1. Ensure base plate and pole section A are fabricated from ASTM A 572 and have a minimum yield strength of 50 ksi. Ensure steel for remainder of pole sections conforms to ASTM A 522, or an approved alternate, and has a minimum yield strength of 50 ksi. After fabrication, ensure ASTM designations and yield strengths for steel components are shown on the shop drawings.

2. High mast pole design is in accordance with the 2020 AASHTO standard specifications for structural supports for highway signs, luminaires, and traffic signals and in accordance with appendix C of the AASHTO specifications. Fatigue importance category I (with a natural wind gust fatigue loading of 0.5 ksi psf with Cda equal to 1.0 for the entire pole, and eight luminaires (8 square feet total effective projected area).

3. Use high mast pole sections that are round or have a minimum of 16 sides. Diameters shown on the outside dimension for round sections and the outside corner to corner dimension for multi-sided sections. The sections have a 0.5 in./ft taper (corner to corner taper value for multi-sided sections).

4. Use pole sections with the shown diameters, lengths, and wall thicknesses, except as noted below. Excluding the top section, longer sections than shown with corresponding smaller top diameters than shown may be supplied resulting in increased overlap lengths to account for fabrication tolerances. Minimum fabrication overlap lengths shown are approximately 10 percent of the AASHTO specifications' required lengths and are shown minimum installation overlaps are attained, apply necessary forces to increase these overlaps to provide a tight fit between the pole sections.

5. For multi-sized sections, ensure the corner bend radius is not less than 0.75 and is specified on the shop drawings.

6. See the special provision for "High mast lighting" for additional requirements for pole and anchor bolts.

7. Ensure the pole fabricator supplies steel construction templates for positioning anchor bolts.

8. Tighten anchor bolt top nuts in accordance with the requirements in the special provision for "High mast lighting." Wrench tighten all leveling nuts against the base plate before tightening the top nuts.

9. To provide a seal against blown dust, place a ring of expanding foam sealer by accessing the service portal. Leave the entire front width of the leveling nuts visible after its placement.

10. Ensure anchor bolts conform to ASTM F 1554 supplementary requirements 0.5 grade 10s for charpy impact requirements at -20 degrees F. Provide anchor bolt certified test reports to the state bridge engineer before shipment of bolts.

11. An eight-sided base plate may be substituted for a 30-degree circular base plate. Ensure minimum distance from centerline bolt hole to edge of plate is 3" for the eight-sided base plate. The surface around each bolt hole ensures the base plate is flat and smooth for anchor bolt nuts and washers.

12. Ensure service portal is centered between anchor bolts as shown in section A-A and this information is shown on shop drawings.

### 120' POLE DATA

#### MATERIAL DATA

<table>
<thead>
<tr>
<th>STEEL COMPONENTS</th>
<th>ASTM DESIGNATION</th>
<th>MIN YIELD (FY) (KSI)</th>
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<tbody>
<tr>
<td>SECTION A</td>
<td>A 572</td>
<td>50</td>
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<tr>
<td>SECTION B-0</td>
<td>A 572, A 588 OR APPROVED ALTERNATE</td>
<td>50</td>
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<tr>
<td>BASE PLATE</td>
<td>A 572</td>
<td>50</td>
</tr>
<tr>
<td>ANCHOR BOLTS</td>
<td>F 1564</td>
<td>105</td>
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<td>HARDENED WASHERS</td>
<td>F 436</td>
<td>50</td>
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<td>MISC STEEL</td>
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<tr>
<td>SERVICE PORTAL</td>
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</table>

### BASE DETAIL

- **Base Detail**
- **Welded Connection at Pole Base**
- **Base of Bottom Pole Section**
- **Concrete Pad**
- **Concrete Pad (see sheet no. 2)**
- **Top Dia (7")**
- **Top Dia (7")**

### THREE SECTION POLE

- **Service Portal (see sheet no. 2)**
- **Service Portal**
- **Top Dia (7")**
- **Top Dia (7")**
- **Concrete Pad**
- **Concrete Pad**

### FOUR SECTION POLE

- **Service Portal (see sheet no. 2)**
- **Service Portal**
- **Top Dia (7")**
- **Concrete Pad**
- **Concrete Pad**

### REVISIONS

- **Revised Anchor Bolt Projection Length:** 07-SEP-06
- **Added Minimum Installation Overlap Lengths:** 23-SEP-06
- **Added Bolt Projection Below Ring Plate and Note No. 9:** 27-JUL-06

### WYOMING DEPARTMENT OF TRANSPORTATION

- **High Mast Lighting Standard Details**
- **Drawn by:** LAF / 760
- **Date:** 23-JUL-04
- **Check by:** PDH / JAB

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**Note:**

- Ensure base plate and pole section A are fabricated from ASTM A 572 and have a minimum yield strength of 50 ksi. Ensure steel for remainder of pole sections conforms to ASTM A 522, or an approved alternate, and has a minimum yield strength of 50 ksi. After fabrication, ensure ASTM designations and yield strengths for steel components are shown on the shop drawings.
- High mast pole design is in accordance with the 2020 AASHTO standard specifications for structural supports for highway signs, luminaires, and traffic signals and in accordance with appendix C of the AASHTO specifications. Fatigue importance category I (with a natural wind gust fatigue loading of 0.5 ksi psf with Cda equal to 1.0 for the entire pole, and eight luminaires (8 square feet total effective projected area).
- Use high mast pole sections that are round or have a minimum of 16 sides. Diameters shown on the outside dimension for round sections and the outside corner to corner dimension for multi-sided sections. The sections have a 0.5 in./ft taper (corner to corner taper value for multi-sided sections).
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- For multi-sized sections, ensure the corner bend radius is not less than 0.75 and is specified on the shop drawings.
- See the special provision for "High mast lighting" for additional requirements for pole and anchor bolts.
- Ensure the pole fabricator supplies steel construction templates for positioning anchor bolts.
- Tighten anchor bolt top nuts in accordance with the requirements in the special provision for "High mast lighting." Wrench tighten all leveling nuts against the base plate before tightening the top nuts.
- To provide a seal against blown dust, place a ring of expanding foam sealer by accessing the service portal. Leave the entire front width of the leveling nuts visible after its placement.
- Ensure anchor bolts conform to ASTM F 1554 supplementary requirements 0.5 grade 10s for charpy impact requirements at -20 degrees F. Provide anchor bolt certified test reports to the state bridge engineer before shipment of bolts.
- An eight-sided base plate may be substituted for a 30-degree circular base plate. Ensure minimum distance from centerline bolt hole to edge of plate is 3" for the eight-sided base plate. The surface around each bolt hole ensures the base plate is flat and smooth for anchor bolt nuts and washers.
- Ensure service portal is centered between anchor bolts as shown in section A-A and this information is shown on shop drawings.
## Drilled Shaft Data

<table>
<thead>
<tr>
<th>High Mast Lighting Standard Unit No.</th>
<th>Drilled Shaft Length</th>
<th>Vertical Reinforcing Length</th>
<th>Spiral Turns</th>
<th>Notes</th>
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## Drilled Shaft Foundation

- **4'-0" Dia. Drilled Shaft & Service Portal**
- **Opt. Const. Jt.**
- **No. 4 Spiral Core - 42" Pitch - 6'**
- **1/2 Turns Top Only**
- **(Typ. at Inside of Spiral)**
- **1" (Typ. at inside of spiral)**

## Concrete Pad Detail

- **Service Portal Detail**
- **SECTION B-B**
- **(Showing Tie Off Loops Orientation)**
- **3'-0" Dia.**
- **4'-0" Dia.**
- **Opt. Const. Jt.**
- **No. 4 Spiral Core - 42" Pitch - 6'**
- **1/2 Turns Top Only**
- **(Typ. at Inside of Spiral)**

## Notes

1. See special provision for "High Mast Lighting" for additional requirements for service portal.
2. See sheet no. 1 for location of concrete pad.

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**Revisions**

- **27-JUL-09**
- **16-JAN-07**
- **27-JUL-06**
- **See special provision for "High Mast Lighting" for additional requirements for service portal.**
- **See sheet no. 1 for location of concrete pad.**