

## CHAPTER 6 SIGNALS

### 6.01 General

Signals shall be installed per the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system of controllers, signals, and appurtenances as required by the City.

### 6.02 Design Standards

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT Design Manual, the WSDOT/APWA Standard Specifications and the MUTCD. At specific locations, railroad preemption may be required.

All public signal designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All applicable requirements set forth in Section 1.06 shall be included. Approval of plans and specifications shall be obtained before construction commences.

### 6.03 Induction Loops

Induction loops shall be constructed per WSDOT/APWA Standard Specification 8-20.3(14)C, WSDOT Standard Plan J-8a, and the following:

Loops shall not be cut into final lift of new asphalt.

Loops shall be preformed in crushed surfacing top course (CSTC) before paving or shall be cut in existing asphalt or leveling course to subbase before intersection is overlaid.

### 6.04 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed by the State of Washington. Staking shall be maintained throughout construction.

A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of signals shall be as follows:

Location, with cut or fill to center of all pole bases;

Location of junction box;

Location of all corners of controller base;

Location of service disconnect;

Location of conduit crossings.

## **6.05 Testing**

All signals shall be subject to any necessary electrical inspections as well as requirements as set forth in the WSDOT Design Manual and the WSDOT/APWA Standard Specifications.

A signal system shall not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30-day "check-out" period as outlined below.

Controller and cabinet testing will be required at WSDOT District 3 laboratory and/or the City of Centralia. All specifications and material samples shall be submitted to the City for review and approval prior to installation. As-built signal drawings with all equipment types listed shall be submitted to the City prior to final acceptance.

## **6.06 Check-Out Procedure**

The contractor shall call for an intersection check-out after completing the controller cabinet installation along with all other signal equipment complete with wiring connections. All parts and workmanship shall be warranted for one year from date of acceptance.

New signals shall operate without any type of failure for a period of 30 days. The contractor shall have technical personnel available to respond to system failure within 24 hours during the 30-day "check-out" period.

Failure of any control equipment or hardware within the "check-out" period shall restart the 30-day "check-out" period.