

- NOTES:
- STRUCTURES ARE TO BE DESIGNED IN ACCORDANCE WITH THE 1994 AASHTO (STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS) AND CURRENT NJDOT SPECIFICATIONS FOR 145 km/h WIND ZONE TO SUPPORT THE FOLLOWING.
 - TRAFFIC ARMS WILL SUPPORT ALL OF THE FOLLOWING:
FIXED SIGNALS AT THE END OF ARM-WT=45kg PROJ. AREA=78 S.m.
FIXED SIGNALS 1/3 OF LENGTH FROM END-WT.45kg PROJ. AREA=78 S.m.
FIXED SIGN MIDWAY BETWEEN SIG'S-WT.=32kg PROJ. AREA=1.12 S.m.
LIGHTING ARM WILL SUPPORT THE FOLLOWING (MAXIMUM LOADING):
FIXED LUMINAIRE (.13 S.m. AND 18kg)
 - POLE TYPE SC WILL SUPPORT ONE LIGHTING ARM 6.10 m AND TWO TRAFFIC MAST ARMS, ONE 13.71 m AND ONE 9.14 m IN LENGTH (MAX.) WITH THE ABOVE LOADING ON EACH ARM AND A MINIMUM ARM SEPARATION ANGLE OF 45°, OR ONE LIGHTING ARM 6.10 m AND ONE TRAFFIC MAST ARM A MAXIMUM LENGTH OF 19.81 m WITH THE ABOVE LOADING.
 - POLE AND MAST ARM CONNECTION CLAMPS ARE ROUND, AND CLAMPS ARE DESIGNED TO FIT TIGHT ON THE POLE AT THE CONNECTION HEIGHTS SHOWN IN THE ELEVATION VIEW. THE 0.63" DIAMETER SHEAR PINS SHOWN IN DETAIL 4, COMBINED WITH THE CLAMPING FORCE, SHALL PREVENT CLAMP ROTATIONAL MOVEMENT UNDER MAXIMUM LOADING CONDITIONS. CLAMPS SHALL PROVIDE ± 457.2 mm VERTICAL ADJUSTMENT WHILE MAINTAINING TIGHT FIT ON POLE.
 - ALL WELDS SHALL BE IN ACCORDANCE WITH 1996 ANSI/AWS D1.1 WELDING CODE.

TABLE 2: MAST ARMS

ARM TYPE	SIGNAL ARM TUBE				
	FIXED END DIA. (mm)	FREE END DIA. (mm)	GAUGE OR THICK (mm)	SPAN (m)	ITEM SC RISE ANGLE (DEGREES)
30S	228.6	121.9	7	9.14	1.50
35S	228.6	104.1	7	10.67	2.50
40S	254.0	111.7	7	12.19	2.50
45S	266.7	106.6	7	13.72	3.50
50S	279.4	101.6	7	15.24	4.00
55S	257.6	96.8	3	13.79	6.00
	108.4	68.1	11	3.47	
60S	279.4	101.6	3	15.24	6.50
	113.5	72.1	11	3.55	
65S	298.4	139.7	3	13.60	6.50
	155.4	76.4	7	6.76	

TABLE 3: MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN YIELD (MP.a)
POLE TUBE	A572 GR.65	448
BASE PLATE	A36	248
ARM TUBE	A595 GR.A	379
CLAMP	A36	248
BOLTS	A325 ¹	634
ANCHOR BOLTS	F1554 GR.55	379
GALVANIZING (TUBES)	A123	NA
GALVANIZING (HARDWARE)	A153	NA

1. LUBRICATE IN FIELD IF NECESSARY IN LIEU OF THE REQUIREMENT IN A325.
2. RISE ANGLE IS FOR MAXIMUM DESIGN LOADS ONLY.

TABLE 1: POLE, BASEPLATE, AND ANCHOR BOLTS

ITEM	QTY.	POLE TUBE				POLE BASE				ANCHOR BOLT			
		BASE DIA. (mm)	TOP DIA. (mm)	LENGTH (m)	GAUGE OR THICK (mm)	SQUARE "S" (mm)	BOLT CIRCLE "Y" (mm)	THK. "M" (mm)	BOLT SLOT "Z" (mm)	DIA. "K" (IN)	LENGTH "J" (m)	HOOK "H" (mm)	THREAD LENGTH "U" (mm)
SC		317.5	219.7	8.38	7.94	444.5	438.2	44.5	50.8 x 57.2	1.75	2.13	152.4	203.2

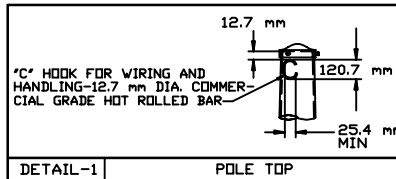
TABLE 4: LUMINAIRE ARM DATA

SPAN (m)	FIXED END DIA. (mm)	FREE END DIA. (mm)	GAUGE	RISE (mm)
4.57	114.6	60.4	11	304.8
6.10	132.3	60.4	11	304.8

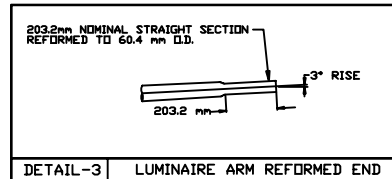
FOR THIS INFORMATION	SEE TABLE
POLE, BASE PLATE & ANCHOR BOLT	1
MAST ARM DATA	2
MATERIAL DATA	3
LUMINAIRE ARM DATA	4

DRAWING NOT TO SCALE

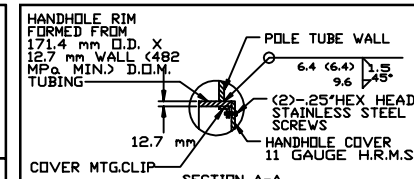
REV. DATE	REVISION	 VALMONT INDUSTRIES, INC. VALLEY, NEBRASKA 68064 (402) 359-2800
① 03/29/99	REVISED TO METRIC UNITS JLE	
② 06/05/99	REVISED PER CUSTOMER REQUEST JLE	
JOB NAME	ORDER NO. J	
SOLD TO	SHEET 1 OF 2 REV	
SHIP TO	DRAWING NO.	
P.O. NO.	DB00550	
AGENT		
DATE: 03-23-99	DRWN: SBH	SBH 03/23/99
TITLE: NEW JERSEY TRAFFIC SIGNAL STRUCTURES		



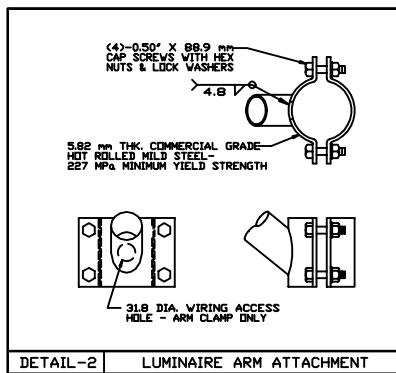
DETAIL-1 POLE TOP



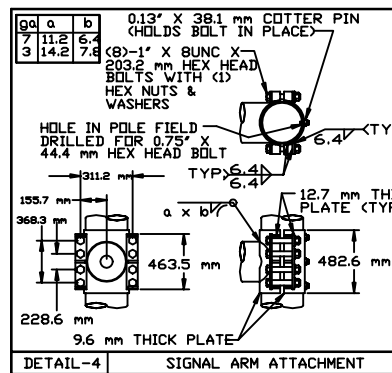
DETAIL-3 LUMINAIRE ARM REFORMED END



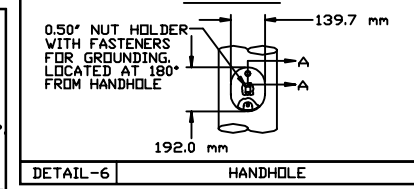
DETAIL-6 HANDHOLE



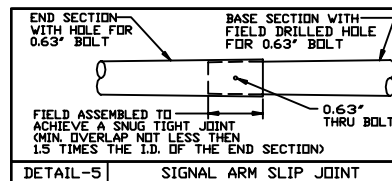
DETAIL-2 LUMINAIRE ARM ATTACHMENT



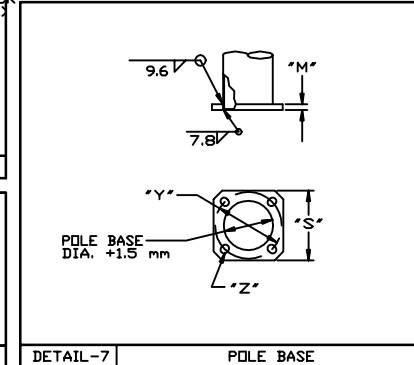
DETAIL-4 SIGNAL ARM ATTACHMENT



DETAIL-7 POLE BASE



DETAIL-5 SIGNAL ARM SLIP JOINT



DETAIL-8 ANCHOR BOLT

DRAWING NOT TO SCALE

REVI	DATE	REVISION	VALMONT				
			 VALMONT INDUSTRIES, INC. VALLEY, NEBRASKA 68064 (402) 339-2201				
JOB NAME						ORDER NO.	
SOLD TO						SHEET 2 OF 2	REV
SHIP TO						DRAWING NO.	B
P.O. NO.			DATE: 03-23-99	DRWN: SBH	SBH 03/23/99		
AGENT			TITLE	NEW JERSEY TRAFFIC SIGNAL STRUCTURES			