ROADWAY ALUMINUM LIGHTING POLE NOTES


2) Attaches were developed assuming the following Luminaires properties: Effective Projected Area of 1.55 ft² and Dress coat stresses at 75 pounds (max.)


4) See Standard Index No. LT005 for grounding and wiring details.

5) Foundation Materials:
   a. Reinforcing Steel: ASTM A615 Grade 60.
   b. Concrete: Class II, 2,400 psi (16.6 MPa) minimum. Compressive Strength at 28-days for all environmental classifications.
   c. Anchor Bolts: ASTM F1533 Grade 55 with ASTM A453 Grade 54 nuts and ASTM F436 Type I washers (galvanized in accordance with ASTM F2329-00).

6) Light Pole Specifications:
   a. Pole(s): ASTM A325, Grade 56.
   c. Finishing for pole and arm: 50 grit sandblasted finish.
   h. Weld Metal: EN40B.
   i. Stake Base Connection Bolts: ASTM A325, Grade 56, ASTM A453 Grade 54 nuts and ASTM F436 Type I washers (galvanized in accordance with ASTM F2329-00).
   j. Stainless Steel Fasteners and Hardware: ASTM A430, Grade 304.
   k. Aluminum alloy 6063-T4 condition and heat treated in accordance with ASTM B519 to T6.

7) Pole Notes:
   a. Tapered to provide a top outside diameter 0.811 in. of 6 in. with a base 2.00 in. of 10 in. Portions of the short near the base plate and at the arm connections may be held constant at 10 in. and 6 in. respectively to simplify fabrication.
   b. Transverse welds are allowed only at the base.
   c. Poles constructed out of two or more sections with overlapping splices are not permitted.
   d. Equip poles with a damping device if the pole location is within 5 miles of the coastline.

8) Furnish each pole with a 2" x 4" (max) aluminum identification tag. Submit details for approval. Secure to Transformer Base with 0.125" stainless steel nuts or screws. Locate identification tag on the inside of the base and visible from the door opening. Include the following information: Project Number, Pole Designation, (e.g., Pole Pay Item number), Manufacturer’s Name & Certification number, Pay Item number.

9) Manufacturers seeking approval for a Standard Roadway Lighting Pole assembly for inclusion on the Qualified Products List must submit a QPL Product Evaluation Application along with design documentation and drawings showing the product meets all specified requirements of the Index.
   a. For Frangible Transformer Base Design, provide design calculations and other test results indicating that the components are capable of providing the required capacity. Certify that the frangible Transformer Base conforms to the current F492 requirements.
   b. Include damping device information, details and performance data with the QPL application.
   c. For alternate foundations, include design calculations and drawings showing that the product meets the requirements of this Index, FDOT Structures Manual and Specification 775.

NOTE:
STANDARD ROADWAY ALUMINUM LIGHTING NOT TO BE USED ON BRIDGES OR WALLS.
**ARM TUBE EXTRUSIONS NOTES:**

At the pole connections, provide arm tube extrusions with dimensions as shown in the ARM SECTION and as tabulated in the ARM DATA TABLES. Uniformly transition elliptical sections to a cylindrical section at the arm connection.

The fabricator may substitute elliptical cross sections other than those tabulated, provided the section properties about the vertical axis and the area of the section equal or exceed that of the required section, and provided the wall thickness is a minimum of 1/8" nominal and within the Aluminum Association Tolerances. The outside diameter about the minor axis should be held at 23/8" at the upper and lower arms.

**ARM TABLE**

<table>
<thead>
<tr>
<th>ARM</th>
<th>LENGTH (FT)</th>
<th>UPPER ARM</th>
<th>LOWER ARM</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>6</td>
<td>2.38</td>
<td>2.38</td>
</tr>
<tr>
<td>150</td>
<td>10</td>
<td>1.63</td>
<td>1.63</td>
</tr>
<tr>
<td>130</td>
<td>10 &amp; 12</td>
<td>1.63</td>
<td>1.63</td>
</tr>
<tr>
<td>150</td>
<td>12 &amp; 15</td>
<td>1.63</td>
<td>1.63</td>
</tr>
</tbody>
</table>

* Increase member wall thickness as necessary to meet minimum requirements of the welding code for the connection weld sizes shown in the Arm and Pole Tables.

**ARM DETAILS**

- **Provide 1/8" Ø Stainless Steel Bolts with Key Nuts and 1/4"-20 D.Ø. Flat Washers and a Split Lockwasher Each Side of Bolt where Slotted."
**SECTION C-C**

**TOP VIEW**
TRANSFORMER BASE

**BOTTOM VIEW**
TRANSFORMER BASE

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**POLE BASE ELEVATION**

- **Conduit**
- **Minimum Embedment**
- **Class II Foundation**
  - Concrete to be cast-in-place or precast with "Flexible Fill Block".
- **6-1/2" Ground Wire**
  - Placed in Conduit
- **4-7 Bars**
  - Equally Spaced

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**POLE TABLE**

<table>
<thead>
<tr>
<th>#200 SPEED</th>
<th>ARM LENGTH (FT)</th>
<th>POLE VALE (PS)</th>
<th>UPPER FIELD (MN)</th>
<th>LOWER FIELD (MN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>22.50 &amp; 19.50</td>
<td>40 &amp; 45</td>
<td>0.156</td>
<td>0.156</td>
</tr>
<tr>
<td>115</td>
<td>22.50 &amp; 19.50</td>
<td>50</td>
<td>0.186</td>
<td>0.186</td>
</tr>
<tr>
<td>120</td>
<td>22.50 &amp; 19.50</td>
<td>40</td>
<td>0.256</td>
<td>0.256</td>
</tr>
<tr>
<td>120</td>
<td>22.50 &amp; 19.50</td>
<td>45</td>
<td>0.250</td>
<td>0.250</td>
</tr>
<tr>
<td>120</td>
<td>22.50 &amp; 19.50</td>
<td>50</td>
<td>0.250</td>
<td>0.250</td>
</tr>
</tbody>
</table>

**NOTE**
Pole wall thicknesses shown in the POLE TABLE are nominal and shall be as determined by the Aluminum Association. Thicker walls are permitted and tapered walls may be used provided the minimum wall thicknesses are not violated.

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**FOUNDATION TABLE**

<table>
<thead>
<tr>
<th>#200 SPEED</th>
<th>MOUNTING HEIGHT (MN)</th>
<th>POLE VALE (PS)</th>
<th>UPPER FIELD (MN)</th>
<th>LOWER FIELD (MN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>115</td>
<td>40</td>
<td>45</td>
<td>6</td>
<td></td>
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<td>45</td>
<td>6</td>
<td></td>
</tr>
<tr>
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<td>40</td>
<td>45</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>40 &amp; 45</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Depths shown in table are for grades flatter than 1:4 for grades up to 1:2 and 2:4 to foundation depths shown in table.

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* At the Option of the Contractor, #200 Spiral Wire @ 6" Pitch, Three Flat Turns Top and One Flat Turn Bottom may be utilized in lieu of Specification.