

SHAFT LENGTH DESIGN TABLE (METRIC) (LENGTH IN METERS)											
	SOIL CONSISTENCY	AVERAGE STRENGTH	LIGHT TOWER HEIGHT (meters)								
		(Qu în kPa)	24	27	30	34	37	40	43	46	49
	SOFT	< 50	6.2	6.5	6.9	7.2	7.6	8.0	8.3	8.7	9.1
ø	MEDIUM	50 to 100	5.1	5.3	5.6	5.8	6.2	6.4	6.7	7.0	7.3
Cohesive	STIFF	100 to 200	4.4	4.5	4.7	4.8	5.2	5.4	5.5	5.9	6.1
ď	VERY STIFF	200 to 400	3.8	3.9	4.1	4.2	4.5	4.6	4.7	5.1	5.2
ပ	HARD	> 400	3.5	3.5	3.6	3.7	4.0	4.1	4.2	4.5	4.6
		(N in BLOWS/0.3M)									
	VERY LOOSE	< 5	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.3	6.5
L	LOOSE	5 to 10	4.6	4.8	4.9	5.1	5.3	5.5	5.6	5.7	5.9
7	MEDIUM	10 to 25	4.4	4.5	4.7	4.9	5.0	5.2	5.3	5.5	5.6
	DENSE	25 to 50	4.1	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3
Ġ	VERY DENSE	> 50	3.9	4.1	4.2	4.4	4.5	4.7	4.8	4.9	5.1

		SHAFT LENGTH DESIG	N TABI	E (EN	GLISH)	(LENG	TH IN	FEET)			
	SOIL CONSISTENCY	LIGHT TOWER HEIGHT (feet)									
		(Qu in tsf)	80	90	100	110	120	130	140	150	160
	SOFT	< 0.5	20.4	21.5	22.5	23.6	25.0	26.1	27.2	28.5	29.8
Φ	MEDIUM	0.5 to 1	16.8	17.5	18.3	19.0	20.3	21.1	21.8	23.1	24.0
>SIV	STIFF	1 to 2	14.3	14.8	15.4	15.9	17.1	17.6	18.1	19.3	19.9
ohe	VERY STIFF	2 to 4	12.6	13.0	13.3	13.7	14.8	15.2	15.6	16.7	17.1
Õ	HARD	> 4	11.4	11.6	11.9	12.2	13.2	13.5	13.8	14.9	15.2
		(N in BLOWS/FT.)									
	VERY LOOSE	< 5	16.4	17.1	17.8	18.5	18.9	19.6	20.2	20.7	21.4
Ē	LOOSE	5 to 10	15.0	15.6	16.2	16.8	17.3	17.9	18.4	18.9	19.5
	MEDIUM	10 to 25	14.3	14.9	15.5	16.0	16.4	17.0	17.5	17.9	18.5
	DENSE	25 to 50	13.6	14.1	14.6	15.1	15.5	16.1	16.5	16.9	17.5
	VERY DENSE	> 50	12.9	13.4	13.9	14.4	14.8	15.3	15.7	16.1	16.6

GENERAL NOTES

- 1) The shaft length(s) provided in the foundation schedule are based on the soil borings included in the plans. If different soils are encountered, the engineer shall be notified to provide a revised length.
- 2) Use 8 rods min., see design table for minimum anchor rod diameter. Anchor rod quantity, diameter, and length shall be determined by the approved drawings furnished by pole manufacturer.
- 3) All foundation reinforcement steel to be epoxy coated. Use *11 vertical bars and *4 spiral reinforcement - see design table.
- 4) The cost of reinforcing is incidental to the foundation.
- 5) Steel anchor bolt forms shall not be removed for a minimum of 3 days after concrete is poured and the tower shall not be set for a minimum of 7 days or as approved by the Engineer.
- 6) Coordinate bolt circle diameter of the tower with the bolt circle diameter of the anchor bolt cage.
- 7) Foundation shall be in accordance with applicable portions of Section 516 and 837 of the Standard Specifications.
- 8) Foundation shall be poured monolithically with no construction joints allowed.
- 9) Place grounding electrodes in an access well, if there is a conflict in using the wireway window.
- 10) Diameters listed in the tables are based upon a 125 (5") concrete cover. The minimum cover is 75 (3") in a clean augered hole or 100 (4") in a wet hole. When rock is encountered, a 125 (5") cover is required against soil to allow a 50 (2") cover against rock.
 - All dimensions are in millimeters (inches) unless otherwise shown.

DATE	REVISIONS Corrected 4/11/06	LIGHT TOWER FOUNDATION

↑ ADDED SHEET 4–11–06 MJ

LOCTO 9 2D DOIN

Top ring template for anchor rods. Attachment as approved by Engineer, see detail (may be part of removable form).	#4 bare copper grounding electrode conductor 125 (5) Dia. PVC duct wireway 25 (1) min. projection above foundation.
im xim xi50 (3'x3'x6") Concrete work pad (center with handhole door) 2:1 (Max) 2:1 (Max) 2:1 (Max) 2:1 (Max) 2:1 (Max) 4 spiral 2:1 (Max) 2:1 (Max) 2:1 (Max) 2:1 (Max) 4 spiral 2:1 (Max) 5 (6) pitch (typ)	230 (9) Minimum anchor rod projection above top of foundation, increase as needed. Top of foundation to be formed to 450 (18) below ground surface. After forms are removed, compact impervious material a minimum of 450 wide x 450 deep (18W x 18D) around fdn.
Shaft length (See foundation sch Basis of payment	Bottom steel anchor bolt template. Method of attachment as approved by the Engineer, see detail. V-bars see Sec. B-B and Table 3 hoops min. top & bottom
FOUNDATION SCHEDULE TOWER STATION OFFSET SHAFT NUMBER STATION OFFSET LENGTH ELEVATION	2.36 M (7.5') P P P P P P P P P P P P P

*11 V bars evenly spaced

SECTION A-A

Anchorrods evenly

spaced

See design

table

-#4 Spiral

see	аетан.			100	1.3	30	24	40	14
				110	1.5	30	24	48	14
				120	1.75	36	26	54	18
				130	1.75	36	28	54	18
				140	1.75	36	28	54	18
				150	2.25	38	30	60	22
				160	2.25	38	32	60	22
	Distribution in the state of th			hei	150 W steel r x hequ	ing pl	ate (typ) yp)	6 x 1/4	0 0 0
٩	٩	Ŋ	P		AN C	CHOR AGE	ROD TOP) —	
				-50 x (2 x 1 steel	/2)				/_@ /_@ /_@
AN	CHOR ROD	CAG	<u> </u>		Α	NCHO	R RO	DD	
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ANCHOR ROD & SHAFT REINFORCEMENT DESIGN TABLE (METRIC) TOWER ANCHOR ROD TOWER DRILLED V Bar NCHOR ROU ROD CIRCLE BASE DIAM. DIAM. (MIN)

(mm)

(mm)

450 760 610

37 525 915 660 1.4 18 40 525 915 710 1.4 18 43 525 915 710 1.4 18
 46
 675
 965
 760
 1.5
 22

 49
 675
 965
 810
 1.5
 22

ANCHOR ROD & SHAFT REINFORCEMENT DESIGN TABLE (ENGLISH) TOWER ANCHOR ROD TOWER DRILLED V Bar ROD CIRCLE BASE SHAFT * 11
DIAM. DIAM. (MIN) (MIN) DIAM. NUMBER

80 1.5 30 24 48 14 90 1.5 30 24 48 14 100 1.5 30 24 48 14

CAGE BOTTOM

(in)

(in)

25 450 760 610 1.2 27 450 760 610 1.2 14 30 450 760 610 1.2

(mm)

HEIGHT

HEIGHT

(ft) (in)

SHAFT # 11

1.2

DIAM. NUMBER (m) (each)

DIAM. NUMBER

(each)

(în)

14