



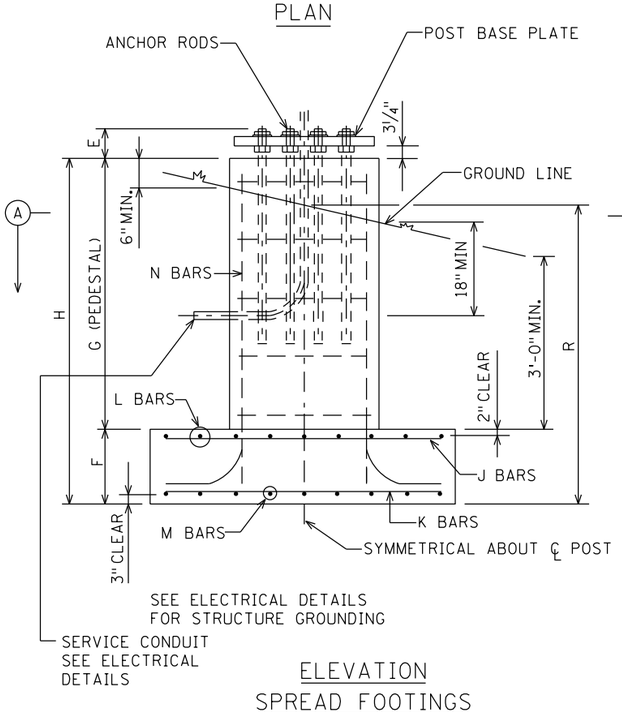
SECTION C-C



POSTS 5-7

POSTS 1-4

PEDESTAL CROSS SECTIONS A-A



ELEVATION
SPREAD FOOTINGS

DRILLED SHAFT											SPREAD FOOTINGS			
POST	DIMENSIONS				REINFORCING BARS				ESTIMATED QUANTITIES (4)		SUMMARY OF ESTIMATED QUANTITIES			
NO.	AA	BB	CC	DD	EE	FF (3)	GG	HH	CONCRETE CY	REIN STEEL LBS.	CONCRETE CY (2)	REIN. STEEL LBS. (2)	ANCH. ASSM. LBS	ST. EXC. C.Y. (2)
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	9.3 + 0.46 G	945 + 98G	781	7.4 R
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	16.7 + 0.46 G	2333 + 133G	1320	12.1 R

SPREAD FOOTINGS																										
POST							ANCHOR RODS			J REIN. BARS			K REIN. BARS			L REIN. BARS			M REIN. BARS			(6) N REIN. BARS			P REIN. BARS (1)		
NO.	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
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"	26	#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"	26	#5	14'-3"

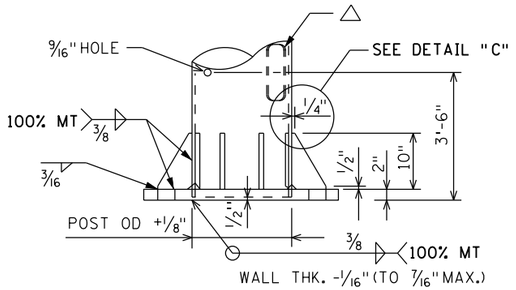
STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

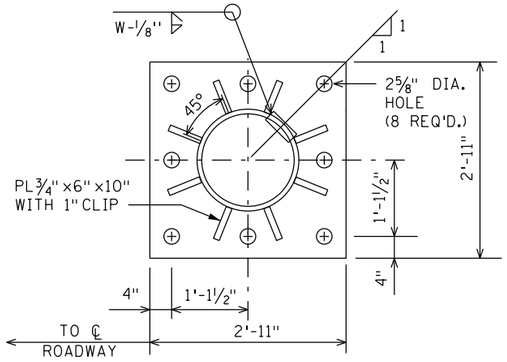
FOUNDATIONS AND ANCHOR RODS

DRAWING ST-3

STATE PROJ. NO. SHEET NO. OF SHEETS

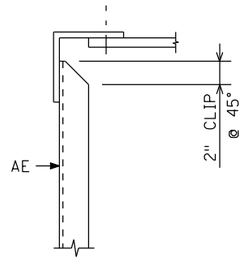
REV. 10-2-2013



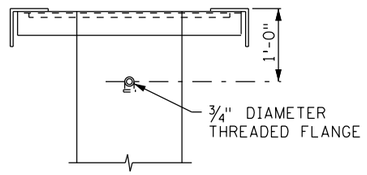


PLAN & ELEVATION - BASEPLATE TYPE A

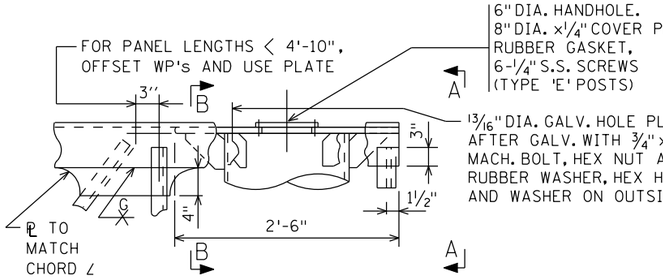
POST NO. 1 THRU 4

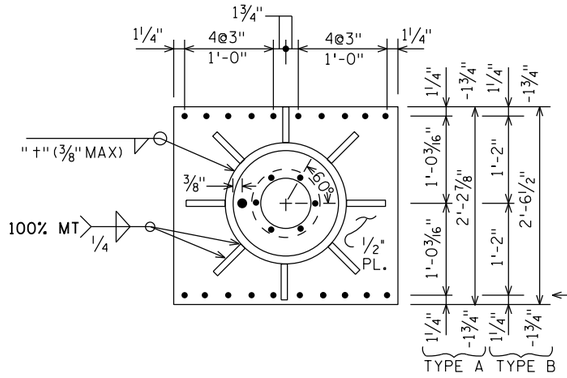


VIEW A-A

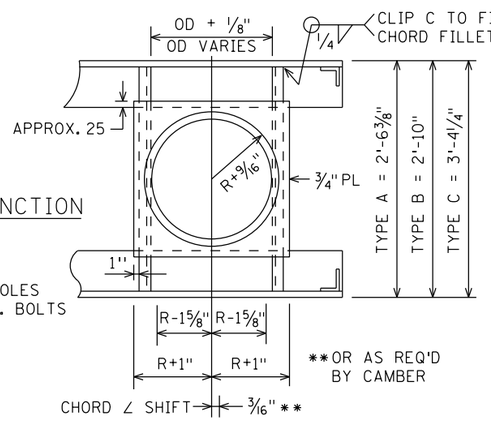


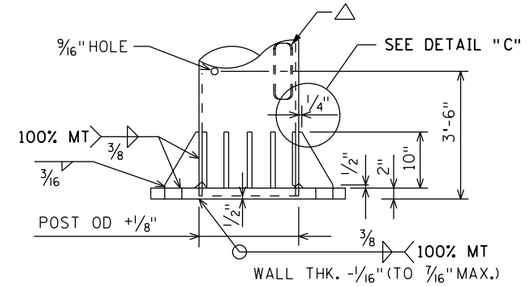
VIEW B-B
(TYPE 'E' POSTS)

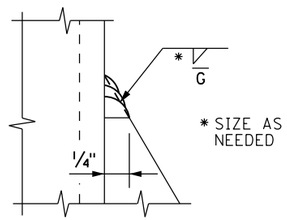




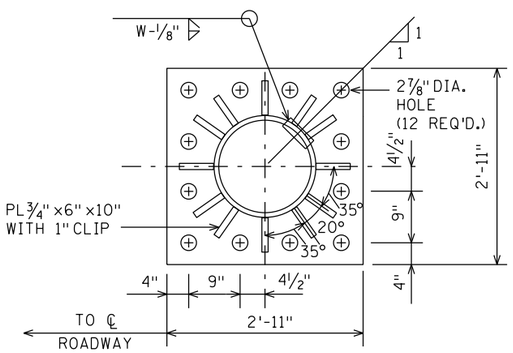
UPPER JUNCTION





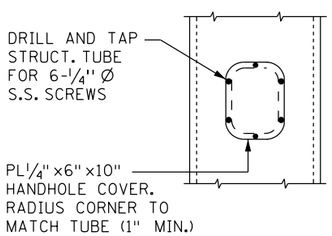


DETAIL "C"



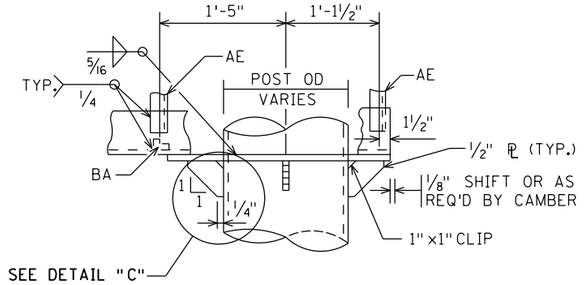
PLAN & ELEVATION - BASEPLATE TYPE B

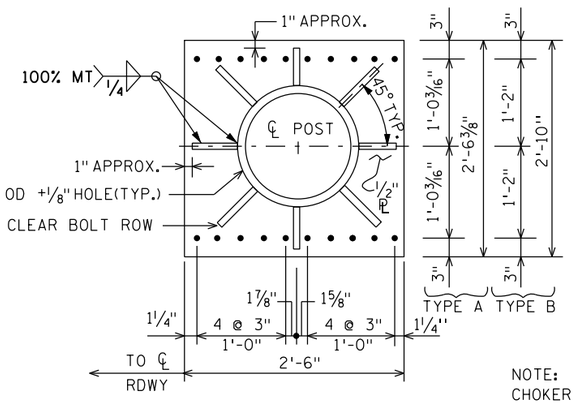
POST NO. 5 THRU 7



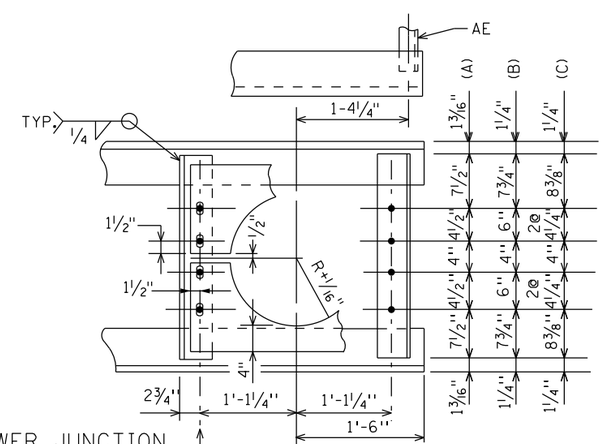
HANDHOLE & COVER PLATE DETAIL
(TYPE 'E' POSTS)

△ =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.





CANTILEVER TRUSS



LOWER JUNCTION

13/16" DIA. HOLES IN 4" x 4" x 1/4" ANGLES
13/16" x 1 1/4" SLOTS IN 1/2" CHOKER PLATES FOR 3/4" DIA. BOLTS.

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

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

PLOTTED/REVISED: 12/1/2015

DISTRICT *: METRO
PLOT NAME: ST4
PATH & FILENAME: IP_PWPdl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

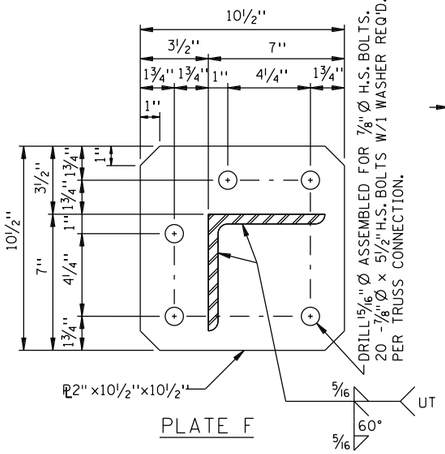
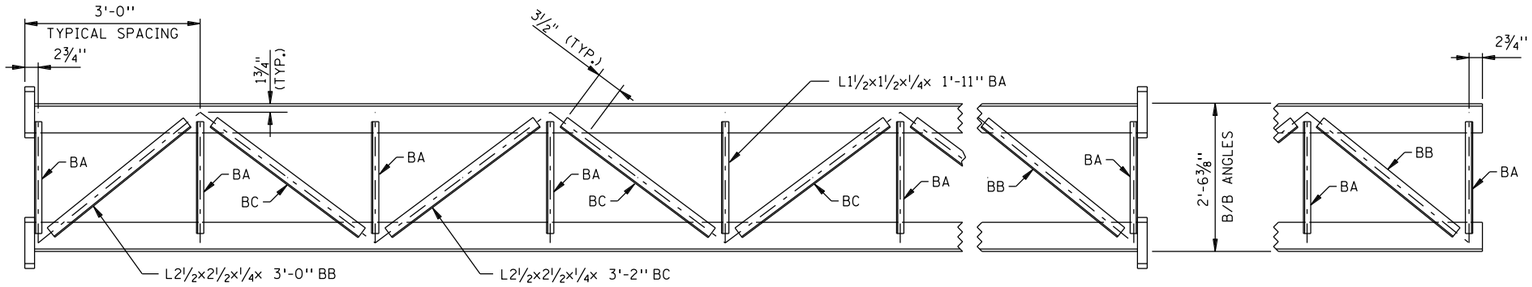


PLATE F



TOP VIEW

TOP VIEW

NOTES:

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVER TRUSSES AS NOTED BELOW.

CANTILEVER TRUSSES SHALL BE SUPPLIED AS A SINGLE UNIT WHENEVER POSSIBLE. WHEN CANTILEVER TRUSS LENGTH EXCEEDS 40'-0" CHORDS MAY BE SPLICED, AS SHOWN, IN THE END BRACING PANEL ONLY. CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, WITH 100% UT AND MT TESTING PER 2471.3M.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

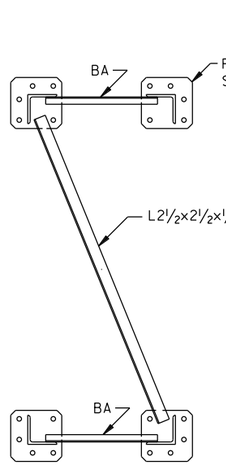
BOLTED SPLICES SHALL NOT BE LOCATED BEHIND CMS SIGNS.

PROVIDE 2- 1/16" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

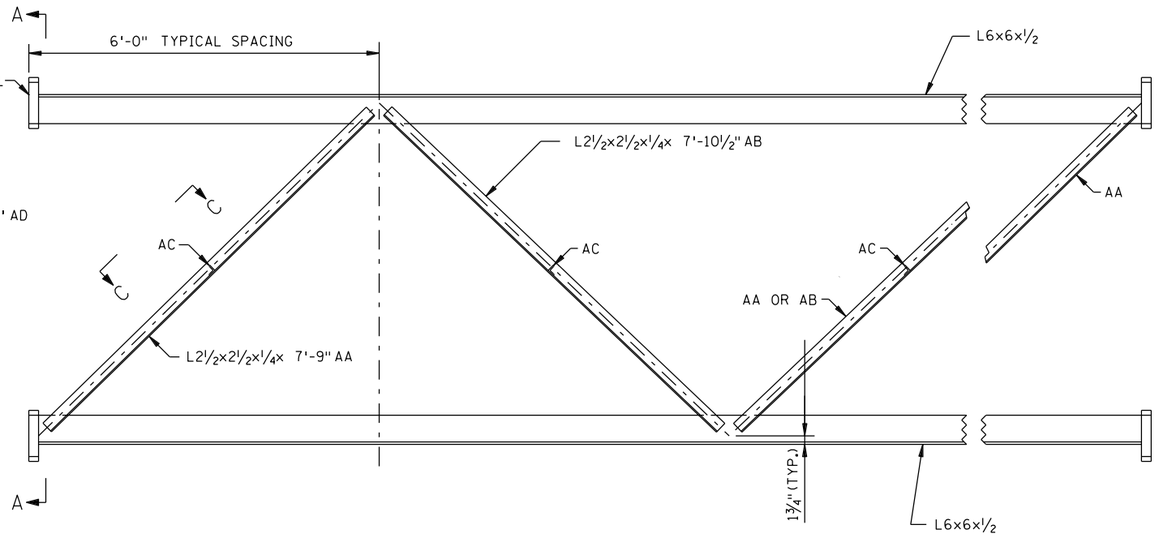
TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

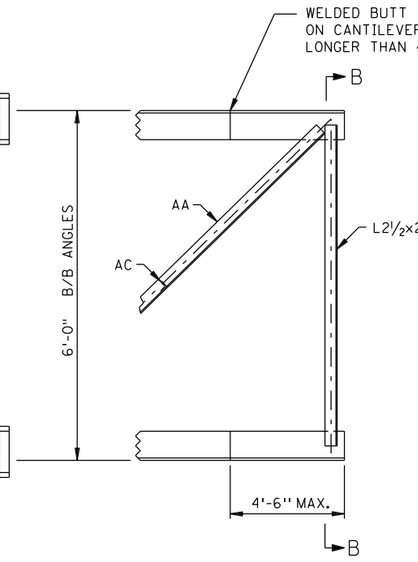
SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.



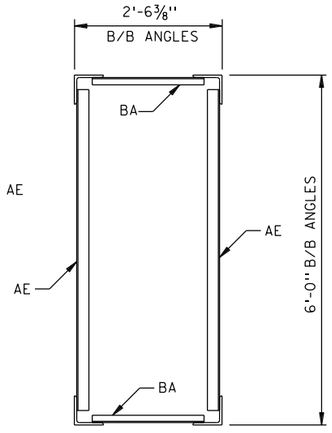
SECTION A-A



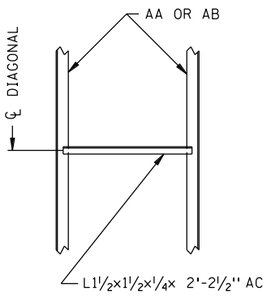
ELEVATION



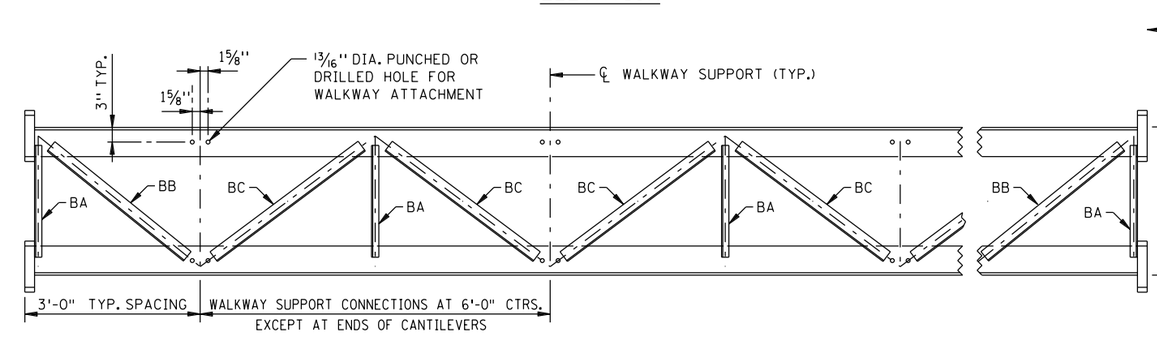
ELEVATION



SECTION B-B



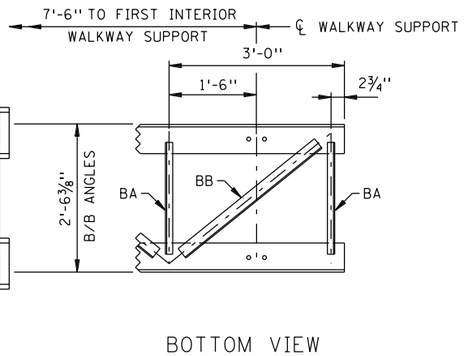
SECTION C-C



BOTTOM VIEW

SIMPLE SPAN

NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.



BOTTOM VIEW

CANTILEVER END

DETAILS SHOWN ARE FOR THE FREE ENDS OF THE CANTILEVER SPANS. ALL OTHER DETAILS FOR CANTILEVER TRUSSES SHALL BE AS SHOWN FOR THE SIMPLE SPANS.

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

SIGN TRUSS DETAILS
TRUSS TYPE A

DRAWING ST-5

STATE PROJ. NO. | SHEET NO. OF SHEETS

PLOTTED/REVISED: 12/1/2015

DISTRICT #: METRO
IPLOT NAME: ST5
PATH & FILENAME: IP_PWP:d1624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

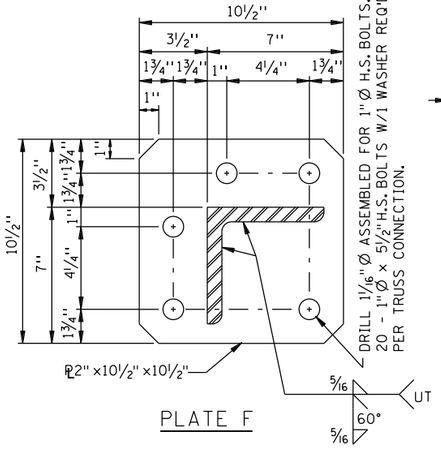
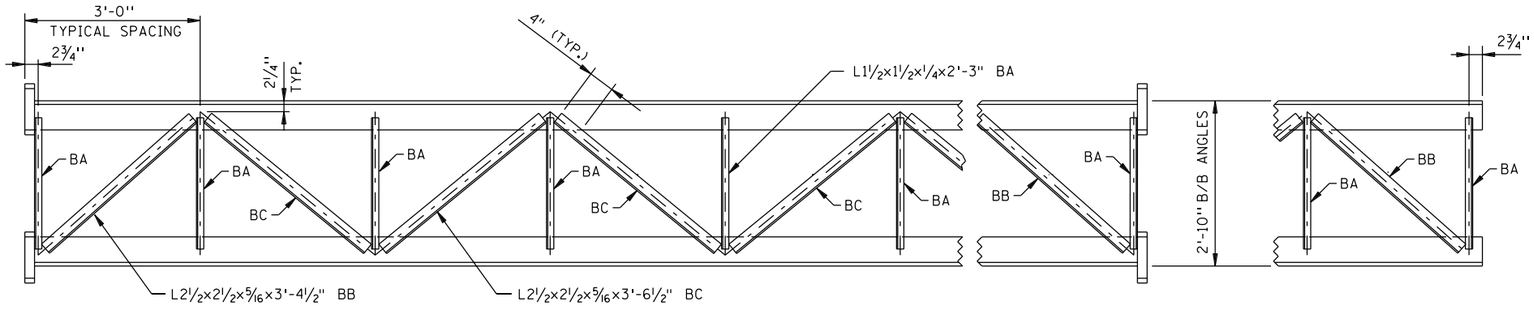


PLATE F



TOP VIEW

TOP VIEW

NOTES:

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVER TRUSSES AS NOTED BELOW.

CANTILEVER TRUSSES SHALL BE SUPPLIED AS A SINGLE UNIT WHENEVER POSSIBLE. WHEN CANTILEVER TRUSS LENGTH EXCEEDS 40'-0" CHORDS MAY BE SPLICED, AS SHOWN, IN THE END BRACING PANEL ONLY. CHORD SPLICE WELD SHALL BE COMPLETE PENETRATION, WITH 100% UT AND MT TESTING PER 2471.3M.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

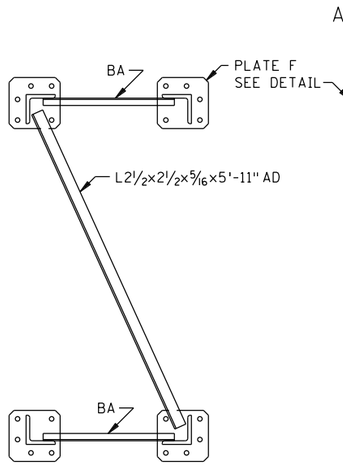
BOLTED SPLICES SHALL NOT BE LOCATED BEHIND CMS SIGNS.

PROVIDE 2- 1/16" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

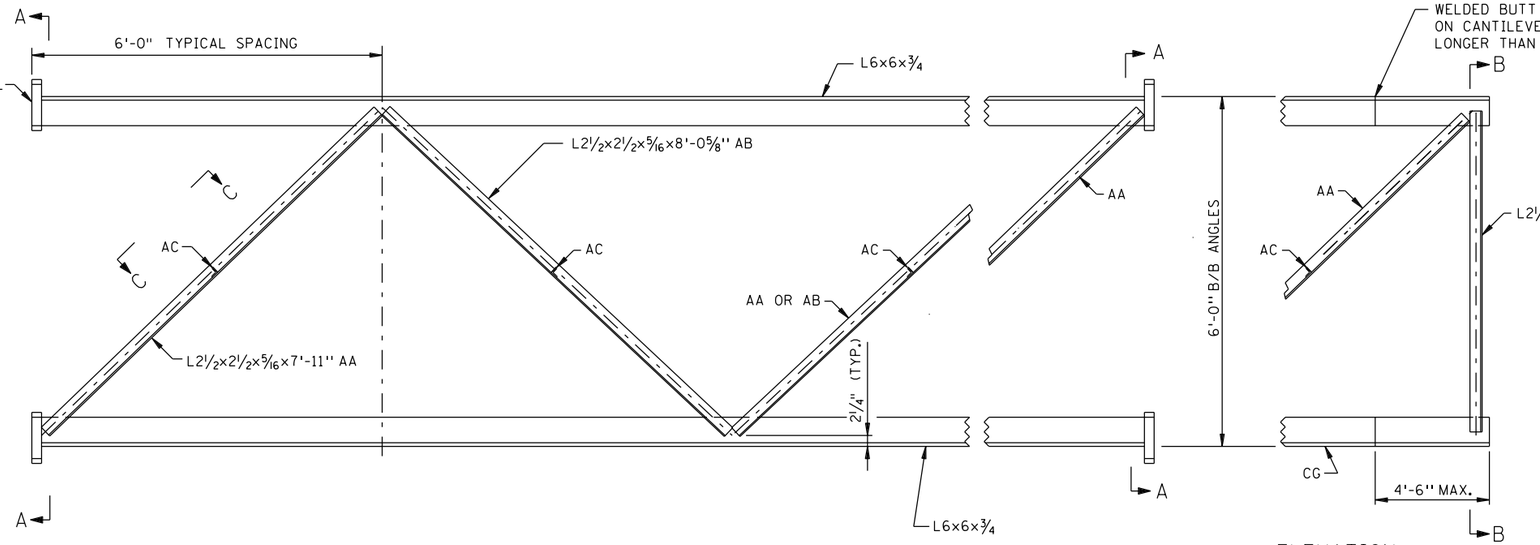
TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

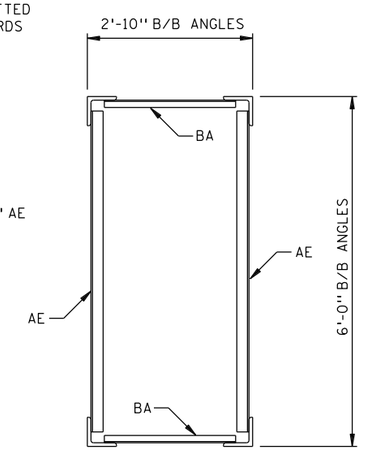


SECTION A-A

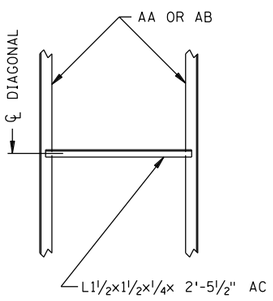


ELEVATION

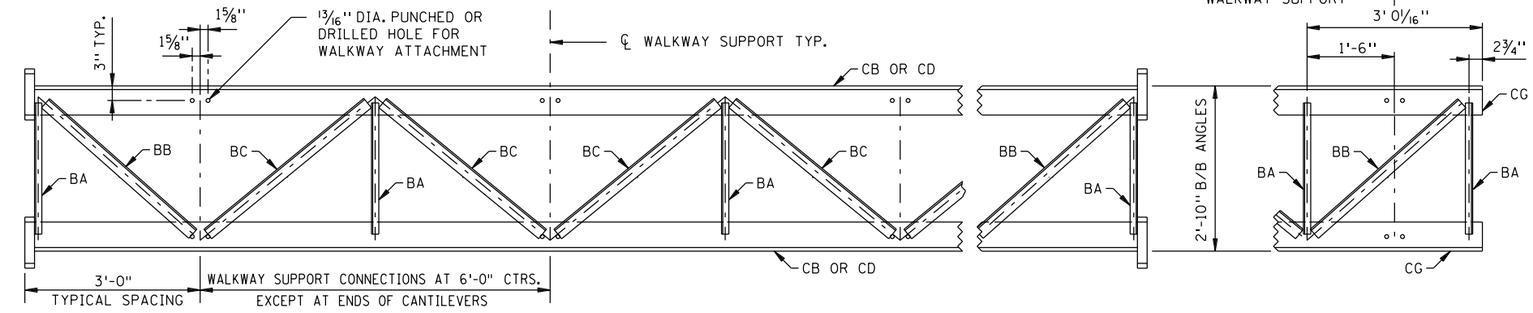
ELEVATION



SECTION B-B



SECTION C-C



BOTTOM VIEW

SIMPLE SPAN

NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.

BOTTOM VIEW

CANTILEVER END

DETAILS SHOWN ARE FOR THE FREE ENDS OF THE CANTILEVER SPANS. ALL OTHER DETAILS FOR CANTILEVER TRUSSES SHALL BE AS SHOWN FOR THE SIMPLE SPANS.

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

SIGN TRUSS DETAILS
TRUSS TYPE B

DRAWING ST-6

STATE PROJ. NO. SHEET NO. OF SHEETS

PLOTTED/REVISED: 12/1/2015

DISTRICT *: METRO
IPLOT NAME: ST6
PATH & FILENAME: IP_PWP:dl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

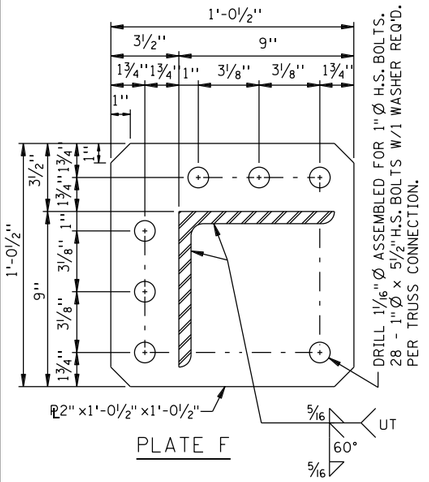
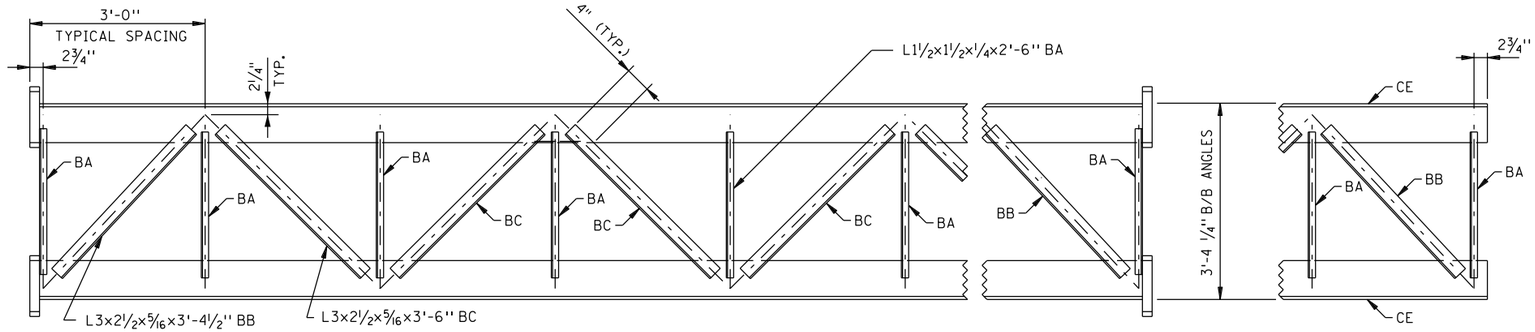


PLATE F



TOP VIEW

TOP VIEW

NOTES:

TRUSS SECTIONS SHALL BE MADE IN MULTIPLES OF 6'-0", EXCEPT THAT THE BRACING PANEL NEAREST EACH POST MAY VARY TO MAKE UP THE NEEDED SECTION LENGTH. WELDED CHORD SPLICES ARE NOT PERMITTED EXCEPT IN CANTILEVER TRUSSES AS NOTED BELOW.

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UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

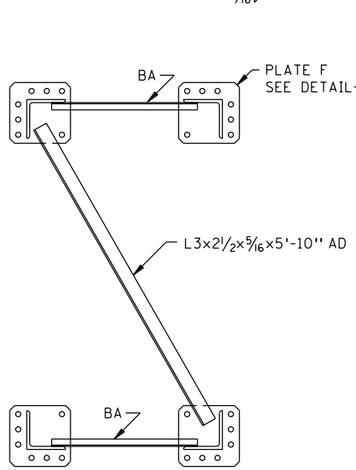
BOLTED SPLICES SHALL NOT BE LOCATED BEHIND CMS SIGNS.

PROVIDE 2- 1⁄16" BRASS, STAINLESS STEEL OR GALVANIZED STEEL SHIMS AT EACH FLANGE TO BRING TRUSS INTO CORRECT CAMBER AND ALIGNMENT.

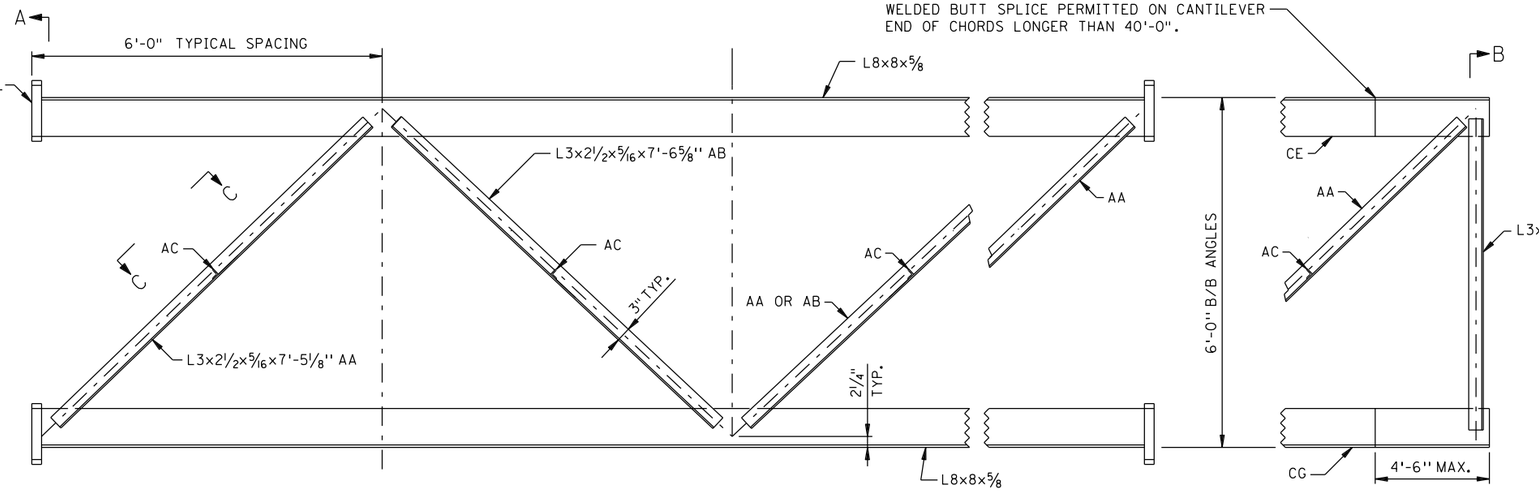
TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE DRAWING ST-4 FOR POST CONNECTION DETAILS.

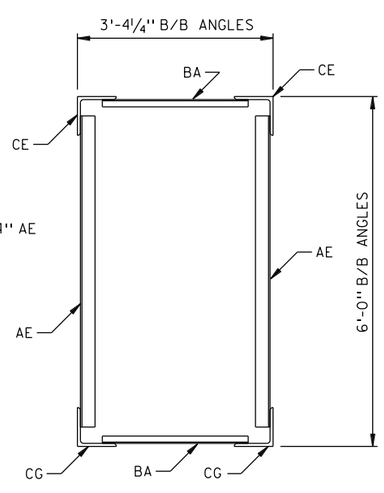


SECTION A-A

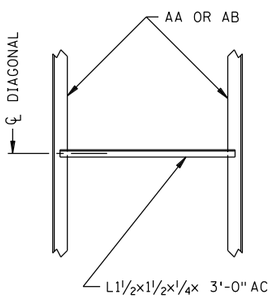


ELEVATION

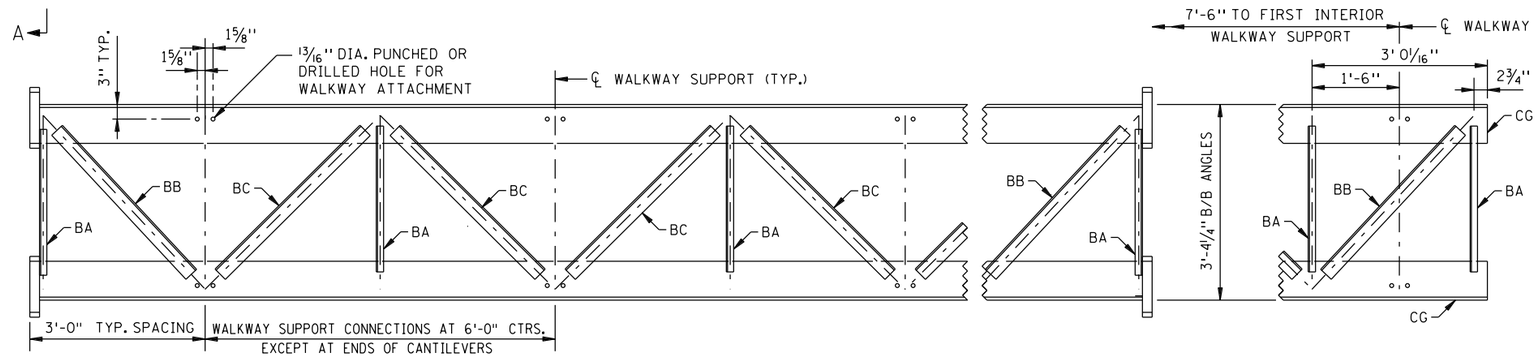
ELEVATION



SECTION B-B



SECTION C-C



BOTTOM VIEW

SIMPLE SPAN

NOTE:
THE BOTTOM VIEW IS DETAILED TO PROVIDE FOR WALKWAY ATTACHMENT. WHERE THE WALKWAY IS OMITTED, PROVIDE STRUT BA AS INDICATED IN THE TOP VIEW.

BOTTOM VIEW

CANTILEVER END

DETAILS SHOWN ARE FOR THE FREE ENDS OF THE CANTILEVER SPANS. ALL OTHER DETAILS FOR CANTILEVER TRUSSES SHALL BE AS SHOWN FOR THE SIMPLE SPANS.

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

SIGN TRUSS DETAILS
TRUSS TYPE C

DRAWING ST-7

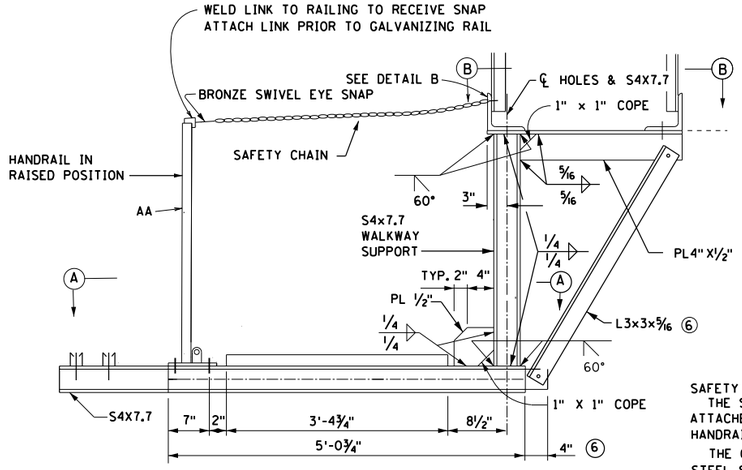
STATE PROJ. NO. SHEET NO. OF SHEETS

PLOTTED/REVISED: 12/1/2015

DISTRICT *: METRO
IPLOT NAME: ST7
PATH & FILENAME: IP_PWP-dl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

PLOTTED/REVISED: 12/1/2015

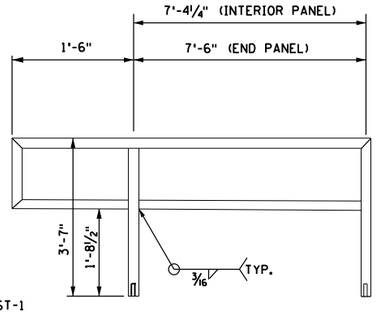


TYPICAL WALKWAY DETAILS

SIGN HEIGHT	x ①
6'-6"	1'-0" ⑤
7'-0"	1'-3"
7'-6"	1'-6"
8'-0"	1'-9" ③
8'-6"	2'-0"
9'-0"	2'-3" ④
9'-6"	2'-6"
10'-0"	2'-9"
10'-6"	3'-0"
11'-0"	3'-3"
11'-6"	3'-6"
12'-0"	3'-9"
12'-6"	4'-0"
13'-0"	4'-3"

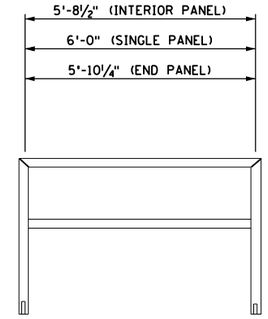
① SEE NOTE 1 ON DRAWING ST-1

SAFETY CHAIN NOTES:
THE SAFETY CHAIN SHALL BE ATTACHED AT EACH END OF THE HANDRAIL.
THE CHAIN SHALL BE 3/16" STAINLESS STEEL STRAIGHT LENGTH CHAIN WITH APPROXIMATELY 12 LINKS PER FOOT.
THE CHAIN AND ITS CONNECTIONS SHALL HAVE A MINIMUM RATED WORK LOAD OF 700 LBS.



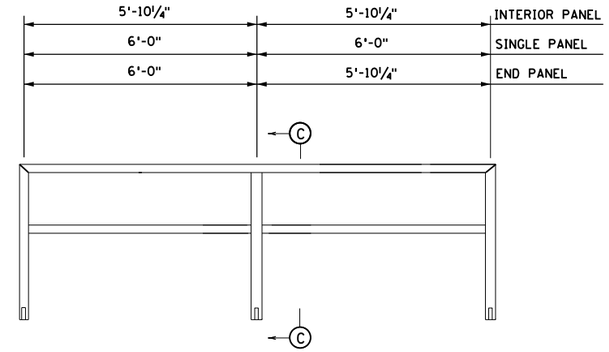
STRUCTURAL TUBING 1 1/2 X 1 1/2 X 3/16 (TYP.)

RAILING ELEVATION AT END OF CANTILEVER



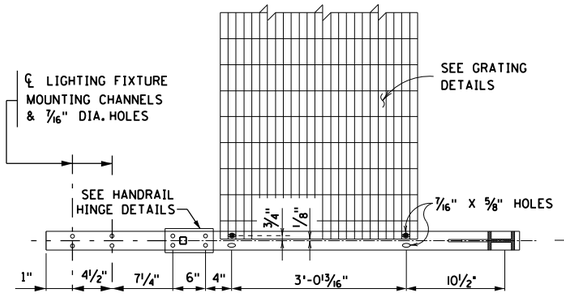
STRUCTURAL TUBING 1 1/2 X 1 1/2 X 3/16 (TYP.)

RAILING ELEVATION 6' PANEL

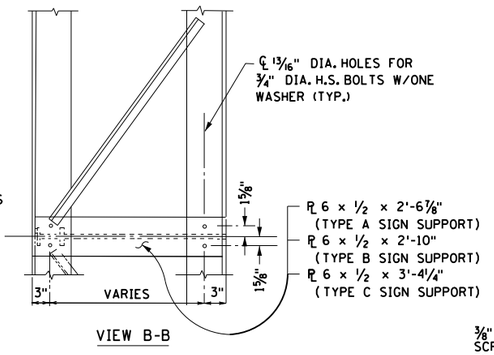


STRUCTURAL TUBING 1 1/2 X 1 1/2 X 3/16 (TYP.)

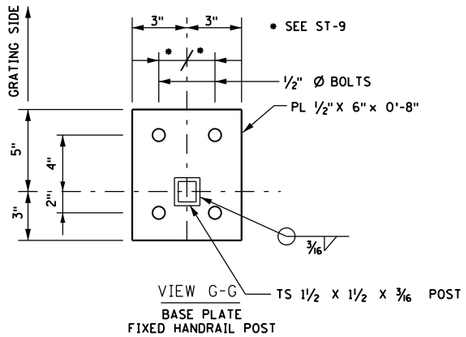
RAILING ELEVATION 12' PANEL



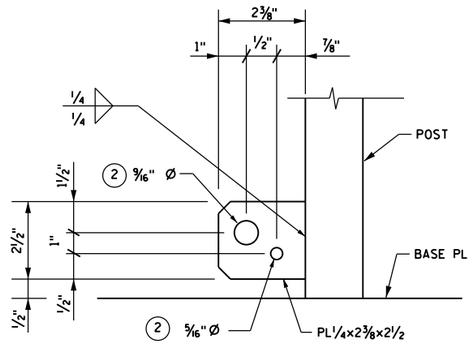
VIEW A-A



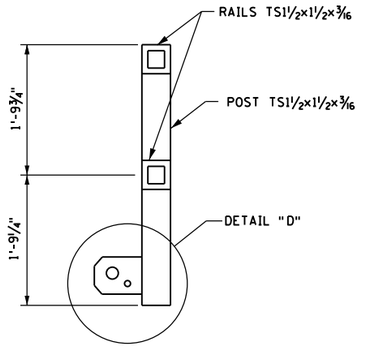
VIEW B-B



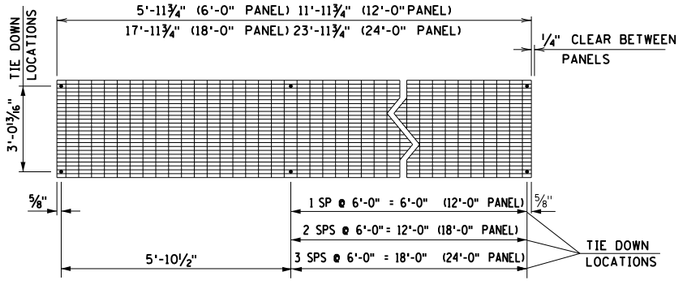
VIEW G-G
BASE PLATE
FIXED HANDRAIL POST



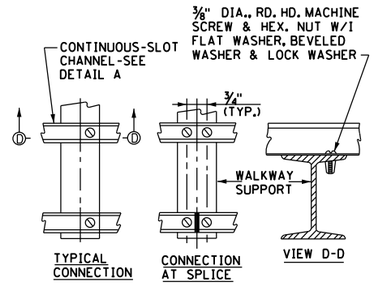
DETAIL "D"



VIEW C-C
FOLDING HANDRAIL POST

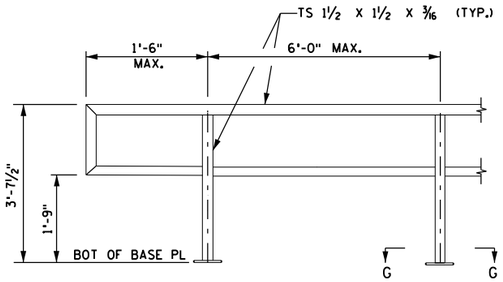


GRATING PLAN - 6'-0", 12'-0", 18'-0", OR 24'-0" PANELS

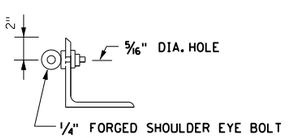


DETAIL A

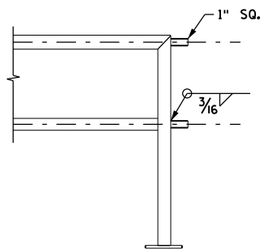
FIXTURE MOUNTING DETAILS



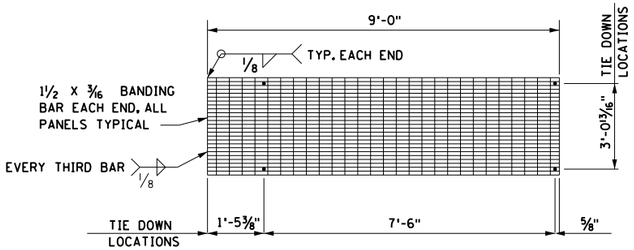
FIXED HANDRAIL FOR OH SIGN



DETAIL B



FIXED RAIL SPLICE DETAIL



GRATING PLAN - AT CANTILEVERS ONLY

NOTE:
ALL GRATING SHALL BE 3'-4 3/4" WIDE AND SHALL BE 1 1/2" x 3/16" SERRATED BEARING BARS AT 1 3/16" CENTERS WITH CROSS BARS AT 4" CENTERS. ATTACH GRATING AT EACH TIE DOWN LOCATION WITH A STAINLESS STEEL SADDLE ANCHOR DESIGNED FOR THIS SPECIFIC USE.

FIXTURE MOUNTING CHANNEL NOTES:
FIXTURE MOUNTING CHANNELS SHALL EXTEND THE FULL LENGTH OF THE WALKWAY AND SHALL BE CONTINUOUS OVER AS MANY WALKWAY SUPPORT SPANS AS PRACTICABLE CONSISTENT WITH EASE OF HANDLING AND ASSEMBLING.
JOINTS IN THE CHANNELS SHALL BE CENTERED ON THE WALKWAY SUPPORTS WITH A MAX 1/8" GAP BETWEEN SECTIONS.
CHANNELS SHALL HAVE A 1/4" DRAIN HOLE IN EACH WALKWAY SUPPORT SPAN.

GENERAL NOTES:

WALKWAY DETAILS SHOWN ARE TYPICAL FOR CANTILEVER AND SIMPLE SPAN SIGNS
WHEN THE FORMAT SHEET INDICATES THAT THE WALKWAY IS CONTINUOUS FROM ONE SPAN TO ANOTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SPECIAL LENGTH GRATING AND HANDRAIL PANELS REQUIRED.
FOLDING HANDRAIL PANELS ARE TO BE CONTINUOUS OVER A MAX. OF TWO WALKWAY SUPPORT SPANS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LENGTH OF GRATING AND HANDRAIL PANELS REQUIRED FOR BRIDGE MOUNTED SIGNS AND CANTILEVERS WHERE THE SPECIFIED LENGTH DOES NOT AGREE WITH THE DETAILS.
PROVIDE ADEQUATE WEEP HOLES FOR HOT-DIP GALVANIZING.

SPECIFIC NOTES:

① SEE NOTE 1 ON DRAWING ST-1
② REAM RAILING SUPPORT BOLT AND LOCKING PIN HOLES AFTER GALVANIZING TO ENSURE BOLT AND PIN FIT.
③ LED CMS
④ DRUM CMS
⑤ NEW LED CMS
⑥ USE FOR SIGN HEIGHTS OF 11'-0" OR GREATER. EXTEND S4x7.7 BY 4" AND COPE FLANGES.

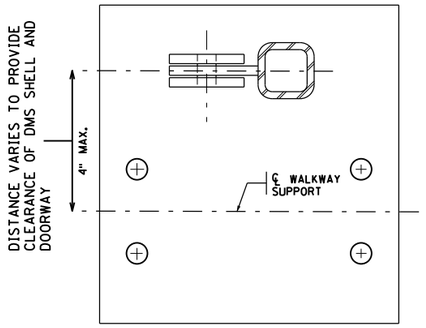
STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

WALKWAY DETAILS

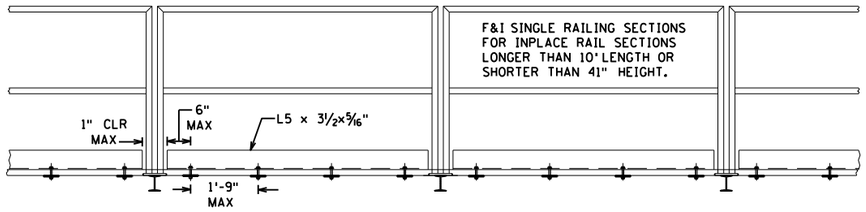
DRAWING ST-8

STATE PROJ. NO. SHEET NO. OF SHEETS

DISTRICT *: METRO
IPLOT NAME: ST8
PATH & FILENAME: IP_PWPdl624788\ST DRAWINGS_STD*.dgn
REV. 10-2-2013

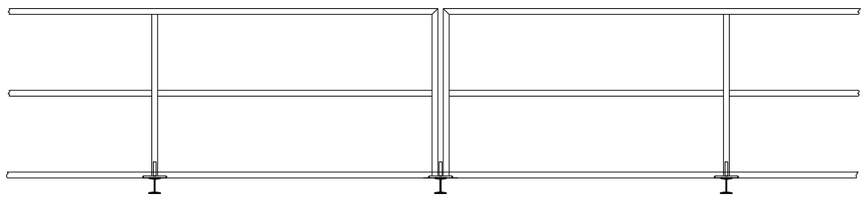


BASEPLATE AND HINGE FOR FOLDING RAIL END POST ADJACENT TO DMS (AS NECESSARY)

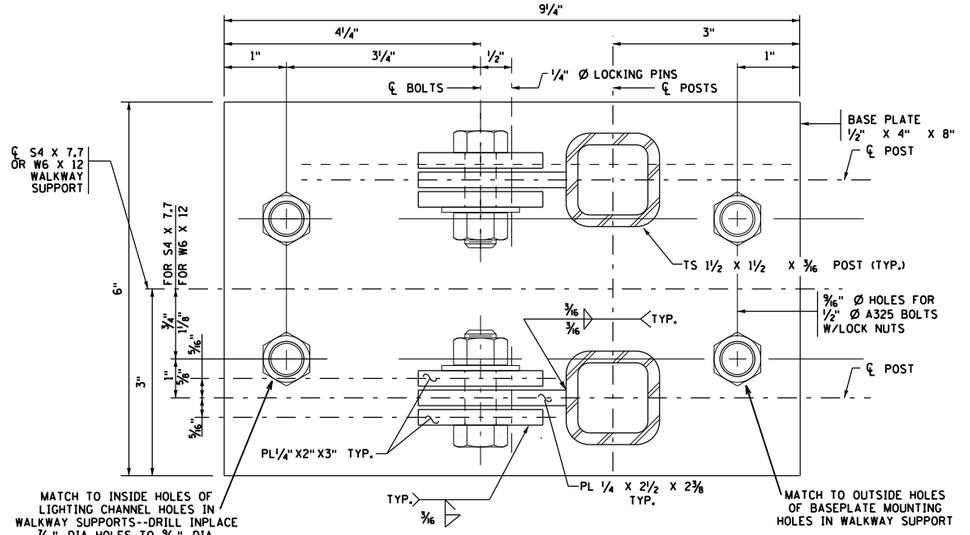


PROPOSED FOLDING RAIL SECTION

NOTE: UPGRADING OF RAIL SECTIONS TO SQUARE TUBING STYLE AND BREAKING LONG RAIL SECTIONS INTO SHORTER RAIL SECTIONS WILL REQUIRE REPLACEMENT OF RAILING MOUNTING BASE PLATE



INPLACE RAIL SECTION



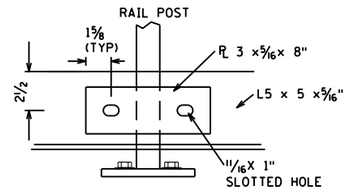
BASE PLATE & HINGE ASSEMBLY FOR FOLDING HANDRAIL AT WIDEN WALKWAY LOCATIONS

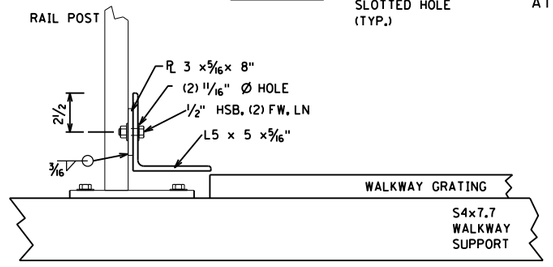
GENERAL NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING AND VERIFYING THE INDIVIDUAL RAIL, TOE ANGLE AND CURB ANGLE LENGTHS REQUIRED AT EACH SITE FOR INPLACE STRUCTURES PRIOR TO MANUFACTURE.

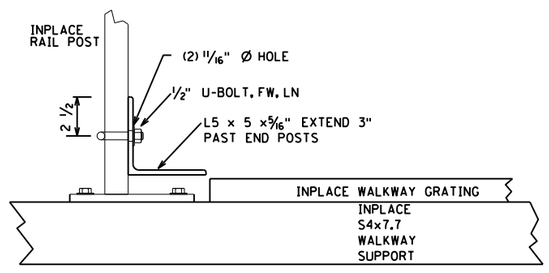
REAM F&I RAILING SUPPORT BOLT AND LOCKING PIN HOLES AFTER GALVANIZING TO ENSURE BOLT AND PIN FIT. VERIFY FIT AND REAM AS NECESSARY IN FIELD ALL RAILING SUPPORT BOLT AND LOCKING PIN HOLES ON INPLACE RAILING TO REMAIN TO ENSURE BOLT AND PIN FIT.

VERIFY & F&I AS NECESSARY ¾" DIA. DROP-FORGED SHOULDER EYE BOLT W/LOCK WASHER & HEX NUT AT SIGN TRUSS LOCATIONS. (HARNESS TIE OFF POINT)

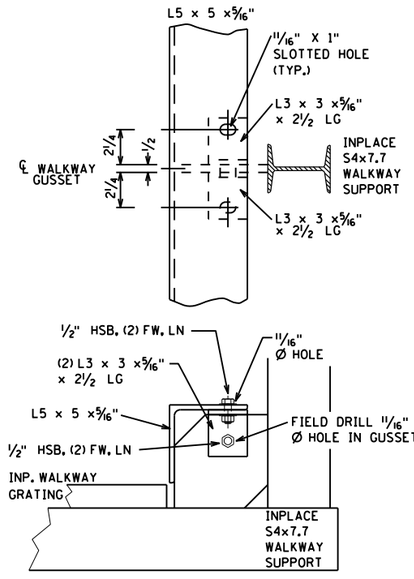




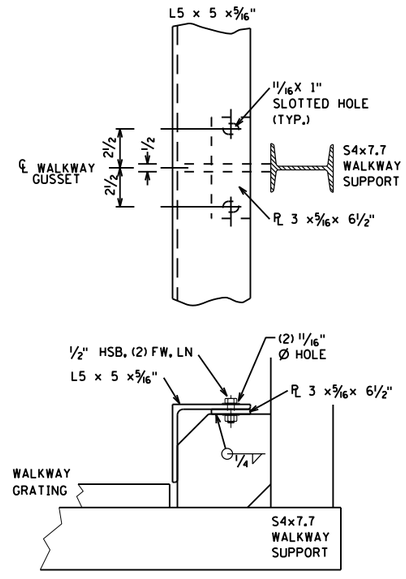
OH SIGN-FIXED RAILING TOE ANGLE-NEW CONSTRUCTION



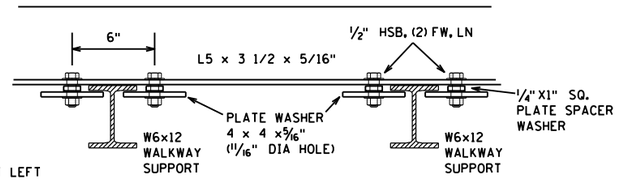
OH SIGN-FIXED RAILING TOE ANGLE-RETROFIT

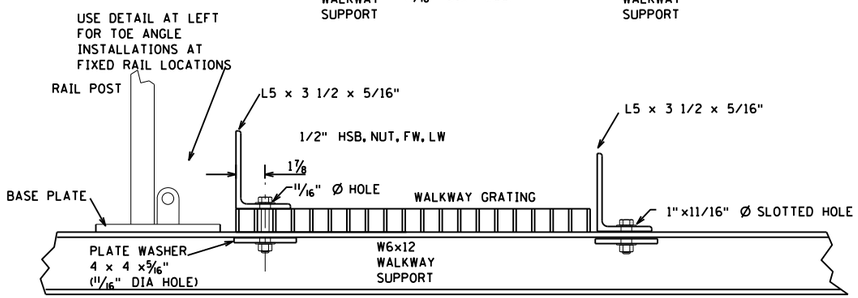


OH SIGN TRUSS SIDE CURB ANGLE-RETROFIT

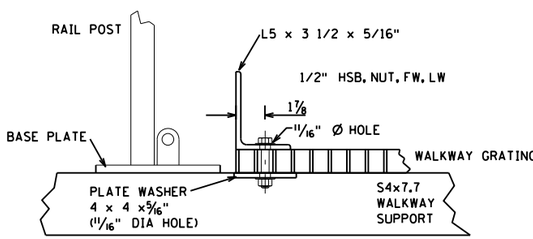


OH SIGN TRUSS SIDE CURB ANGLE-NEW CONST.





OH SIGN BRIDGE MOUNT-BRIDGE SIDE TOE ANGLE (NEW CONST. OR RETROFIT)



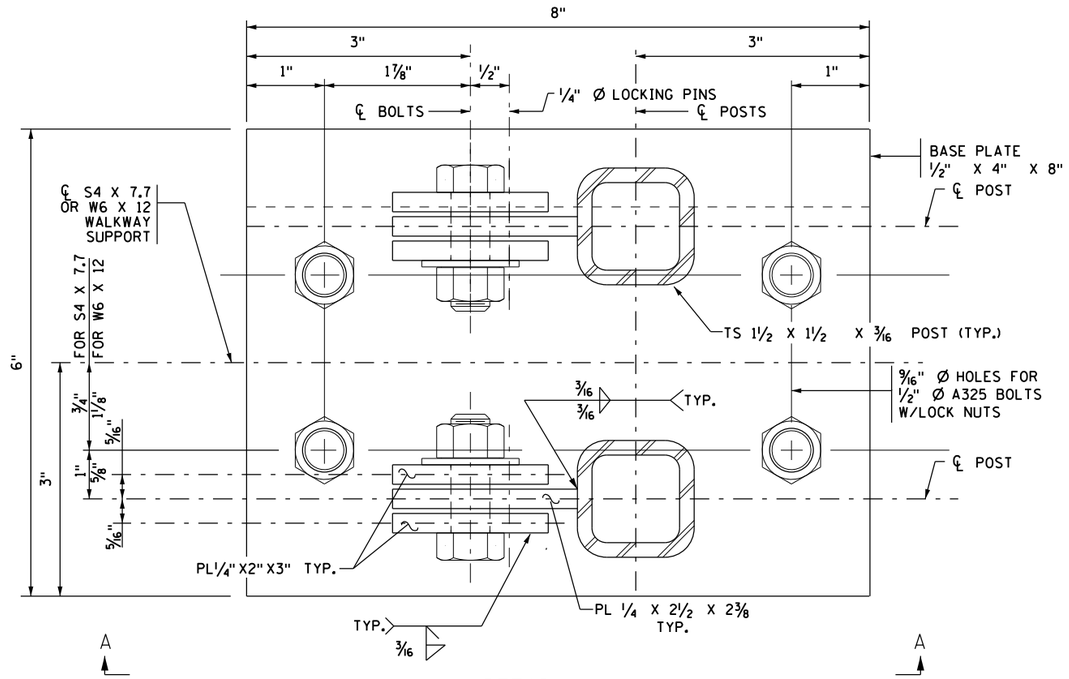
OH SIGN TRUSS-FOLDING RAIL TOE ANGLE (NEW CONST. OR RETROFIT)

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

WALKWAY TOE ANGLES-
NEW CONST. & RETROFIT

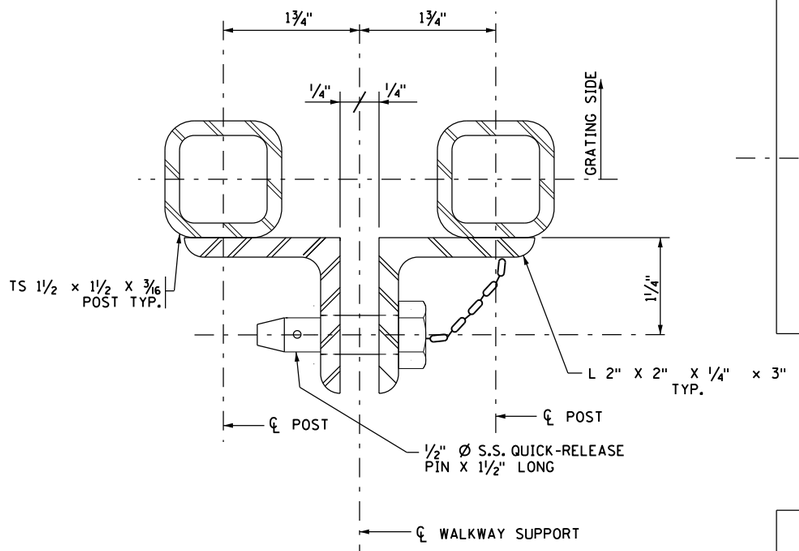
DRAWING ST-8A

STATE PROJ. NO. SHEET NO. OF SHEETS



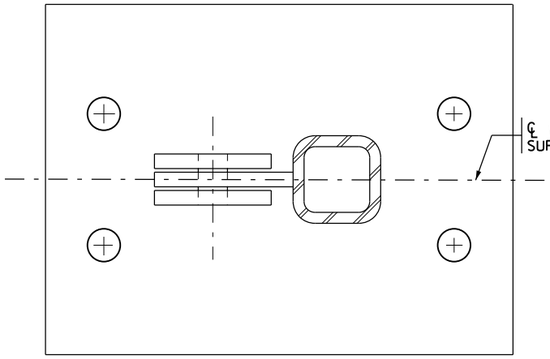
DETAIL 1

BASE PLATE & HINGE ASSEMBLY
FOR FOLDING HANDRAIL

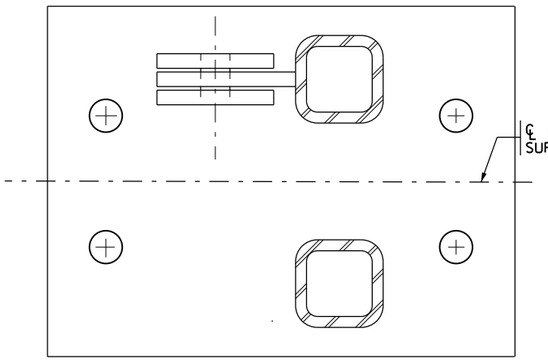


TOP RAIL JOINT

FOLDING HANDRAILS

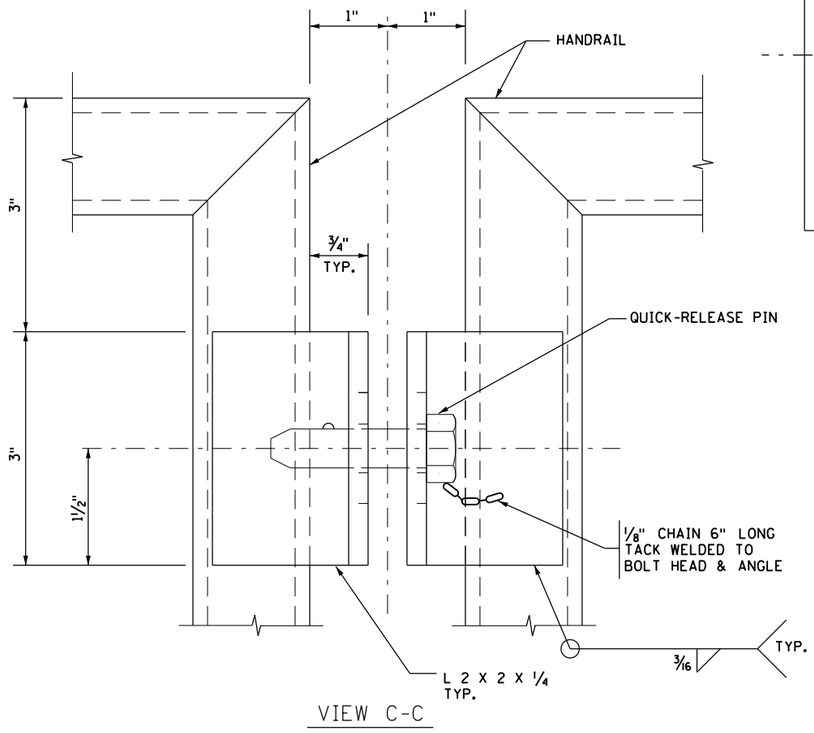


BASEPLATE AND HINGE FOR
FOLDING RAIL END POST

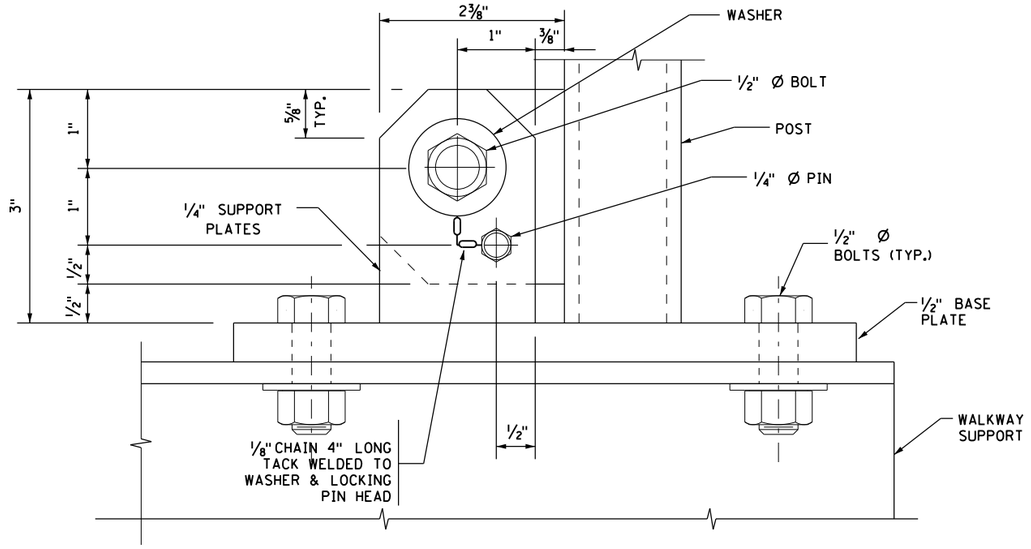


BASEPLATE AND HINGE FOR
FIXED TO FOLDING TRANSITION

(MAY BE OPPOSITE HAND)



VIEW C-C



VIEW A-A

BASE PL. & HINGE FOR FOLDING HANDRAIL

STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

FOLDING HANDRAIL

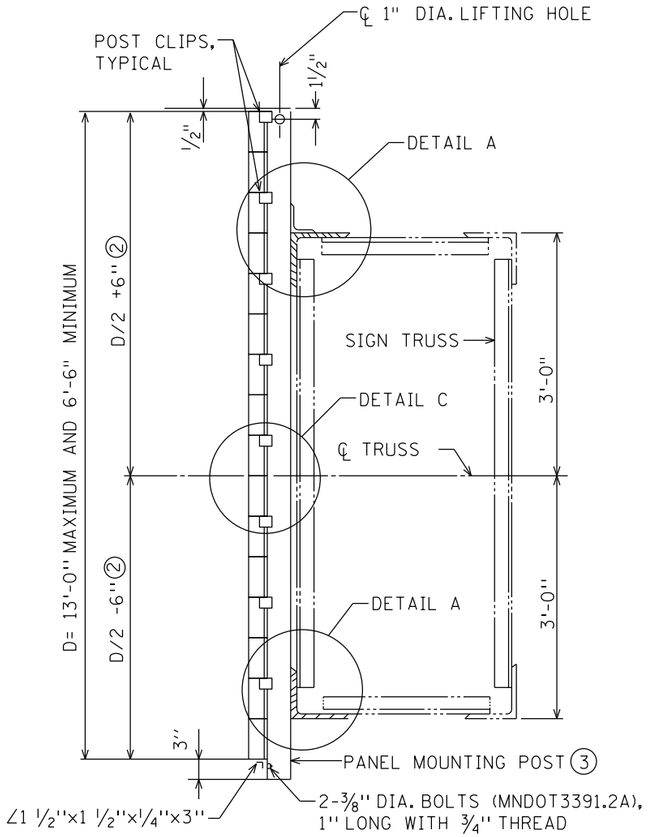
DRAWING ST-9

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

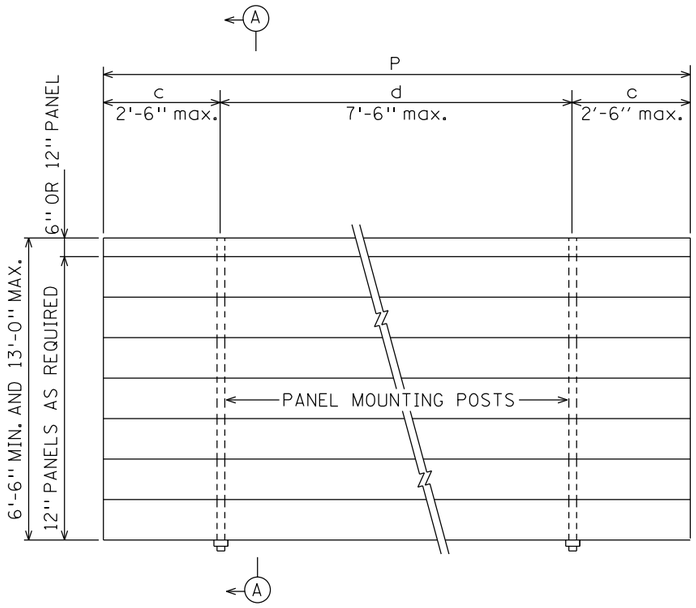
PLOTTED/REVISED: 12/1/2015

DISTRICT *: METRO
IPLOT NAME: ST9
PATH & FILENAME: IP_PWP:dl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

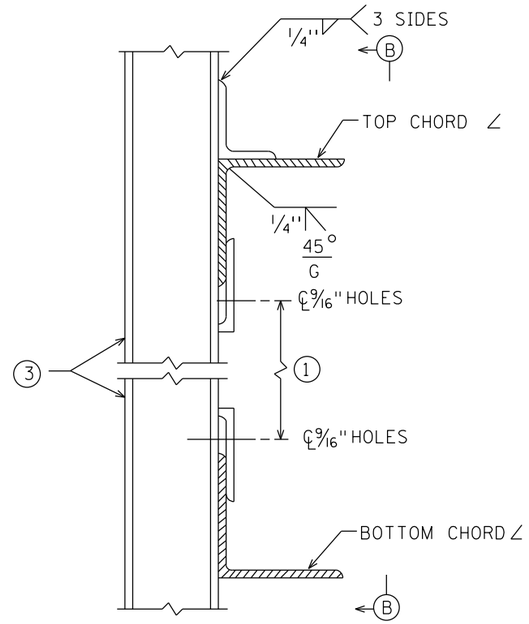


SECTION A-A

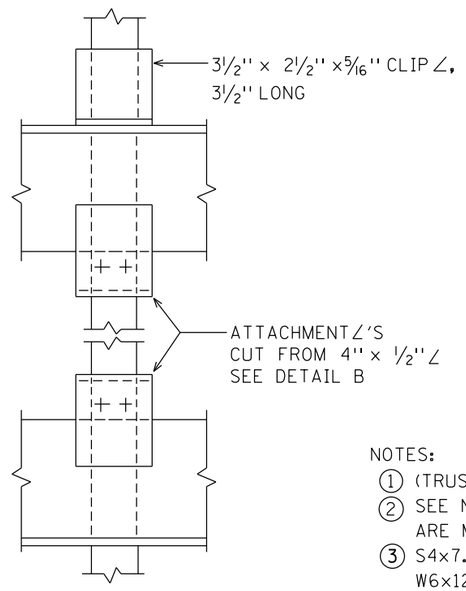


PANEL MOUNTING POST	
NO. OF POSTS	
2	P=144" OR LESS, c=.207P, d=.586P
3	P=150" THRU 204", c=.145P, d=.355P
4	P=210" THRU 276", c=.107P, d=.262P
5	P=282" THRU 348", c=.084P, d=.208P
6	P=354" THRU 420", c=.070P, d=.172P
7	P=426" THRU 492", c=.059P, d=.147P
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.	

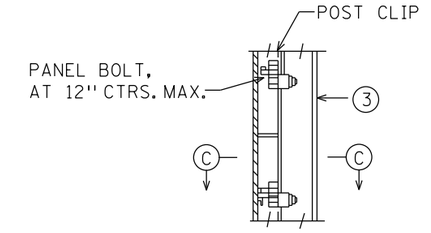
SIGN PANEL ELEVATION



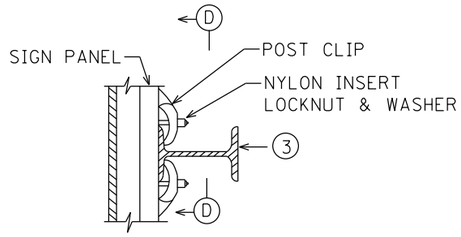
DETAIL A



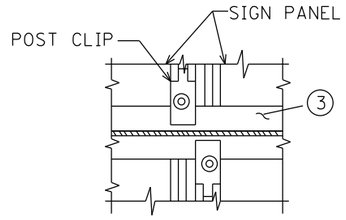
VIEW B-B



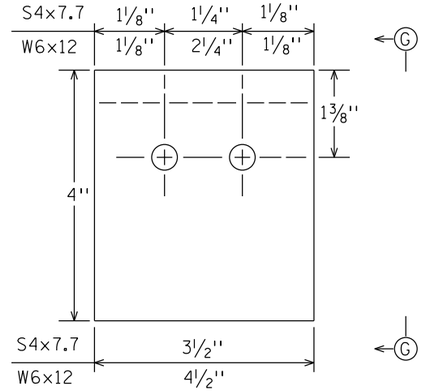
DETAIL C



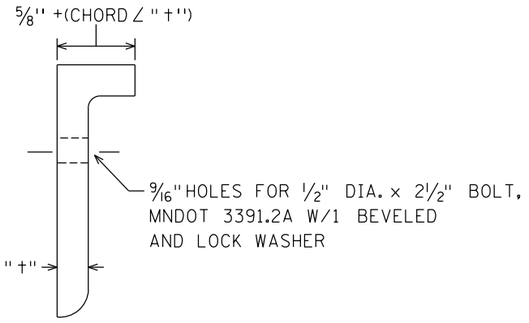
SECTION C



SECTION D-D



DETAIL B



VIEW G-G

NOTES:
1. (TRUSS DEPTH)-(TOP & BOTTOM CHORD ∠ LEGS)-1¼"
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

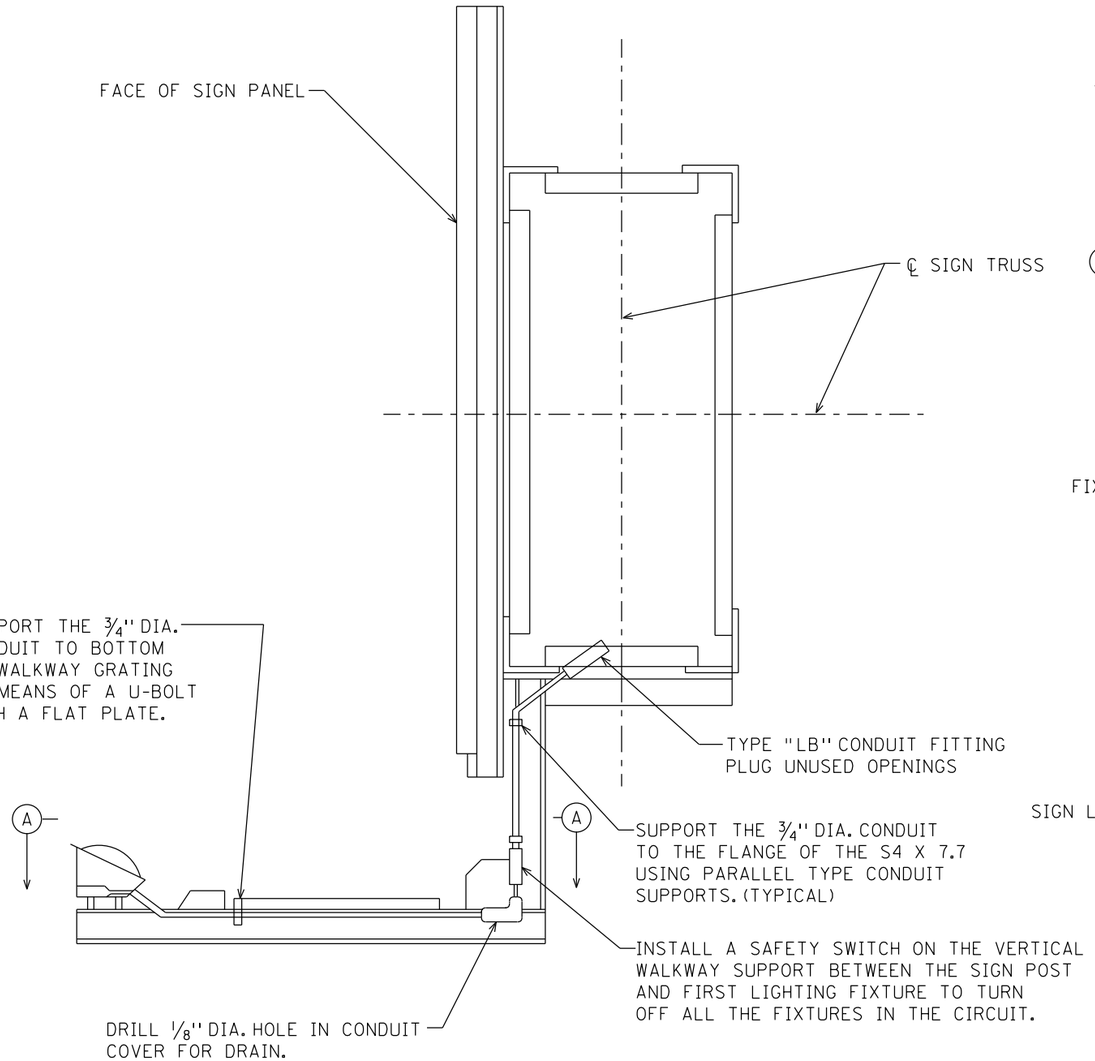
DRAWING ST-10

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

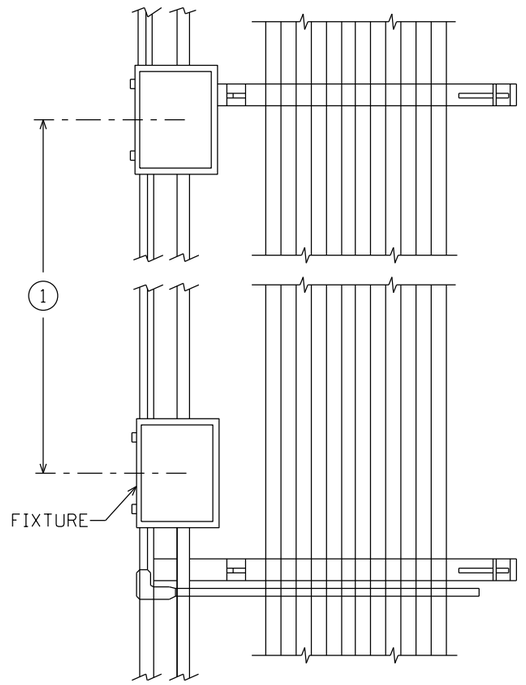
REV. 10-2-2013

PLOTTED/REVISED: 12/1/2015

MOUNTING DETAILS FOR SIGN LIGHTING



SIDE VIEW

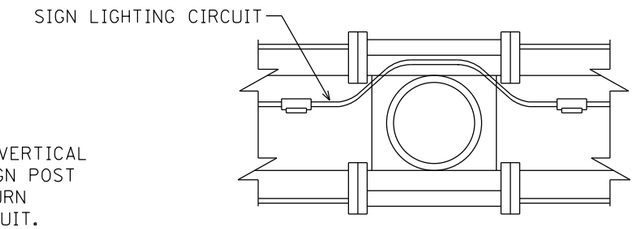


(1) SEE FIXTURE SPACING CHART

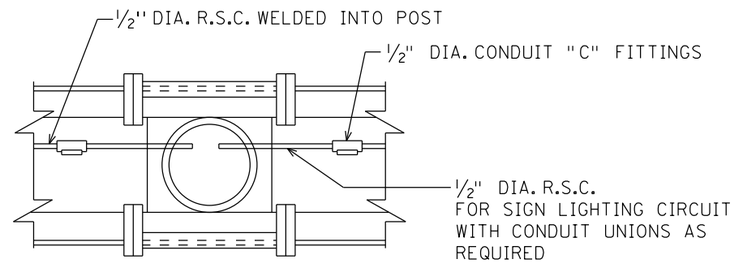
SECTION A-A

FIXTURE SPACING CHART		
W (PANEL WIDTH)	NUMBER OF FIXTURES	FIXTURE SPACING
9.5′ OR LESS	1	
10.0′ TO 16.5′	2	W/2
17.0′ TO 24.5′	3	W/3
25.0′ TO 32.5′	4	W/4
33.0′ TO 40.5′	5	W/5
41.0′ TO 48.5′	6	W/6
49.0′ TO 56.5′	7	W/7
57.0′ TO 64.5′	8	W/8
65.0′ TO 72.5′	9	W/9
73.0′ TO 80.0′	10	W/10

FIXTURES SHALL BE SYMMETRICALLY PLACED WITH RESPECT TO THE SIGN PANEL. SIGN PANELS WHICH ABUT EACH OTHER SHALL BE TREATED AS A SINGLE SIGN PANEL FOR LIGHTING FIXTURE SPACING.



POST WITHOUT HANDHOLES



POST WITH HANDHOLES

ELECTRICAL SERVICE CONNECTION FROM POST TO TRUSS

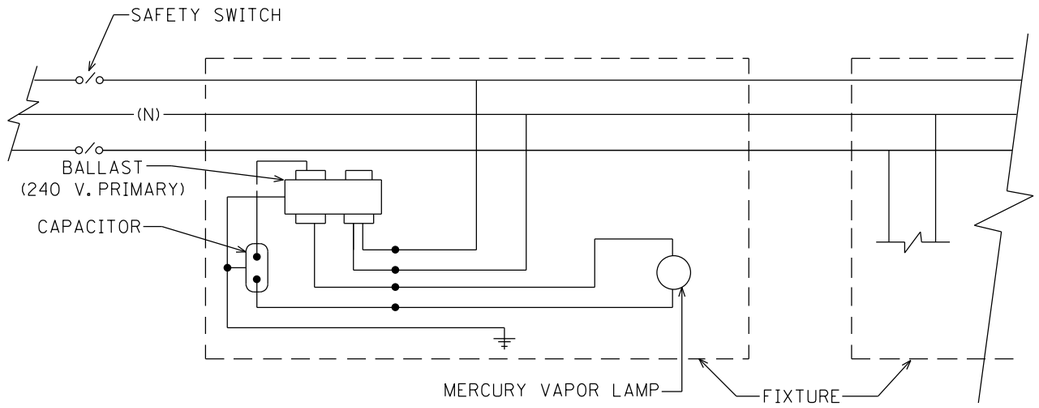
NOTES:
1. SEE SPECIAL PROVISIONS FOR SIGN LIGHTING FIXTURE REQUIREMENTS.
2. HIGH IMPACT RESISTANT POLYCARBONATE SHIELD SHALL BE PROVIDED FOR ALL SIGN LIGHTING FIXTURES INSTALLED ON TYPE OH SIGNS (BRIDGE MOUNTED).
3. WIRING BETWEEN THE SIGN POST AND THE SAFETY SWITCH SHALL BE RUN IN ¾" R.S.C.

DISTRICT *: METRO
IPLOT NAME: ST11
PATH & FILENAME: I:\P_PW\pd1624788\ST DRAWINGS_STD*.dgn
REV. 10-2-2013

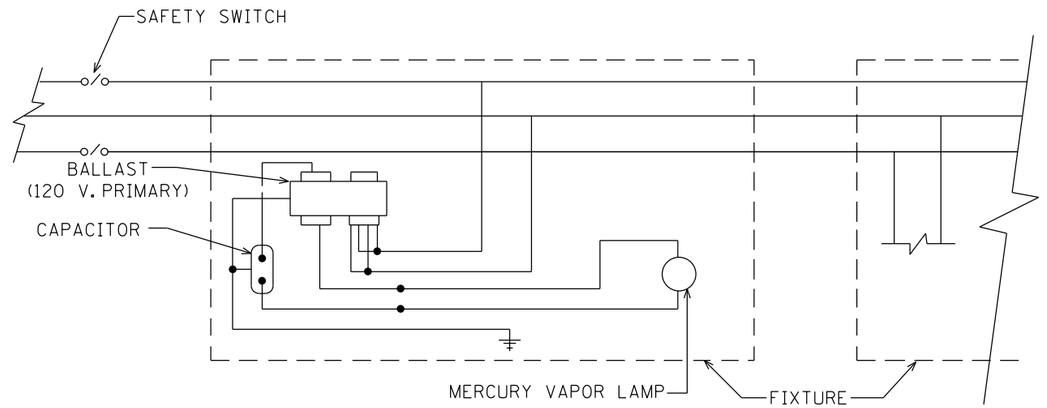
STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

ELECTRICAL DETAILS

DRAWING ST-11

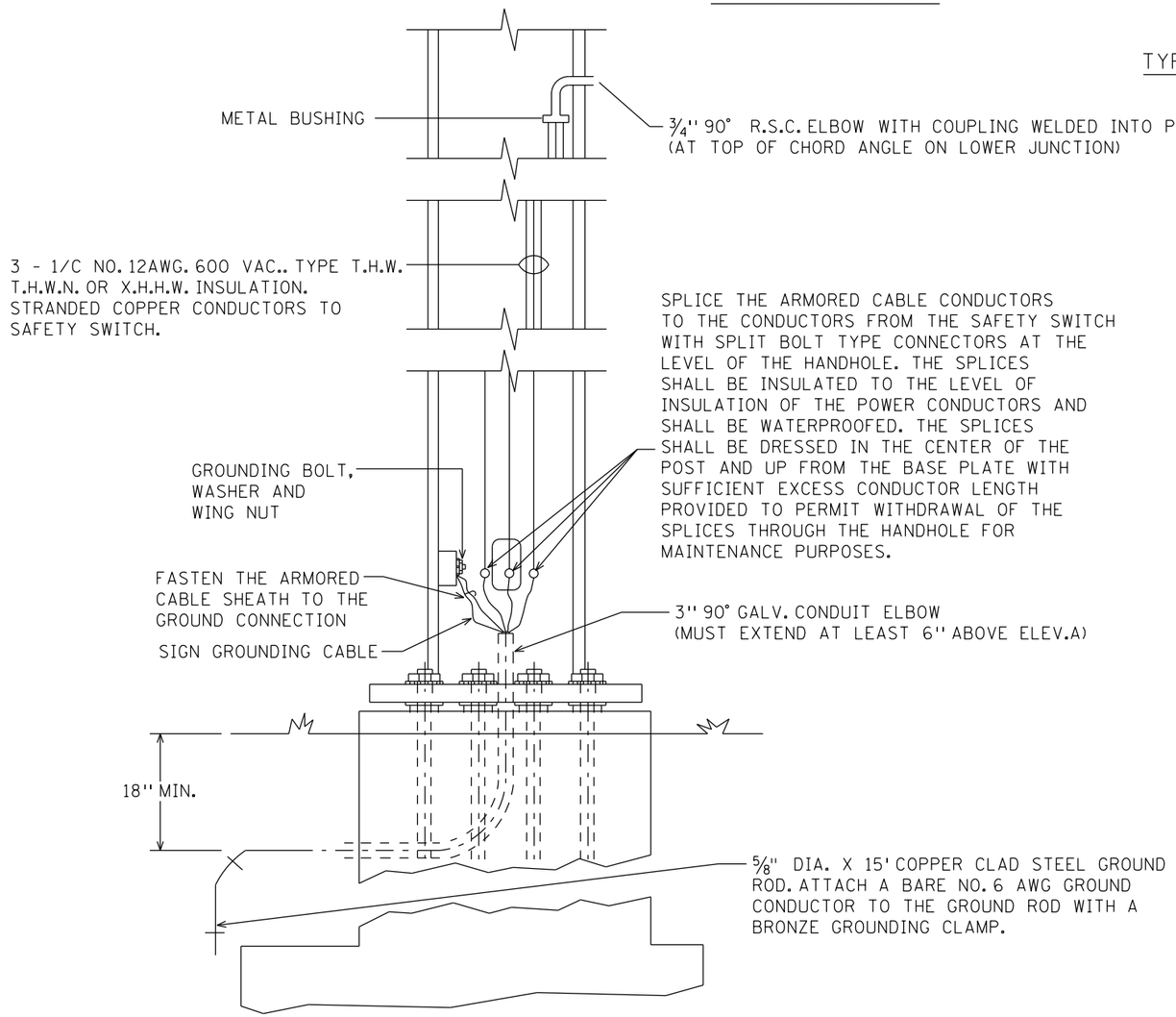


240/480 V. CIRCUIT



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/C NO. 12 AWG AND SHALL BE RUN IN ¾" 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

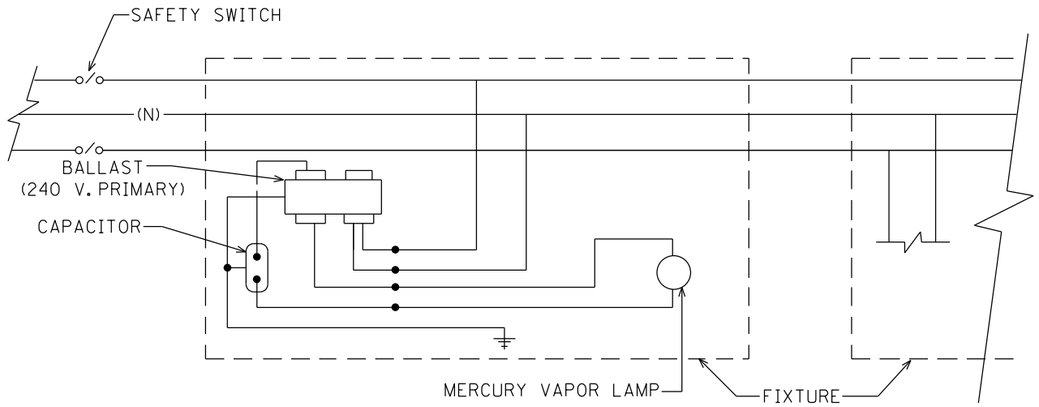
DRAWING ST-12

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

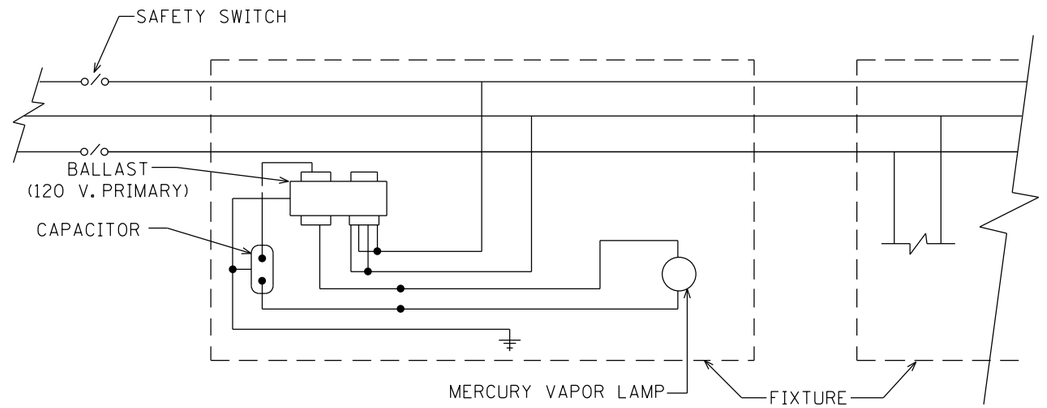
PLOTTED/REVISED: 12/1/2015

DISTRICT #: METRO
IPLOT NAME: ST12
PATH & FILENAME: IP_PWP:dl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013

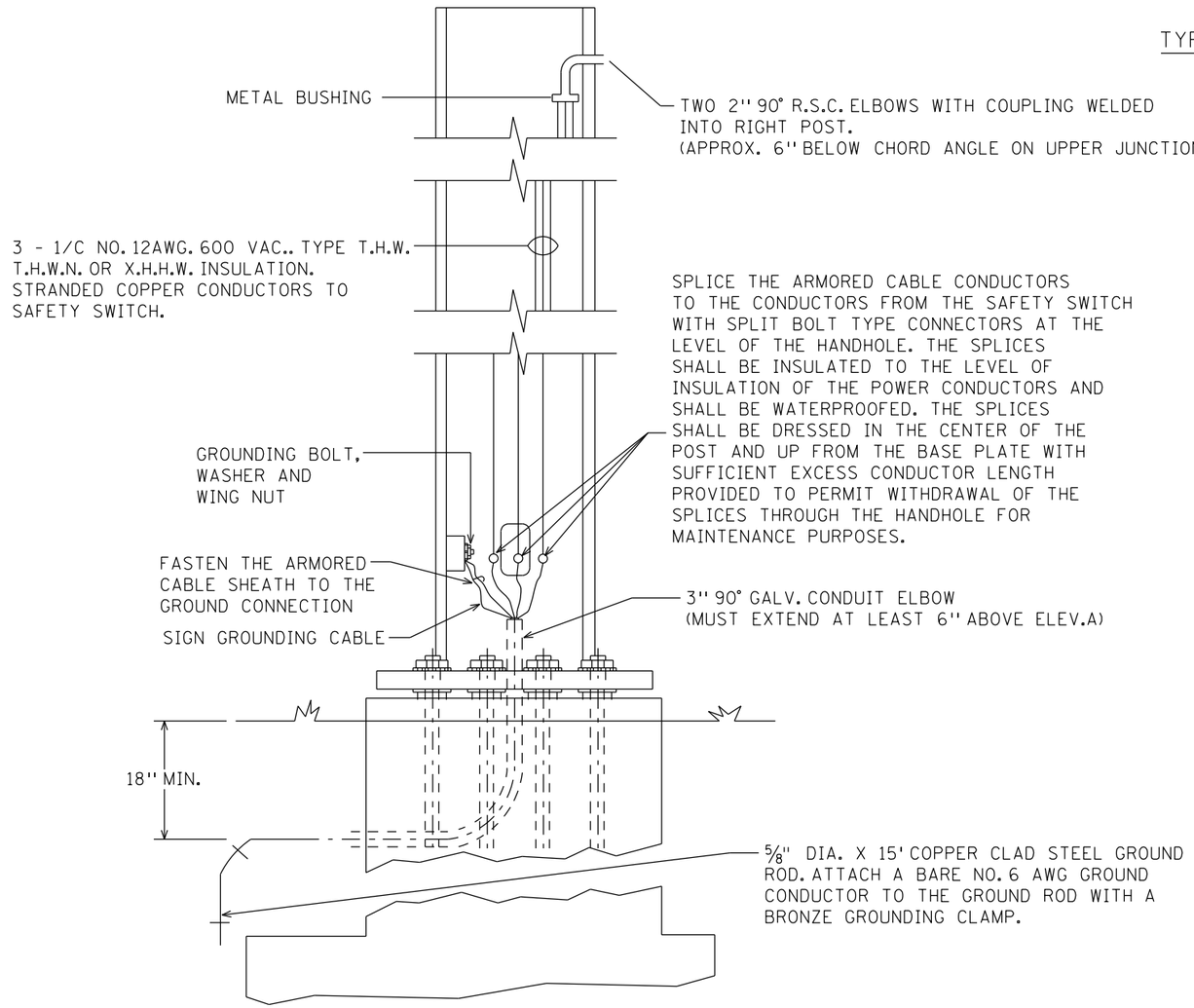


240/480 V. CIRCUIT



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.
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STANDARD OVERHEAD SIGN SUPPORTS
INTERIM DESIGN B

MODIFIED
ELECTRICAL DETAILS

DRAWING ST-13

STATE PROJ. NO.	SHEET NO.	OF	SHEETS

PLOTTED/REVISED: 12/1/2015

DISTRICT #: METRO
IPLOT NAME: ST13
PATH & FILENAME: IP_PWP:dl624788\ST DRAWINGS_STD*.dgn

REV. 10-2-2013