

**SECTION 13
TRAFFIC SIGNAL DESIGN**

13.1 DESIGN STANDARDS

Traffic signals, intersection safety lighting and electrical systems shall be designed in accordance with Part 4 of the California Manual on Uniform Traffic Control Devices for Streets and Highways, Sections 9-06 thru 9-13 of the California Traffic Manual, California Signal and Lighting Design Guide, the applicable State Plans, and the applicable provisions of Section 86, "General" and Section 87, "Electrical Systems", of the State Specifications.

13.2 GENERAL PLAN REQUIREMENTS

The traffic signal/safety lighting plans shall include pertinent traffic signal notes, in addition to all designed features, for the project.

13.3 PULL BOXES

Pull boxes for traffic signal shall be designed to locate outside all access ramp areas. Such requirements shall be stipulated on the traffic signal/safety light plans as a special note.

13.4 SIGNAL INTERCONNECT

All traffic signals shall be connected to the City's Traffic Management Center (TMC) via signal fiber optics to the nearest traffic signal. The signals shall be connected using a 96 strand Single Mode Fiber Optic Cable (SMFO) and be placed in a conduit that is at least two and a half inches (2.5") internal diameter. Conduit and SIC shall meet all requirements in the most recent version of the State Standard Plans.

For new traffic signal construction, fiber optics shall be installed in the cabinet in such a way to allow communication between the City's Traffic Management Center and the signal using a modem and network switch from the City's Authorized equipment list. The City shall be consulted prior to design and will provide the most current pre-qualified list.

13.5 LIGHTING TYPE CONSISTENCY

For those areas requiring decorative street lights in Section 5, "Street light Design" interior signalized intersections shall be designed to reflect the decorative type of the development.

A. Zone 2

1. Safety Lighting - All luminaire arms and fixtures mounted on traffic signal poles at intersections in the Zone 2 area shall be designed in accordance with designated requirements unique to the area.
2. Coating - All traffic signal poles, mast arms, luminaire arms, and internally illuminated street name sign support arms at intersections in the Zone 2 area shall be required with a stock color black super-durable TGIC polyester powder coat finish prior to installation. Such requirements shall be stipulated on the traffic signal/safety lighting plans as a special note.

B. Common Type (CT)

1. Safety Lighting - Standard safety lighting shall be used in areas designated for common type street lights.
2. Finish - Standard galvanized steel poles, mast arms and luminaire arms shall be used.