HIGHMAST LIGHTING NOTES:

1. Poles are designed to support the following:
   - A. One (1) cylindrical head assembly with a maximum effective projected area of 6 sf and 340 lbs (Max.)
   - B. Eight (8) cylindrical luminaires with a maximum effective projected area of 1.5 sf and 77 lbs each.

2. Shop Drawings: This Index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.

3. High Mast Structure Materials:
   - A. Poles and Bucking Rings:
     - a. Less than 170 MPH: ASTM A1011 Grade 50, 55, 60 or 65
     - b. Greater than or equal to 170 MPH: ASTM A492 Grade 50, 55, 60 or 65
     - c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
   - B. Steel Plates: ASTM A570 or ASTM A36
   - C. Pole Caps: ASTM A1011 Grade 50, 55, 60, or 65 or ASTM B209
   - D. Bolt Metal: C1008
   - E. Stainless Steel Screws: AISI 316
   - F. Anchor Bolts, Nuts and Washers:
     - a. Anchor Bolts: ASTM F1554 Grade 55
     - b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)
     - c. Plate Washer: ASTM A36 (4 per anchor bolt)
   - G. Nut Covers: ASTM B16 (319-F)
   - H. Concrete: Class IV (Drilled Shaft)
   - I. Reinforcing Steel: Specification Section 415

4. Fabrication:
   - A. Welding: Specification Section 460-6.4
   - B. Poles:
     - a. Round or 16-Sided (Min.)
     - b. Pole Taper: Diameter changing at 0.14 inches per foot.
     - c. Two longitudinal seam welds (Max.)
     - d. Length of each weld shall be at least 6".
   - C. Holes for Anchor Bolts: Anchor Bolt diameter plus 6".
     - b. Pole Taper: Diameter changing at 0.14 inches per foot.
     - c. Two longitudinal seam welds (Max.)
     - d. Length of each weld shall be at least 6".
   - D. Hot Dip Galvanize after Fabrication.
   - E. Identification Tag: (Submit details for approval.)
     - a. 2 4 x 4 (Max.) aluminum identification tag.
     - b. Locate on the inside of the pole and visible from the handhole.
     - c. Secures to pole with 1/4" diameter stainless steel rivets or screws.
     - d. Include the following information on the ID Tag:
       - 1. Financial Project ID
       - 2. Pole Type
       - 3. Pole height
       - 4. Manufacturers' Name
       - 5. Fe of Steel
       - 6. Base Wall Thickness
   - F. Coating:
     - A. Galvanize Anchor Bolts, Nuts and Washers: ASTM F2329
     - B. Hot Dip Galvanize all other steel items: ASTM A123

5. Construction:
   - A. Foundation: Specification Section 455 Drilled Shaft, except that payment is included in the cost of the Structure.
     - B. After Installation: Place wire screen between top of foundation and bottom of baseplate in accordance with Specification Section 649-6.

6. Wind Speed by County:
   - 130 MPH
   - 150 MPH
   - 170 MPH
     - Brevard, Broward, Charlotte, Collier, Dinwiddie, Escambia, Indian River, Lee, Martin, Miami-Dade, Monroe, Palm Beach, Sarasota and St. Lucie Counties.
**DESCRIPTION:**

REVISION

LAST REVISED 01/01/17

STANDARD PLANS

FY 2018-19

HIGH MAST LIGHTING

INDEX

715-010

POLE FOUNDATION

Sheet 3 of 6

**BASE PLATE AND ANCHORAGE ELEVATION**

(Conduits Not Shown)

**SECTION A-A**

(T = Wall Thickness)

**SECTION B-B**

(Conduits Not Shown)

**SECTION C-C**

**SECTION E-E**

**FOUNDATION PLAN**

(Anchor Bolts and Conduits Not Shown)

**HANDHOLE RING**

**HANDHOLE DOOR**

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

**SECTION E-E**

**POLE FOUNDATION**

**BASE PLATE AND ANCHORAGE ELEVATION**

(Conduits Not Shown)
For Pull Boxes between Poles refer to Index 715-001.

1. Slabs to be placed around all Poles and Pull Boxes.

2. Specifications For Road And Bridge Construction.

3. Interrod distances must be a minimum of 10 ft.

4. Minimum of (6) 1/2" x 20' approved ground rods.

5. Schedule 40 PVC conduit with 4/0 Cu bare ground wire.

6. Schedule 80 PVC conduit. Circuit conductors and conduit size as shown in plans (Typical).

NOTES:

1. At all pull boxes and pole bases, ends of conduit shall be sealed in accordance with Section 630 of the Standard Specifications For Road And Bridge Construction.

2. Slabs to be placed around all Poles and Pull Boxes.

3. For Pull Boxes between Poles refer to Index 715-001.

WIRING DETAILS
The contractor's attention is directed to those plan sheets detailing the mounting of luminaires at the pole top. Particular attention is directed to alignment of luminaire light distributions. Special attention must be exercised in the physical alignment of these luminaires to ensure that the approved photometric layout is physically produced at each lighting standard in the field. A marking shall be placed on the external face of the refractor to allow visual inspection of alignment. The marking shall correspond to the 0° axis of the refractor.

Luminaire support ring

2" slip fitter assembly (equally spaced around ring)

Pole Cable with Female Plug

Circuit Breaker with Female Plug

Positive drive reversible winch

Supply cable receptacle

Receptacle

Remote control switch

Female Plug

Conduit

Lift cable sheaves

Grounding Array

#6 Bonding Ground

480V Phase to Phase

20' Ground Rod

Pole Cable

Pole Cable Terminator

600 Volt rated Pole Cable. Size of conductors to be determined by luminaire load.

600 Volt rated Circuit Breaker Cable. Size of conductors to be determined by luminaire load.

Luminaire support ring

Luminaire Light Distribution

2" Slip/Fitter Assembly

See legend for number of luminaires, lamp wattage and light distribution.
NOTES:

1. Use compacted select material in accordance with Index 120-001.
2. Concrete shall be Class K5 with a minimum strength at 28 days of f’c = 2.5 ksi.
3. Outside edge of slab shall be cast against formwork.
4. The pull box shown is 13’ x 24’; others approved under Section 635 of the Standard Specifications may be used.
5. Slabs to be placed around all Poles and Pull Boxes. In urban areas or where space is limited slab dimensions may be adjusted as shown in the plans.
6. Concrete for slabs around poles and pull boxes shall be included in the price of pole or pull box.
7. The expansion joint shall consist of 1/2” of closed-cell polyethylene foam expansion material. The top 1/2” of expansion material shall be removed after pouring the slab and sealed with an APL approved Type A sealant meeting the requirements of Section 932.

SLAB DIMENSIONS

SHALLOW LOCATION

PULL BOX LOCATION

SECTION C-C

SLAB DETAILS

SLAB DETAILS