

Chapter 4

Bridge Program Drawings

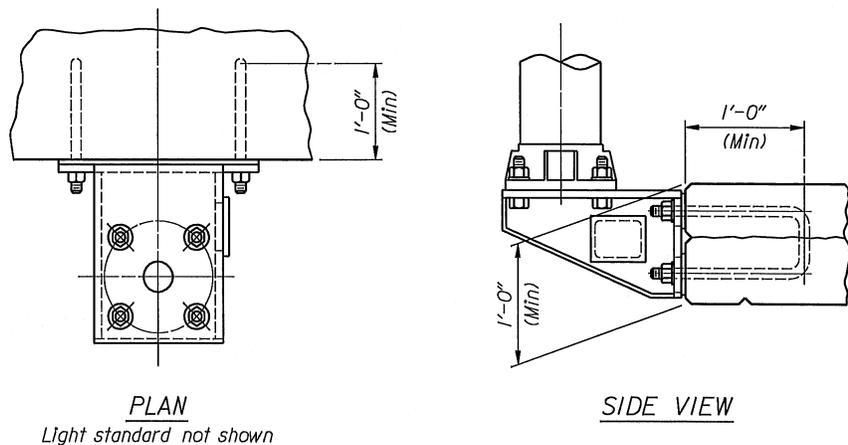
Section 4.12-Lighting

Introduction

Lighting systems are provided for public safety. Oftentimes, lighting requirements are included in the Engineer's Recommendations, but a scaled Preliminary Layout must be sent to the Traffic Program (see Chapter 6 – Project Management). The Traffic Program will provide the required number and spacing of light standards. Light standard supports on bridges are spaced to provide the optimum illumination. The types of light standard supports used are the Two-U-Bolt Anchorage System and the Four-Bolt Anchorage System. These are cantilevered off the edges of the deck to keep the light standard behind the railing. All light standards are electronically connected by a rigid conduit system placed in the slab and/or curb. Light standard supports shall not be provided for future use.

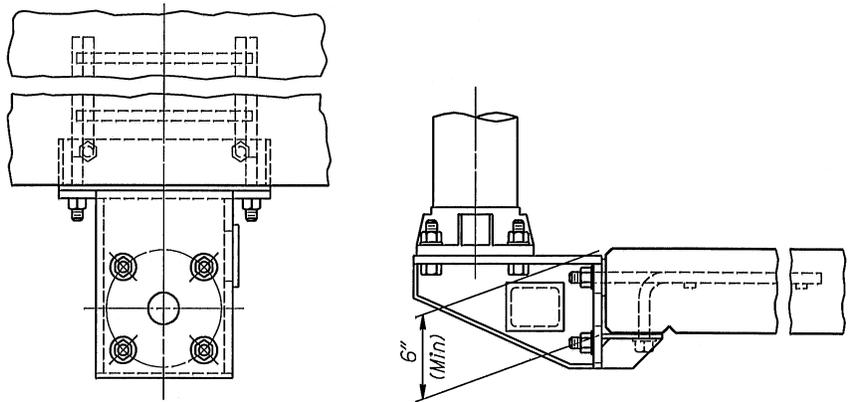
Light Standard Support Types

The **TWO-U-BOLT ANCHORAGE SYSTEM** is used when the minimum dimensions shown below are adequate to provide for the shape of the U-bolts. Examples of such anchorage areas are curb and slab, sidewalk and slab, wingwalls, or retaining walls. When the Two-U-Bolt Anchorage System is used, the ends of the U-bolts extend through the side of the structure. This anchorage system can be altered to meet the situation at hand.



The **FOUR-BOLT ANCHORAGE SYSTEM** is used when the

minimum dimension shown below is limited. When the Four-Bolt Anchorage System is used, the ends of two top bolts extend through the side of the slab and the ends of two bottom bolts extend through the bottom of the slab. A single U-bolt is sometimes used to replace the top bolts extending through the side of the slab, depending on the fabricator. This anchorage system can also be altered to meet the situation at hand.



PLAN

Light standard not shown

SIDE VIEW

General Design and Detail Information

BEVELED PLATES should be used if the bridge grade is greater than or equal to 1.50%.

Provide four of each of the following **SHIMS** per light standard support: $\frac{1}{16}$ " thick, $\frac{1}{8}$ " thick, and $\frac{1}{4}$ " thick.

Standard Sheets

Name	Description
LIGHT2BLT_V8	Two-U-bolt anchorage system (bolts through sidewalk and slab)
LIGHT4BLT_V8	Four-bolt anchorage system (bolts through slab)