



## *Local Programs Procedures*

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### **LPP 95 - 05 Traffic Signal Controllers**

**References: Assembly Bill No. 3418, Chapter 1297  
Vehicle Code Sections 21401 & 21374**

**Effective Date: March 17, 1995      Approved: \_\_\_\_\_  
Chief, Office of Local Programs**

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**This LPP advises state and local agency personnel that the State of California is establishing new standards for traffic signal controllers.**

#### **EXISTING PROCEDURES**

**Currently the State allows only those official traffic control devices that conform to existing Caltrans standards and specifications.**

#### **NEW PROCEDURES**

**Effective January 1, 1996, any newly installed or upgraded traffic signal controller must be of a standard, traffic-signal communication protocol capable of two-way communications. Additional information is contained in the attached set of documents:**

- 1. Information for Local Agencies and Vendors**
- 2. Interpretation of the Intent of the Legislation**
- 3. Assembly Bill No. 3418**
- 4. AB 3418 Implementation Committee Directory**

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**Increased costs to local agencies resulting from this procedure may be reimbursed from the State Mandates Claims Fund. Local agencies perceiving that they have increased costs as a result of this new legislation should file a claim with the State Commission on State Mandates. To obtain information on filing a claim, please contact the Commission at (916) 323-3562.**

**Attachments**

**Information for Local Agencies and Vendors**  
**Regarding Implementation of AB 3418.**

**The Problem Addressed by AB 3418**

In most urban areas, and even in rural areas, adjacent jurisdictions abut and it is often necessary, or at least desirable, for adjacent signals to communicate with a master operated by another agency, as discussed below. That communication is generally not possible today due to incompatible communications protocols used by the controllers adopted by different agencies.

Examples of adjacent signals operated by different jurisdictions include freeway ramp signals adjacent to city signals on a local street, signals operated by two adjacent cities, and county signals on the outskirts of a "rural" city. Improved coordination of such signals is the most common reason for needing compatible communications.

**Background**

In 1992, working with other local and enforcement agencies, Riverside County took the lead and established a committee to improve traffic signal coordination as part of the bigger effort to improve traffic safety in the county.

The traffic signal coordination committee identified the various issues related to coordination between Model 170 and National Electrical Manufacturers' Association (NEMA) controllers. However, the committee was not able to implement any resolutions among local agencies, the California Department of Transportation (Caltrans) and the signal controller manufacturers. The Riverside County Transportation Department then decided to initiate legislation that would require two-way communication between traffic signal controllers that are newly installed. The result was the passage of Assembly Bill 3418. A copy of the bill is attached for your reference.

**Caltrans' Approach to AB 3418**

Caltrans is the state agency responsible for implementing Assembly Bill 3418, which requires use of a standard communications protocol in traffic signal controllers. To assist in that process, Caltrans has elected to use a committee composed of representatives of interested parties. That committee, referred to as the AB 3418 Implementation Committee, is in the process of developing the standard protocol to be ready for use in controllers installed after January 1, 1996, as required by the legislation. The members of the committee are shown in the attached directory.

Although AB 3418 is explicit about the date it is to take effect, the nature of the communications protocol and how it is to be implemented are not clearly stated.

**No distinction is made in the legislation (nor is any distinction made by the AB 3418 committee or Caltrans) between different types of controllers, including those adhering to the NEMA TS-1 or TS-2 standards and those adhering to Caltrans' Model 170 or 2070 specifications. All controllers are treated equally and the protocol is equally applicable to both NEMA and Model 170 controllers, as well as controller software developed by any agency, software vendor, or controller manufacturer.**

**The first task undertaken by the committee was the preparation of an Implementation Statement (see second enclosure), which outlines the way in which the legislation has been interpreted and the way in which it will be implemented by Caltrans.**

**It should be noted that a comprehensive standard protocol development effort is currently being undertaken by the National Traffic Control and Intelligent Vehicle Highway Systems Communications Protocol Committee led by NEMA. This protocol is likely to become a national standard. The AB 3418 committee intends to adopt message formats matching those planned by NTCIP where possible.**

**Please pass this information on to any other persons or agencies to whom it may be of interest.**

**If you have any questions, or need additional information, you are welcome to call any of the committee members listed in the directory.**