

POLE FOUNDATION SCHEDULE							
POLE DESIGNATION	FORCES (1.)			DRILLED PIER			
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH (4.)	SUSPENSION "Y" (2.)	CONCRETE BACKFILL YD ³ (3.)
A1, A4	65,299	1,380	1,858	36	12'-0"	NA	2.3
A2	101,235	2,140	3,589	30	16'-0"	NA	1.7
A3, A7	36,895	969	1,232	42	10'-0"	NA	2.7
B1 - B4	107,980	2,093	3,413	30	16'-0"	NA	1.7
B5, B8	42,788	1,063	1,345	42	10'-0"	NA	2.7
C1, C2	65,299	1,380	1,858	36	14'-0"	2'-0"	2.8
C3, C4	66,361	1,393	1,858	36	14'-0"	2'-0"	2.8
C5	36,895	969	1,232	42	12'-0"	2'-0"	3.4
C7	36,895	969	1,232	42	10'-0"	NA	2.7

- ASD LOAD COMBINATION D + 0.6W. VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PC BASE)
- SUSPEND PRECAST BASE "Y" OFF THE BOTTOM OF THE EXCAVATION DURING MONOLITHIC CONCRETE BACKFILL PLACEMENT AND CURING. NA = NOT APPLICABLE, SUSPENSION NOT REQUIRED.
- MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.
- POTENTIAL FOR ROCK BEFORE REACHING EMBEDMENT DEPTH. ROCK AUGERING EQUIPMENT MAY BE REQUIRED.

POLE IDENTIFICATION				
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT ²)
A1, A4	LSS70B	3B	6 (5)	18.3
A2	LSS70D	5B	12 (5) / (5)	36.5
A3, A5 - A7	LSS60A	2B	4 (3)	12.9
B1 - B4	LSS80B	5B	8 (7)	25.3
B5 - B8	LSS60A	2B	5 (4)	15.7
C1, C2	LSS70B	3B	6 (5)	18.3
C3, C4	LSS70B	3B	6 (5)	18.8
C5 - C8	LSS60A	2B	4 (3)	12.9

- EACH POLE HAS (1) MUSCO LED FIXTURE AT 25'-0" AGL FRONTSIDE INCLUDED ABOVE.
- POLE A2 ALSO HAS (1) MUSCO LED FIXTURE AT 25'-0" AGL BACKSIDE INCLUDED ABOVE.

CONCRETE/REINFORCEMENT NOTES

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS: MIXTURE WITH ASTM C-94, PORTLAND CEMENT WITH ASTM C-150 TYPE 1-A, AGGREGATES WITH ASTM C-33 AND BE IN CONFORMANCE WITH ACI 318.

CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM WATER-CEMENT RATIO, w/cm = 0.45 AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,500 PSI (SPREAD FOOTINGS) AND 3,000 PSI (DRILLED PIERS).

DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY BE INCREASED BY THE USE OF A WATER REDUCING AGENT MEETING ASTM C494-92.

CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60, EXCEPT TIES CAN BE OF GRADE 40 AND BE IN CONFORMANCE WITH ACI 315 & 318.

CONCRETE MUST ATTAIN DESIGN STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING.

DESIGN NOTES

DESIGN PARAMETERS:

WIND: $V_{ult} = 115$ MPH, $V_{asd} = 89$ MPH (EXPOSURE C, RISK CATEGORY II) PER INTERNATIONAL BUILDING CODE, 2012 EDITION (ASCE 7-10). DESIGN WIND PARAMETERS ARE AS NOTED, ACTUAL EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

GEOTECHNICAL PARAMETERS:

ALLOWABLE END BEARING SOIL PRESSURE: 1,500 PSF
 ALLOWABLE LATERAL SOIL BEARING PRESSURE:
 0 PSF/FT (GRADE TO -2'-0"); VARIES, SEE SOIL REPORT (BELOW -2'-0")
 IN ACCORDANCE WITH THE 2012 EDITION OF THE INTERNATIONAL BUILDING CODE, CHAPTER 18.

OVER EXCAVATE 2'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -8'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1806.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR (ASTM D698). FOOTINGS MAY BEAR ON BEDROCK, OVER EXCAVATION OF BEDROCK IS NOT REQUIRED.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, NO. 4895 (PHASE 2 & 3), PREPARED BY GEOTECHNICS, INC; ROANOKE, VA.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT.

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

GENERAL NOTES:

FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

POLE FOUNDATION ELEV.

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:

THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

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DRAWING TITLE:
 POLE AND FOUNDATION
 SCALE: SEE PLAN
 NOTES:
 SCAN #174728A_TLC

PROJECT NUMBER
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DATE
 16 JUNE 2017

DRAWING NUMBER
 C1-BB/SB

OF TWO



POLE FOUNDATION SCHEDULE

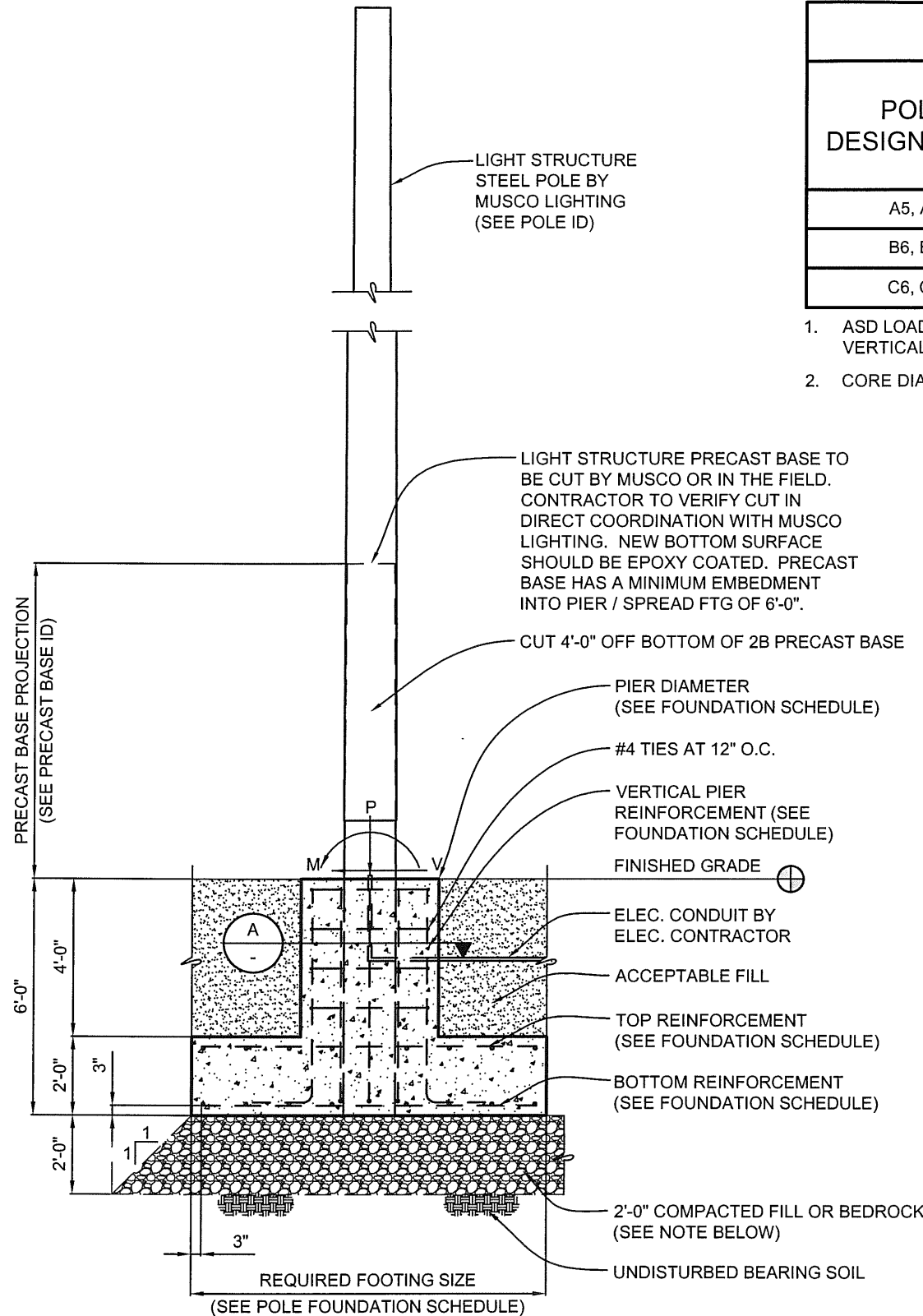
POLE DESIGNATION	FORCES (1.)			FOOTING			PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (2.)	VERTICAL REINFORCING
A5, A6	36,895	969	1,232	7'-6" x 7'-6"	2'-0"	(40) 10 - #6's EACH WAY	36	29	12 - #6
B6, B7	42,788	1,063	1,345	7'-6" x 7'-6"	2'-0"	(40) 10 - #6's EACH WAY	36	29	12 - #6
C6, C8	36,895	969	1,232	7'-6" x 7'-6"	2'-0"	(40) 10 - #6's EACH WAY	36	29	12 - #6

1. ASD LOAD COMBINATION D + 0.6W.
VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT).
2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
2B	1,690 LBS	17'-3"	7'-3"	10'-0"	12.00"
3B	2,470 LBS	20'-0"	8'-0"	12'-0"	13.38"
5B	4,580 LBS	23'-11"	7'-11"	16'-0"	18.25"

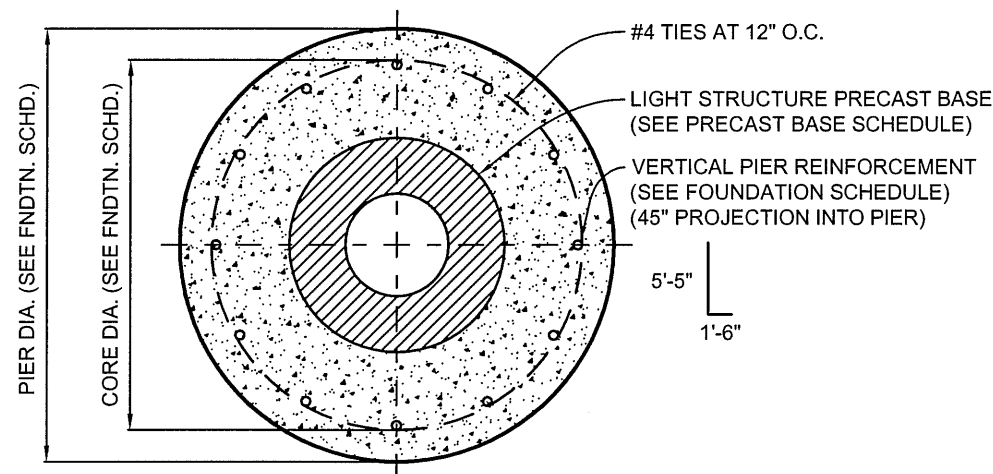
PRECAST BASE WEIGHT, LENGTH AND STANDARD EMBEDMENT ARE PRECUT PROPERTIES
REFERENCE POLE ID TABLE ON SHEET C1 FOR POLE TO PRECAST BASE TYPES



POLE FOUNDATION ELEVATION

SCALE: NOT TO SCALE

NOTE:
OVER EXCAVATE ANY EXISTING FILL MATERIAL 2'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -8'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1804.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR. FOOTINGS MAY BEAR ON BEDROCK, OVER EXCAVATION OF BEDROCK IS NOT REQUIRED.



PIER DETAIL

SCALE: NOT TO SCALE



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