

Foundation Design Laods.

he base of the structure.

used to adjust shaft lengths.

Mounting

SECTION D-D

Fixed		ROU				
Mount Arm Lr	D <sub>B</sub>	D19.5 D20.25	_	D 30	12)thk	Foundation
ft.	in.	in.	in.	in.	in.	, ,
50', 55' 60', 65'	21.0	18.2	17.6	16.8	3125	48-A

Fixed	ROUND ARMS (13)							
Mount Arm LF			D <sub>2</sub>	(12)thk	Rise			
ft.	ft.	in.	in.	in.	RISE			
50	49	18.5	11.7	. 3125	3' - 3"			
55	54	18.5	11.0	.3125	3'- 7"			
60	59	18.5	10.3	. 3125	3'-11"			
65	64	18.5	9.6	. 3125	4' - 4"			

D<sub>B</sub> = Pole Base O.D.
D<sub>19.5</sub> = Pole Top O.D. with no Luminaire and no ILSN (single mast arm)

D<sub>20,25</sub>= Pole Top O.D. with no Luminaire and no ILSN (dual mast arm)

= Pole Top O.D. with ILSN

w/out Luminaire
= Pole Top O.D. with Luminaire

= Arm Base O.D. Arm End O.D.

Shaft LengthFixed Arm Length

(12) Thickness shown is minimum, thicker materials may be used.

(13) Shaft profile 16-sided or 18-sided is considered to be equivalent to round section.

23

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228

## GENERAL NOTES:

Built-up Box Connection: For the welded arm-to-pole connection as a build-up box configuration illustrated here is an example only, fabricators are required to submit a shop drawing of box connection for approval. The drawing shall specify the details of each box element, welds of arm-to-pole connection, arm-to-plate socket connection, and arm rise creation. Specify the proper location of drain holes along the pole. 2 1/2" dia hole in the pole mounting plate and 4" dia hole in the pole need to be aligned for wiring access or drainage. Arm stiffeners cut to match arm inclination and taper shall also be included.

The deviation from flat for either arm or pole mounting plate shall not exceed  $\frac{1}{12}$  in., which is measured along the center of mounting plate to a radial distance of 13.5 in. The deformed-from-flat connection between arm and pole mounting plates shall not be allowed if the center of both mounting plates cannot contact directly.

Fixed mount details are used for single mast arm assemblies and for the first arm on dual mast arm assemblies.

ANCHOR BOLT & TEMPLATE SIZE							
Bolt Dia in.	Leng†h †	Top Thread	Bottom Thread	Bolt Circle	R2	Rı	
2 1/2"	5*-2"	10"	6 ½"	27"	16"	11"	

\*Min dimension given, longer bolts are acceptable.

Texas Department of Transportation Traffic Operations Division

## TRAFFIC SIGNAL SUPPORT STRUCTURES

LONG MAST ARM ASSEMBLY (50 TO 65 FT)

(80 AND 100 MPH WIND ZONE)

Sheet 3 of 5

LMA(3)-12

CTxDOT July 2000	DN: JSY		CKI ARC	DW1 TGG	CK1 JSY	
REVISIONS	CONT	SECT JOB HIG		HIGHWAY		
2	DIST	COUNTY		v	SHEET NO	

(17) If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock. (8) Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

(16) Field Penetrometer readings at a depth of approximately 3 to 5 feet may be

(15) Foundation Design Loads are the allowable moments and shears at