SIGNAL STANDARD NOTES:

1. VARIABLE/DYNAMIC MESSAGE SIGNS MAY NOT BE INSTALLED ON THESE POLES. BLANK OUT SIGNS MAY BE INSTALLED ON MAST ARM OR VERTICAL POLE.
2. POLE ORIENTATION ANGLE IS MEASURED BETWEEN THE STATION OFFSET LINE AND THE CENTER OF THE BASEPLATE FRONT. THE POLE HAND HOLE IS ALWAYS AT THE BACK OF THE BASEPLATE (180° ON THE BASEPLATE).
3. B# POSITIONS HAVE TENONS INSTALLED AT POSITIONS SHOWN IN CHART UNLESS TYPE N MOUNT REQUIRED.
4. B# POSITIONS REQUIRING TYPE N MOUNTS AND ALL OTHER MAST ARM WIRED DEVICES SHALL HAVE MAST ARM FIELD DRILLED AND PLASTIC SPLIT BUSHING INSTALLED FOR CABLE ENTRANCE.
5. S#, SN, AND SP POSITIONS SHALL HAVE SIGNS FIELD INSTALLED. SIGN SIZES SHALL NOT EXCEED THE MAXIMUM VALUES LISTED FOR EACH POSITION.
6. SIGN SN SHALL BE 1'-0" MIN. TO 2'-6" MAX. FROM POLE CENTERLINE TO SIGN EDGE.
7. SIGN SP SHALL BE A MINIMUM OF 2'-0" FROM THE EDGE OF THE SIGN TO THE FACE OF CURB OR EDGE OF SHOULDER.
8. FACE OF POLE SHALL BE A MINIMUM OF THE REQUIRED DEFLECTION DISTANCE SHOWN IN **DESIGN MANUAL EXHIBIT 1610-3** FROM THE APPLICABLE BARRIER - OR 2'-0" FROM FACE OF CURB, EDGE OF SHOULDER, OR BACK OF BARRIER - WHICHEVER IS LONGER.
9. PEDESTRIAN PUSHBUTTONS SHALL BE INSTALLED AT 3'-6" FROM SURFACE OF SIDEWALK TO CENTER OF CIRCULAR PUSHBUTTON (NOT THE HOUSING).
10. WHERE TYPE E PEDESTRAIN SIGNAL DISPLAY MOUNTS ARE REQUIRED, AND AN 8-SIDED POLE IS PROVIDED, TYPE A OR B MOUNTS SHALL BE USED INSTEAD.
11. SEE **STANDARD PLAN J-20.01** FOR REQUIRED POLE ID TAGS.

STANDARD TYPE		STANDARD PLAN REFERENCES			
		POLE	FOUNDATION		ELECTRICAL
			STANDARD	CURB	
PPB	FIXED	J-20.10	J-20.10	J-20.11	J-20.10
	BREAKAWAY	J-20.15	J-20.15		J-20.15
PS		J-20.16	J-21.10		J-20.20
I		J-21.15	J-21.10		J-21.20
II, III, SD		N/A	J-26.10, J-26.15	N/A	N/A

MAST ARM EQUIPMENT

B# VEHICLE DISPLAY

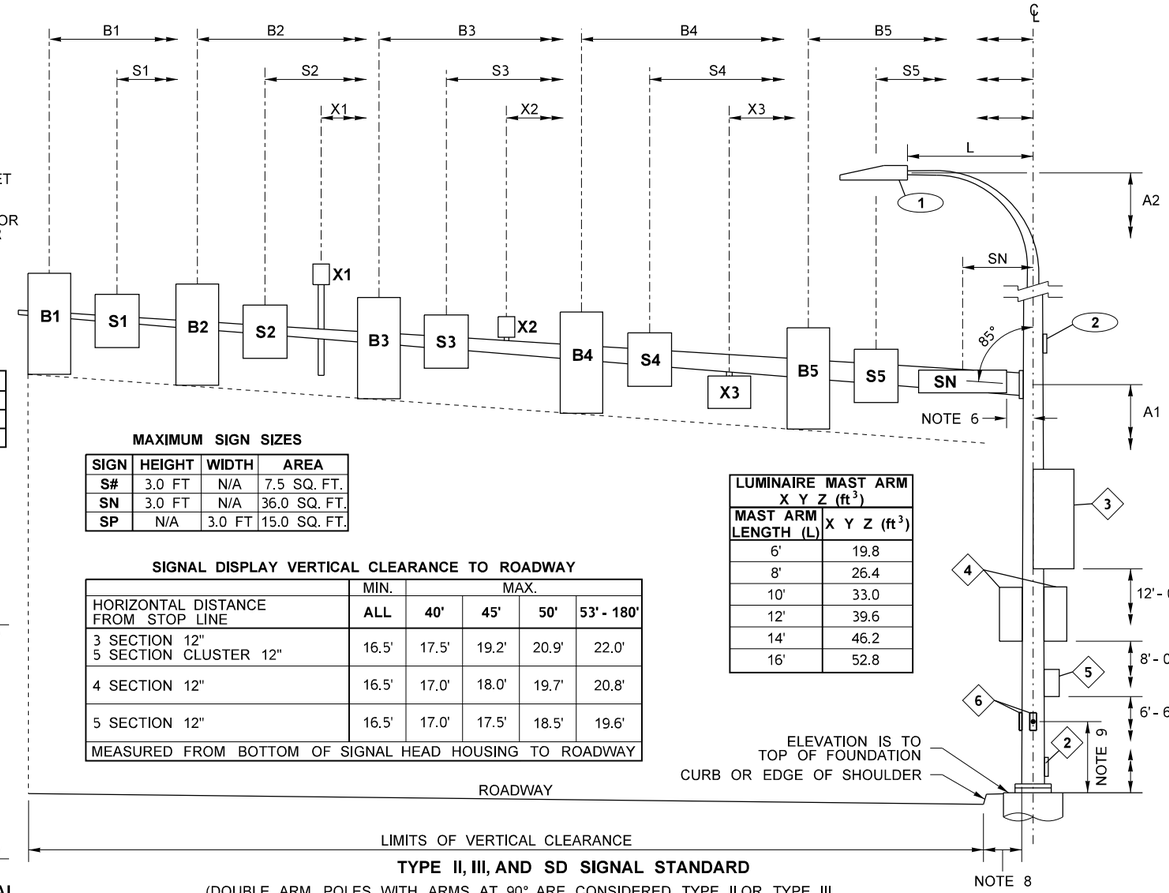
S# MAST ARM SIGN

SN MAST ARM STREET NAME SIGN

X# PRE-EMPT, VIDEO OR RADAR DETECTOR

NON-WINDLOAD DEVICES

LOC.	DEVICE	OFFSET
X1	IR VID. DET.	00.0
X2	EVP DET.	00.0
X3	RADAR DET.	00.0



MAXIMUM SIGN SIZES

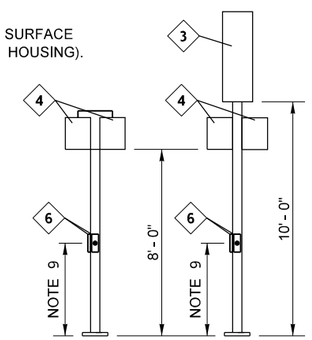
SIGN	HEIGHT	WIDTH	AREA
S#	3.0 FT	N/A	7.5 SQ. FT.
SN	3.0 FT	N/A	36.0 SQ. FT.
SP	N/A	3.0 FT	15.0 SQ. FT.

SIGNAL DISPLAY VERTICAL CLEARANCE TO ROADWAY

	MIN.	MAX.			
HORIZONTAL DISTANCE FROM STOP LINE	ALL	40'	45'	50'	53' - 180'
3 SECTION 12" 5 SECTION CLUSTER 12"	16.5'	17.5'	19.2'	20.9'	22.0'
4 SECTION 12"	16.5'	17.0'	18.0'	19.7'	20.8'
5 SECTION 12"	16.5'	17.0'	17.5'	18.5'	19.6'
MEASURED FROM BOTTOM OF SIGNAL HEAD HOUSING TO ROADWAY					

LUMINAIRE MAST ARM X Y Z (ft^3)

MAST ARM LENGTH (L)	X Y Z (ft^3)
6'	19.8
8'	26.4
10'	33.0
12'	39.6
14'	46.2
16'	52.8



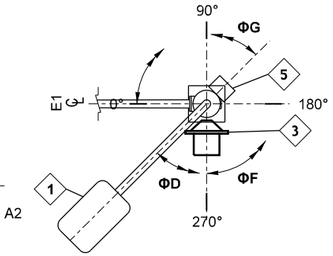
TYPE PPB PUSHBUTTON POST

TYPE PS PED. SIGNAL STANDARD

TYPE I VEHICLE SIGNAL STANDARD

TYPE II, III, AND SD SIGNAL STANDARD

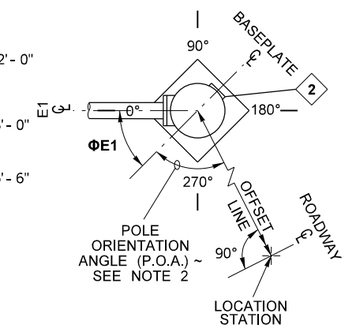
(DOUBLE ARM POLES WITH ARMS AT 90° ARE CONSIDERED TYPE II OR TYPE III. DOUBLE ARM POLES WITH ARMS AT OTHER THAN 90° ARE CONSIDERED TYPE SD.)



POLE MOUNTED EQUIPMENT ORIENTATION DETAIL

KEY ITEMS

#	ITEM
1	LUMINAIRE
2	HAND HOLE
3	VEHICLE DISPLAY OR SIGN (SP)
4	PEDESTRIAN DISPLAY (FIELD ORIENT)
5	TERMINAL CABINET
6	APS PPB-M (FIELD ORIENT)



POLE ORIENTATION AND E1 ATTACHMENT POINT DETAIL

SIGNAL STANDARD DETAIL CHART

STD. No.	SR #	SR MILE POST	FIELD LOCATION STATION	OFFSET	LT.	RT.	ELEV.*	P.O.A.	POLE TYPE	MOUNTING HEIGHT (FT) A1	A2	SIGNAL MAST ARM DATA OFFSETS (FT) (Z) (POLE ℄ TO ATTACHMENT POINT) B1	S1	B2	S2	B3	S3	B4	S4	B5	S5	SN	WINDLOAD AREAS (FT^2) (X)(Y) B1	S1	B2	S2	B3	S3	B4	S4	S5	B10	SN	LUMINAIRE ARM (FT) C	CALCULATED POLE XYZ (FT^3)**	POLE ATTACHMENT POINT Φ ANGLES (DEGREES) D	E1	E2	F	G	FOUNDATION DESIGN XYZ (FT^3)	SOIL BEARING PRESSURE (PSF)	FOUNDATION DEPTH (FT) ALTERNATE 1 3' RD.	3' SQ.	4' RD.	ALTERNATE 2 3' RD.	4' RD.	REMARKS
00	000	000.00	000+00	00.0	X	X	000	000	000	00.0	00.0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	000	000	000	000	000	000	000	000	00	00	00	00	00	XXXXXXXXXX

* ELEVATION IS TO TOP OF FOUNDATION. FIELD VERIFY ELEVATION PRIOR TO ORDERING SIGNAL STANDARDS. IF NO ELEVATION SHOWN, ELEVATION SHALL MATCH TOP OF SIDEWALK OR ROAD SHOULDER AS APPLICABLE.

** CALCULATED POLE XYZ (FT^3) IS THE SUM OF THE TOTAL XYZ (FT^3) FOR THE SIGNAL ARM AND THE XYZ (FT^3) FOR THE LUMINAIRE ARM (IF PRESENT).

FILE NAME	C:\Storage\01 Manual Revisions\02 Std Details\IS-13\2023-04\IS-13X.dgn
TIME	09:41:58
DATE	4/19/2023
PLOTTED BY	Jacksfl
DESIGNED BY	
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CHECKED BY	
PROJ. ENGR.	
REGIONAL ADM.	

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER

CONTRACT NO. | LOCATION NO.

P.E. STAMP BOX DATE

P.E. STAMP BOX DATE

Washington State Department of Transportation

TRAFFIC SIGNAL STANDARD CHART - 5X

Plot 1

PLAN REF NO IS-13X

SHEET OF SHEETS