

LOAD CASE 2 - LIGHT LOADING

PROJECT REFERENCE NO. R-2813 C SHEET NO. Sig.51
dwg.MP4

FOUNDATION SELECTION TABLE

42" Diameter Drilled Pier Length (L) - Feet

CONCRETE VOLUME (cubic yards)=.356xL

Denotes Wing Wall Required SEE NOTE 37.

USE TYPE-1 WING WALL. FOR DETAILS, SEE DRAWING NO. MP-11.

WIND ZONE 1	MAST ARM NUMBER	SOIL TYPES						
		Clay				Sand		
		Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30
LC2-25		13.5	10.0	9.0	9.0	13.0	11.5	10.0
LC2-30		13.5	10.0	9.0	9.0	13.0	11.5	10.0
LC2-45		14.5	10.5	9.0	9.0	14.0	12.0	11.0

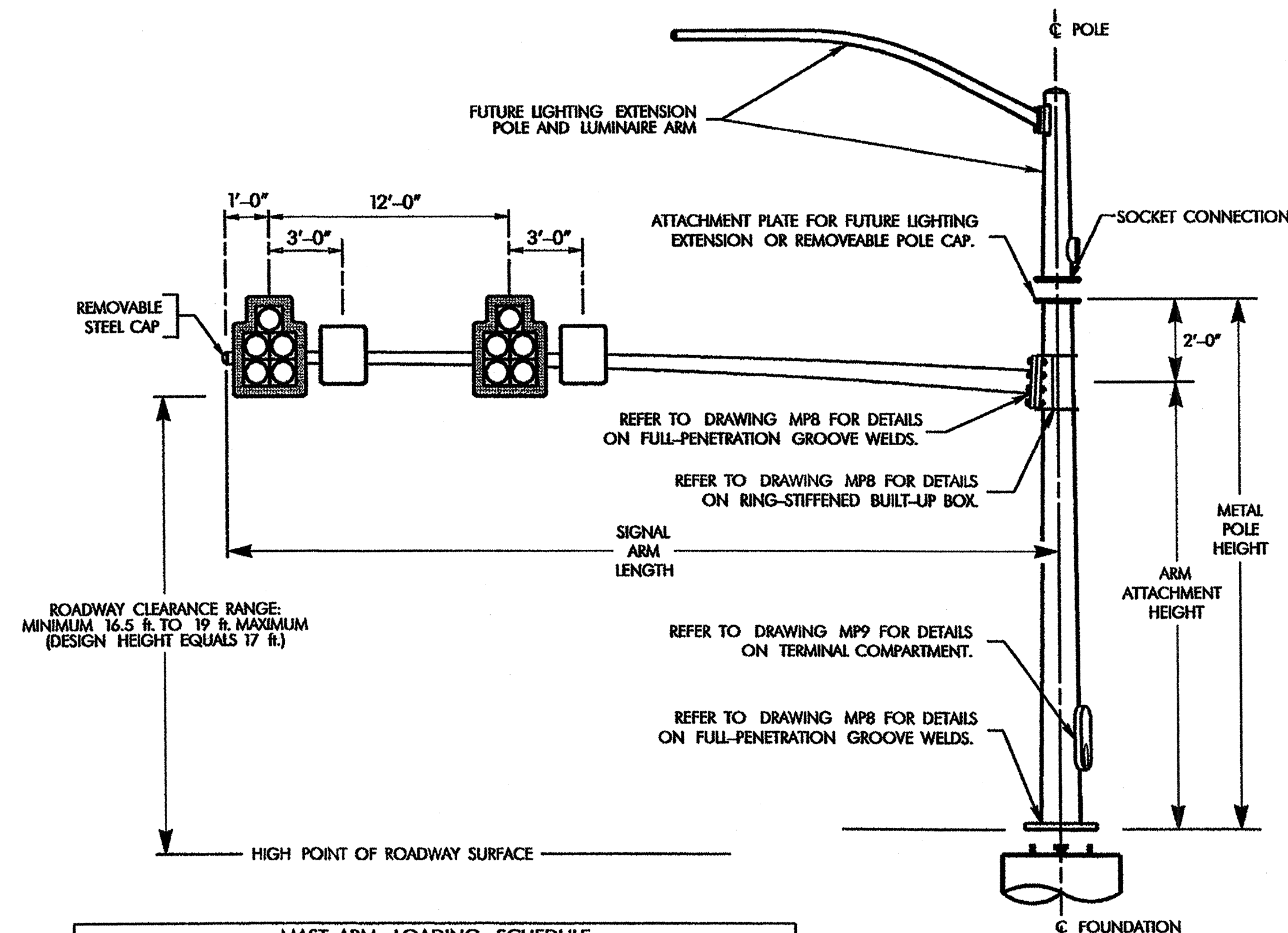
WIND ZONE 2	MAST ARM NUMBER	SOIL TYPES						
		Clay				Sand		
		Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30
LC2-25		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-30		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-45		13.5	10.0	9.0	9.0	13.0	11.5	10.0

WIND ZONE 3	MAST ARM NUMBER	SOIL TYPES						
		Clay				Sand		
		Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30
LC2-25		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-30		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-45		11.5	9.0	9.0	9.0	12.0	10.5	9.5

WIND ZONE 4	MAST ARM NUMBER	SOIL TYPES						
		Clay				Sand		
		Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30
LC2-25		9.5	9.0	9.0	9.0	10.0	9.0	9.0
LC2-30		9.5	9.0	9.0	9.0	10.0	9.0	9.0
LC2-45		11.5	9.0	9.0	9.0	12.0	10.5	9.5

WIND ZONE 5	MAST ARM NUMBER	SOIL TYPES						
		Clay				Sand		
		Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30
LC2-25		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-30		11.5	9.0	9.0	9.0	12.0	10.5	9.5
LC2-45		11.5	10.0	9.0	9.0	13.0	11.5	10.0

POLE LOADING DETAILS



MAST ARM LOADING SCHEDULE				
LOADING SYMBOL	DESCRIPTION	AREA	SIZE	WEIGHT
	SIGNAL HEAD 12"-5 SECTION WITH BACKPLATE AND ASTRO-BRAC	16.3 S.F.	42.0" W X 56.0" L	103 LBS
	SIGN RIGID MOUNTED WITH ASTRO-SIGN-BRAC	5.0 S.F.	24.0" W X 30.0" L	11 LBS

SIGNAL POLE WITH PROVISION FOR LIGHTING EXTENSION

SIGNAL MAST ARM DATA								MIN. POLE DATA				
MAST ARM NUMBER	SIGNAL ARM LENGTH	MINIMUM ARM BASE DIAMETER	MINIMUM ARM WALL THICKNESS	MAST ARM ATT. PLATE SIZE		ATT. PLATE BOLT SPACING		ATT. PLATE TO FLANGE PLATE ATTACHMENT BOLT SIZE	MAST ARM ATT. PLATE THICKNESS	FLANGE PLATE THICKNESS	POLE BASE DIAMETER	POLE WALL THICKNESS "T"
				W	H	A	B					
LC2-25	25'-0"	11"	.25"	24"	27"	15"	21"	1.5" x 7"	2"	2"	15"	.3125"
LC2-30	30'-0"	11"	.25"	24"	27"	15"	21"	1.5" x 7"	2"	2"	15"	.3125"
LC2-45	45'-0"	14"	.25"	24"	27"	18"	21"	1.5" x 7"	2"	2"	18"	.3125"

POLE BASE PLATE AND ANCHOR BOLT DATA				
SIGNAL POLE HEIGHT	MAX. BASE PLATE DIAMETER "D"	MAX. BASE PLATE BOLT CIRCLE "BC"	BASE PLATE THICKNESS	ANCHOR BOLT SIZE (8 PER POLE)
22'-0"	32"	25"	2"	2" x 66"
24'-0"	32"	25"	2"	2" x 66"
26'-0"	32"	25"	2"	2" x 66"

MAST ARM AND POLE IDENTIFICATION LEGEND
 MAST ARMS AND METAL POLES SELECTED FOR USE FROM THESE STANDARDS SHOULD BE IDENTIFIED USING THE FOLLOWING ALPHA NUMERIC IDENTIFICATION NUMBER:
 LCX-XX-XX
 Load Case Number (1 THRU 5) Pole Height Mast Arm Length

REFER TO DRAWING MP8 AND MP9 FOR DETAILS ON POLE AND ARM FABRICATION.

Prepared in the Office of:

 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 222 N. McDowell St., Raleigh, NC 27603

POLE LOADING DETAILS AND FOUNDATION SELECTION TABLES FOR LOAD CASE 2

PLAN DATE: APRIL 2003 REVIEWED BY: D.C. SARKAR
 PREPARED BY: C.F. ANDREWS REVIEWED BY: R.E. MULLINAX

REVISIONS: _____ INIT. _____ DATE _____

6.3.03
 SIGNATURE DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028094 DEBISH C. SARKAR

SIG. INVENTORY NO. _____

METAL POLES WITH MAST ARMS

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