

Traffic Signal Turn On Process

Project ID _____ Project Title: _____

Project Manager's Name: _____ Phone # _____

PROJECT MANAGER OR INSPECTOR

In general, the Traffic Signal Turn On process is the following:

1. **Signed Plans Per Turn On Checklist** – Project Manager shall provide the contractor with the Signal Pre-Turn On Checklist at NTP. The approved plans shall be sent to the Traffic Engineering's (TE's) Traffic Operations (TOC) (Ryan and Evangeline) and the Signal & Light Maintenance sections (Larry). Plans must be sent as soon as possible after final signature.
2. **Timing and Cabinet** – Upon request, TE TOC will create timing for the intersection. Timing will take approximately 30 days. When completed, the timing files will be sent to the Project Manager. Project Manager will forward the timing to the Contractor. The manufacturer shall request the timing as part of the configuration process or thru submittals. The new traffic signal cabinet shall be fully assembled, configured, and tested at supplier/contractor's facility with the city provided signal timing. The Contractor shall notify the City Inspector of any issue with cabinet and timing test. After the cabinet is properly configured, it will be delivered directly to the intersection. See Standard Specification Section 34-24. It shall not be tested at City Signal Shop.
3. **Field Cabinet Functional Test** - Once the cabinet is installed at the traffic signal intersection, energized, and field wiring terminated and labeled, the Contractor shall notify the City Inspector to schedule a functional test of the controller and cabinet through the inspector. The test will be performed by Traffic Signal Shop will take a minimum of 5 days. Controller and Cabinet must pass this test prior to moving to next step. (Section 34-24).
4. **Traffic Signal Pre-Turn On Inspection Checklist** - Contractor must go thru the City of Sacramento Checklist to ensure all items shown on the plans are present, video detection programmed, EV configured and working correctly. An Inspector may be present at this phase to assist. (Section 34-24)
5. **Pre-Turn On Inspection** - After the checklist is completed, the Contractor can schedule a Pre-Turn On Inspection meeting through the inspector. City Inspector will coordinate the inspection with the City. At the Inspection meeting, the contractor will be prepared to perform functional tests of all items shown on the checklist with City Staff. (Section 34-25)
6. **Final Turn On**– After successful completion of the Pre-turn On checklist, the Contractor can request a final turn on date. (Section 34-26).
 - Date of Final Turn ON is subject to the approval of the City Traffic Engineer.
 - Final Turn On shall be scheduled on Tue, Wed, Thur. No earlier than 9am.
 - Inspector is to ensure that City Staff (Signal Shop, TOC) are present at Final Turn On.
 - Limit lines, Stop Bar and Crosswalk shall be installed no earlier than 1 business day prior to Final Signal Turn On.

Traffic Signal Pre-Turn On Inspection Checklist

—General Information—

Instructions: The Contractor is required to complete this checklist section for each individual signal prior to requesting the Pre-Turn On Inspection by the City of Sacramento Traffic Signal Operation (TSO) and the Signal & Light Maintenance (SLM). Sections. Pre-Turn On Inspection must be minimum of 5 working days before signal turn on or cut over. If inspection fails, then the signal turn-on shall be postponed for minimum of 5 days and the failure corrected. The check list does not represent that the contractor has meet all requirements in Plans, Standards and Special Provisions. No Pre-Turn On Inspection shall occur without this form being completed and submitted. Please refer to Section 34-24, 34-25 and 34-26 of the City of Sacramento Standard Specifications published November 2020 for information on cabinets and signal turn on.

—Project Information—

Instructions: The Electrical Contractor is required to complete the project information section at the Pre-construction Meeting or at Notice to Proceed (NTP). The form in PDF format with completed project information section and approved plans shall be sent to Prime Contractor, Project Manager & City Inspector & City's TSO-SLM sections @ elucaslee@cityofsacramento.org

Project Name:	CIP Number:
Electrical Contractor and Forman:	City Project Inspector:
Electrical Contractor Email Address:	City Project Manager:
Intersection / Traffic Signal Location:	Date NTP:

—Traffic Signal Cabinet functional test Checklist —

Instructions: For newly constructed traffic signal cabinets the contractor is to provide a fully tested and function traffic signal cabinet to be installed at the intersection. The Cabinet and Controller testing shall meet City Standard Equipment specifications. Per Sacramento Standard Specifications section 34-24, the contractor shall make the cabinet ready for functional test 5 days before Pre-Turn On inspection and inform City inspector. The Cabinet is required to pass test before the contractor can move to the next step.

Y N/A

- Check** Cabinet and controller type is per plans, standards, and special provisions.
- Check** Cabinet and Controller are configured, programmed, and passed the functional test Section 34-24.
- Check** MMU/CMU is programmed properly.
- Check** Controller has latest D4 software is installed.

— Pre-Turn On Inspection Checklist—

Instructions: The Contractor is required to check off on all the items below before requestion Pre-Turn On inspection by the City's TSO-SLM sections. If it becomes apparent during the inspection that the Contractor did not verify these items, the City inspection team will cease the inspection and require the contractor to submit a new request. Active traffic signals may require a modified process and City's TSO-SLM sections will work with inspector to coordinate a correct application.

Y N/A

Intersection Power

- Check** intersection has SMUD power.

Operations and Components

- Check** All cabling is landed labeled and neat.
- Check** Cabinet is grounded.
- Check** Cabinet and Controller have passed Functional test.
- Check** Surge suppressor powered strip.
- Check** Network Switch installed and powered from power strip.
- Check** Fiber Optic cabling is installed and terminated.
- Check** Detector cards are installed and operating.
- Check** CCTV equipment is installed and powered from power strip.
- Check** Battery back-up system, if required is installed and was

Pull Boxes

- Check** Pull boxes #5 and #6 at traffic signal have standard concrete lids.
- Check** Pull boxes #5 and #6 for street lighting have lockable steel lids.
- Check** Traffic rated pull boxes provide as required.

Y N/A

Detection

- Check** Loop detectors installed per plan and City Standards.
- Check** Loop detectors are landed and assigned to correct detection channels.
- Check** Video detection system mounting is vertical to ground and system placement per City standards.
- Check** Video detection system programming is complete and correct detection channels are assigned.
- Check** Emergency Vehicle Preemption system programming is complete and correct detection channels assigned.
- Check** Emergency Vehicle Preemption activates proper channel from vehicle unit.

Signal Poles & Vehicle Displays

- Check** All Displays are bagged.
- Check** All Displays have been flashed out.
- Check** height, aiming, straightness and alignment of signal heads are per plan.
- Check** Holes drilled in poles are sealed per standards.
- Check** CCTV is installed with correct mounting.
- Check** EV is installed with correct mounting.
- Check** GPS is installed with correct mounting.
- Check** Salvaged Equipment returned per 34-27.

Pedestrian Push Buttons

- Check** Ped signals heads are mounted and oriented properly.
- Check** Count-down Ped signals heads are installed.
- Check** pedestrian push buttons are installed and activate of correct phase in controller.
- Check** Accessible Pedestrian Signal system is properly programmed and operational.
- Check** Pushbutton mounting height and locations are per MUTCD.
- Check** Audio feedback and messages are per MUTCD.

Luminaries

- Check** All streetlights are operational.
- Check** Photocells function.

Signal Operation

- Check** The controller shall be turned on. Field outputs disabled, all pedestrian push buttons, vehicle, and bicycle detector inputs are inputting into controller. Controller operation is per plan.

Signing and Striping

- Check** Signage is installed per plan.
- Check** Long line striping is installed per plan.
- Check** Crosswalk and Stopbar are not installed until 1 day before turn on.
- Check** intersection legs without crosswalks are properly signed for no crossing.

—Contractor Inspection Certification—

Instructions: Upon completing the check list the contractor shall certify this document and shall present complete signed checklist to the City’s Inspector. City Inspector will coordinate the inspection with the City’s TSO-SLM sections. It is required for the Contractor to attend this inspection. The complete checklist shall be sent with request for Pre-Turn On inspection to @ elucaslee@cityofsacramento.org

I certify that employees of this company have verified that all the items listed, have been installed according to the specifications. I am now requesting the City of Sacramento or its representatives to perform Pre-Turn On inspection before signal turn on as required by the specifications. The signature line below shall be filled out by the Contractor:

Print Name *Representing* *Signature* *Date*

—City Verification ready for turn on—

Instructions: City’s TSO-SLM sections and City inspector will determine if the traffic signal is ready to turn on. If it is determined that there are punch list items they will be list below and with attachment, as necessary. A follow-up Pre-Turn On inspection will be required and may result in additional punch list items. This punch list relates to signal turn on and will not be final or comprehensive.

City Comments/Punch List:

Signal Ready for Turn Signal has Punchlist. Contact: Name _____ Phone: _____

The City agrees that the signal is ready to turn on:

Print Name *Department* *Signature* *Date*

The signature City’s TSO-SLM sections or the City electrical Inspector: