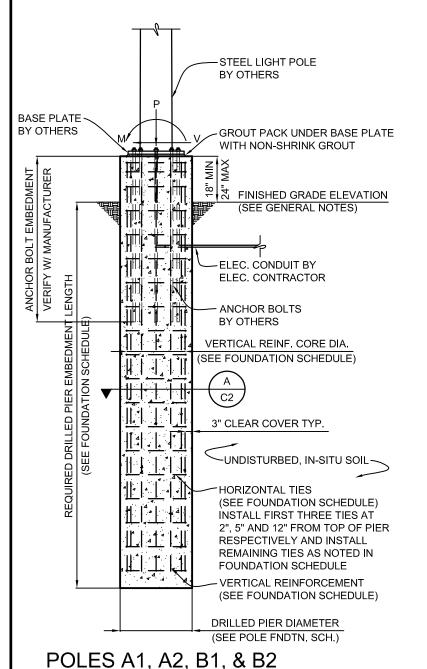
#### POLES A1, A2, B1, & B2 FOUNDATION SCHEDULE **DRILLED PIER FORCES** REINFORCING **POLE** CORE DESIGNATION MOMENT (M) SHEAR (V) VERTICAL (P) DIAMETER **EMBEDMENT VERTICAL** HORIZONTAL DIAMETER LBS (1.) **INCHES** REINFORCING TIES INCH (2.) A1, A2 917.719 13,162 18,906 60 33'-0" 53 #4 @ 12" 36 - #8 16.524 54 32'-0" 47 #4 @ 12" B1, B2 716,732 11 711 30 - #8

- 1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
- 2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.



FOUNDATION ELEVATION

SCALE: NOT TO SCALE

#### POLE IDENTIFICATION FIXTURE AND **FIXTURE** POLE **PRECAST** POLE CONFIGURATION ACCESSORIES DESIGNATION TYPE BASE TYPE (FIX. PER XARM) EPA (FT<sup>2</sup>) 28 (8+8+8) 75.6 A1, A2 NA VALMON7 90' VALMON 34 (9+9+8+8) В1 NA 91.8 32 (8+8+8+8) B2 90' VALMON NA 86.4 C1, D1, D2 LSS90C 7B 15 (5+5+5) 39.0 15 (5+5+5) C2 LSS90C 7B 40.5

- POLES A1 & A2 EACH HAVE FOUR QUARTZ FIXTURES AT 95'-0", INCLUDED IN EPA.

## CONCRETE/REINFORCEMENT NOTES

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.

WATER -CEMENT RATIO, w/cm = 0.43 AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI.

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 DRILLED PIERS MUST ATTAIN 3,000 PSI STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING.

THE TOP 12'-0" SHOULD BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT.

## **DESIGN NOTES**

## **DESIGN PARAMETERS:**

WIND: 130 MPH ( I = 1.0 ) PER AASHTO STANDARD, 2009 EDITION (LTS-5). DESIGN WIND PARAMETERS ARE AS NOTED. ACTUAL WIND SPEED AND EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

### GEOTECHNICAL PARAMETERS:

ALLOWABLE END BEARING SOIL PRESSURE; 2,000 PSF ALLOWABLE LATERAL SOIL BEARING PRESSURE: 0 PSF/FT (GRADE TO -2'-0"); 150 PSF/FT (-2'-0" TO -11'-0"); 0 PSF/FT (-11'-0" TO -18'-0"); 150 PSF/FT (-18'-0" TO -35'-0"); 200 PSF/FT (BELOW -35'-0")

IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE,

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, NO. 1633-12-052 & 1633-12-052-02, PREPARED BY S&ME; CONWAY, SC.

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. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 6'-0".

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.

A1, A2, B1, & B2; POLES, BASE PLATES, ANCHOR BOLTS, AND FORCES PROVIDED BY POLE MANUFACTURER, VALMONT INDUSTRIES, INC. FIXTURES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

C1. C2. D1. & D2: POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

# **PRELIMINARY**

NOT FOR CONSTRUCTION

CAROLINA

SOUTH

CONWAY

FIELD LIGHTING

ALL

 $\mathbf{m}$ 

 $\mathbf{H}$ 

BASI

CAROLINA

COASTAL

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DRAWING HILE:
POLE AND FOUNDATION

PROJECT NUMBER

133433

18 JANUARY 2013

C1

DRAWING NUMBER

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS:

CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM

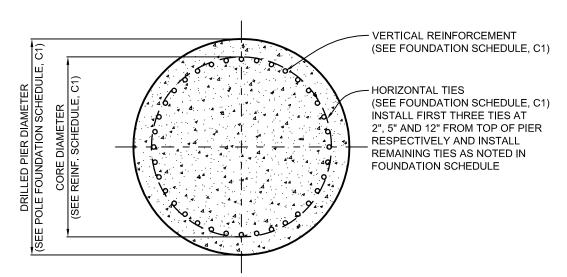
DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY

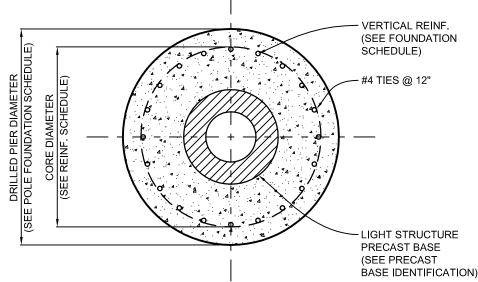
## INSTALLATION NOTE (POLES C1, C2, D1, & D2):

CONCRETE TO BE PLACED IN A CONTINUOUS POUR OR A COLD JOINT WILL BE ACCEPTABLE AT THE BOTTOM OF THE PRECAST BASE. TWO POUR: WITH THE REINFORCEMENT IN PLACE, THE CONCRETE BELOW THE BOTTOM OF THE PRECAST BASE MAY BE POURED AND ALLOWED TO SET UP FOR APPROXIMATELY FOUR HOURS (CURE LONG ENOUGH TO SUPPORT WEIGHT OF PRECAST BASE). THEN THE PRECAST BASE MAY BE SET IN PLACE AND THE REST OF THE CONCRETE CONCRETE BACKFILL POURED.

#### POLES C1, C2, D1, & D2 FOUNDATION SCHEDULE **FORCES DRILLED PIER** REINFORCING **POLE** CORE DESIGNATION MOMENT (M) SHEAR (V) VERTICAL (P) DIAMETER **EMBEDMENT** VERTICAL HORIZONTAL DIAMETER FT-LBS LBS (1.) DEPTH REINFORCING INCH (2.) C1, D1, D2 350,604 5,423 6,161 48 #4 @ 12" 28'-0" 41 20 - #8 28'-0" 41 20 - #8 #4 @ 12" C2 358,750 5,514 6 161

- 1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
- 2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES







OUTSIDE

DIAMETER

PIER DETAIL

	PRECAST BASE IDENTIFICATION					
DRILLED PIER DIAMETER (SEE POLE FOUNDATION SCH.)  POLES C1, C2, D1, & D2  FOUNDATION ELEVATION	PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSII DIAMET
	7B	10,160 LBS	27'-10"	7'-10"	20'-0"	23.75
	REFERENCE POLE ID TABLE ON SHEET C1 FOR POLE TO PRECAST BASE TYPES					

# **PRELIMINARY**

NOT FOR CONSTRUCTION

DRAWING TITLE: POLE AND FOUNDATION

STRUCTURAL ENGINEERS, P.C

CAROLINA

SOUTH

CONWAY

AROLINA

COASTAL

SG

EB,

BASE

FIELD LIGHTING

PROJECT NUMBER

133433

18 JANUARY 2013

DRAWING NUMBER

OF TWO

C2

BETTER IN ACCORDANCE WITH IBC - TABLE 1806.2.

USE OR REPRODUCTION OF THIS INFORMATION OTHER THAN ITS INTENDED PURPOSE FOR THIS PROJECT IS PROHIBITED WITHOUT WRITTEN CONSENT FROM MUSCO SPORTS LIGHTING, LLC.

LIGHT STRUCTURE

STEEL POLE BY

MUSCO LIGHTING

(SEE POLE ID, C1)

LIGHT STRUCTURE

PRECAST BASE BY MUSCO LIGHTING (SEE POLE ID, C1)

SOIL BACKFILL SEE NOTE BELOW

VERTICAL REINF. CORE DIA.

3" CLEAR COVER TYPICAL

(SEE REINF, SCHEDULE)

-UNDISTURBED,

HORIZONTAL TIES (SEE REINF. SCHEDULE)

VERTICAL REINFORCEMENT (SEE REINF, SCHEDULE)

CONCRETE

THE TOP TWO FEET OF ANNULUS MAY BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 OR

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:

IN-SITU SOIL -

REQUIRED DRILLED PIER EMBEDMENT LENGTH
(SEE POLE FOUNDATION SCHEDULE)

FINISHED GRADE ELEVATION (SEE DESIGN NOTES, C1)