

## Index 521-660 Light Pole Pedestal - Bridge

### Design Criteria

***AASHTO LRFD Bridge Design Specifications; Structures Design Guidelines (SDG)***

### Design Assumptions and Limitations

Use this Index with Index 521-422, 521-423, 521-427, 521-428, 521-820, 515-021, 521-510 as appropriate.

Anchor Bolts were designed for Design Wind, Bridge Deck Height (above MLW), Luminaire Mounting Height, and Luminaire Arm Lengths of Standard Index 715-040 Light Poles.

For poles at or below elevations in the table, 4~1" diameter anchor bolts meet design criteria. Where elevations are 75 feet or less but greater than those shown in Table 1, 4~1 ¼" diameter anchor bolts are required.

Design of the additional bridge deck reinforcement is based on the minimum transverse top deck reinforcing required by the **SDG** for the following unfactored loads:

Axial Dead Load = 1.56 kip

Wind Load Moment about Transverse Axis = 40.6 kip-ft

Wind Load Moment about Longitudinal Axis = 28.3 kip-ft

Dead Load Moment about Longitudinal Axis = 1.69 kip-ft

Torsion about Pole Axis = 3.56 kip-ft

Maximum Shear = 1.38 kip

Locate pedestals near a substructure support to minimize vibration of the light poles due to traffic live loads. Locate the centerlines of pedestals a minimum 3'-10" away from centerlines of open joints in railings and ends of railings.

### Plan Content Requirements

In the Structures Plans:

Show Light Pole Pedestals on Plan and Elevation, Superstructure and Approach Slab Supplemental Detail sheets. Use stations or longitudinal dimensions along bridge to define pedestal locations. Include anchor bolt diameters.

### Payment

No separate payment is made for Light Pole Pedestals. See Payment Note on the **Standard Plan**.