

## SECTION 11 - ALUMINUM DESIGN

### 11.1 GENERAL

The purpose of this section is to provide a location for indexing aluminum design, material fabrication and construction specifications.

### 11.2 BRIDGES

The *Specifications for Aluminum Structures*, Fifth Edition, December 1986, published by the Aluminum Association, Inc., as it applies to “Bridge and Similar Type Structures”, are intended to serve as a standard or guide for the preparation of plans and specifications and as a reference for designers, fabricators, and erectors of aluminum bridge and railing structures and their aluminum structural components. Welding shall conform to Section 10 of the current AWS D1.2 *Structural Welding Code—Aluminum*, and workmanship requirements for Class II structures.

### 11.3 SOIL-METAL PLATE INTERACTION SYSTEMS

The design of aluminum soil-metal plate interaction systems shall be in accordance with Section 12.

### 11.4 STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS

The AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals* shall be used for the design and preparation of plans and specifications, fabrication and erection of aluminum sign supports luminaires, and traffic signals. Welding shall conform to Section 10 of the current AWS D1.2 *Structural Welding Code—Aluminum*, and workmanship requirements for Class I structures. Special consideration may be given to certain support structures, which may be designed and fabricated according to the provisions of Article 11.2, Bridges.

### 11.5 BRIDGE RAILING

The design of aluminum bridge railing shall be governed by Article 2.7; the fabrication and erection shall conform to Section 6 of the *Specifications for Aluminum Structures*, Fifth Edition, 1986; and the welding shall conform to Section 10 of the current AWS D1.2 *Structural Welding Code—Aluminum*, and workmanship requirements for Class II structures. The AASHTO *Roadside Design Guide* should be consulted for guidance on the safety considerations in the design of bridge rail.