


**TRAFFIC OPERATIONS POLICY DIRECTIVE**

TR-001 (REV 8/2021)

<b>TRAFFIC OPERATIONS POLICY DIRECTIVE</b>	NUMBER: <b>22-06</b>	PAGE: 1 of 5
JASVINDERJIT S. BHULLAR, DIVISION CHIEF (Signature) 	DATE ISSUED: March 9, 2022	EFFECTIVE DATE: March 9, 2022
SUBJECT: <b>Department Furnished Electrical Equipment and Software Programs on the State Highway System</b>	DISTRIBUTION <input checked="" type="checkbox"/> All District Directors <input checked="" type="checkbox"/> All Deputy District Directors - Traffic Operations <input type="checkbox"/> Chief Counsel, Legal Division Headquarters Division/Program Chiefs for: <input checked="" type="checkbox"/> Construction <input checked="" type="checkbox"/> Design <input checked="" type="checkbox"/> Maintenance <input type="checkbox"/> Safety Programs <input checked="" type="checkbox"/> Transportation Planning <input checked="" type="checkbox"/> Additional:  <u>Division of Engineering Services – Materials</u> <u>Engineering &amp; Testing Services</u>	
DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, DESCRIBE <ul style="list-style-type: none"> <li>• Memorandum dated August 29, 1983, "Model 170 Traffic Controller Assemblies"</li> <li>• Memorandum dated November 23, 1987, "Model 170 Software and Firmware"</li> <li>• Memorandum dated March 19, 1997, "State-Furnished Equipment Policy"</li> <li>• TOPD 17-01 dated, April 1, 2017, "Use of Department-Furnished Signal Controller Assemblies and Department-Furnished Software Programs on the State Highway System"</li> </ul>	
WILL THIS DIRECTIVE BE INCORPORATED IN A DEPARTMENT MANUAL, GUIDELINE OR STANDARD PLAN? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, DESCRIBE Electrical System Design Guide	

**DIRECTIVE**

**All signalized intersections and ramp meters operated by the California Department of Transportation (Caltrans) on the State Highway System (SHS) shall use Caltrans' standard [Transportation Electrical Equipment Specifications \(TEES\)](#) equipment and software.**

**TRAFFIC OPERATIONS POLICY DIRECTIVE****DIRECTIVE CONT.**

All TEES equipment shall be acquired using the Department Furnished Electrical Equipment process.

**IMPLEMENTATION****Acquisition of TEES Equipment:**

Districts shall forecast Department Furnished Material needs for projects during the Design phase using the Electrical Department Furnished Materials Database and eventually AASHTOWare. Districts shall then follow the Division of Maintenance's standard process for the requisition of Department Furnished Materials during the Construction phase using the Materials Management & Acquisitions (MMA) inventory ordering system.

Exceptions to this policy for the inclusion of contractor furnished TEES equipment shall be approved by Headquarters (HQ) Traffic Operations. The Office of Systems Development shall coordinate exceptions with concurrence from the Division of Engineering Services Materials Engineering & Testing Services.

**Licensing Caltrans Software to Locals:**

Caltrans shall only furnish software to cities and counties for signalized intersections that are not part of the SHS under an approved license agreement. HQ shall assist the Districts in establishing license agreements with the Division of Legal upon request.

**Delegated Traffic Signals:**

Delegated traffic signals that are not operated and maintained by Caltrans shall use equipment that is compliant with Caltrans TEES. Local agencies maintaining and operating traffic signals under an agreement with Caltrans may choose to use their preferred traffic controller and software. **The local agency shall enter into a Maintenance and Operations agreement prior to installation of non-standard equipment and/or non-standard software.**

**DELEGATION**

The decision to delegate the maintenance and operations of a traffic signal shall be at the discretion of the districts working collaboratively with their regional and local agency partners in the mutual interests of the agencies and for the good of the traveling public. **Agreements between Caltrans and local agencies to delegate the maintenance and operation of traffic signals shall be at the discretion and responsibility of the respective districts.** The agreement may be renewed after a full traffic signal review by the district's traffic signal operations staff.

**Agreements shall contain the following conditions:**

- The agreement shall clearly state the roles and responsibilities of operations and maintenance of the specific traffic signal.
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**TRAFFIC OPERATIONS POLICY DIRECTIVE****DELEGATION CONT.**

- **The agreement shall specify that vehicle traffic may not be allowed to back up onto the freeway and that Caltrans may take back control of a traffic signal at any time if the signal is not meeting Caltrans standards.**
- **Local Agency shall submit the current timing plan to Caltrans for each delegated location and if changes are made, an updated timing plan for that location should be resubmitted to Caltrans.**
- **All traffic signal timing parameters shall be compliant with the latest version of the California Manual on Uniform Traffic Control Devices.**
- **The traffic signal shall be maintained in compliance with American Disabilities Act (ADA) requirements and Caltrans ADA policies.**
- **The expiration date shall be clearly documented in the agreement.**
- **Equipment shall be funded and maintained by the local agency.**
- **Upon returning responsibility of maintenance and operation of traffic signals back to Caltrans, the local agency shall restore all equipment and software to Caltrans standards at the expense of the local agency.**

**BACKGROUND**

Since 1978, Caltrans has been purchasing TEES electrical equipment as Department Furnished Material to benefit from cost savings, uniformity and quality control. Over the years, Caltrans has maintained these specifications and developed new specifications to update various pieces of equipment such as the traffic signal controllers, cabinets, detectors as well as added specifications to accommodate newer technology modems, GPS modules, and double rack-based cabinets. In 1996 Caltrans published its latest specifications as the "Transportation Electrical Equipment Specifications (TEES)," dated May 1996. The latest active specification is TEES 2020, dated November 5, 2020.

Caltrans HQ Division of Traffic Operations oversees the Department Furnished process for the acquisition of TEES equipment by maintaining the TEES, certifying qualified suppliers of TEES equipment using a Qualified Product List (QPL) and forecasting future Department Furnished material needs. This process involves:

- Working with the transportation industry including the manufacturers, regulating bodies, partner Departments of Transportation, counties, and cities in the development of specifications.
  - Working with districts and implementing an Electrical Department Furnished Materials Database where districts enter the Department Furnished Materials needed for the project during the Plans, Specifications & Estimates phase before the project is Ready to List. This will assist HQ in better forecasting future needs for semiannual orders.
  - Working on a long-term solution to program individual TEES Equipment into the Basic Engineering Estimate System Item Codes and AASHTOWare in order to facilitate the semiannual orders for Department Furnished Materials and transition away from the previously mentioned Electrical Department Furnished Materials Database once programming is completed.
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**TRAFFIC OPERATIONS POLICY DIRECTIVE****BACKGROUND CONT.**

- Working with Caltrans Materials Engineering & Testing Services to test products for quality control and qualifying manufacturers for QPL.
- Preparing equipment lists of qualified manufactures that are eligible to compete as suppliers of TEES equipment under the Department of General Services Master Purchase Agreement.
- Collaborate with the warehouse to procure equipment and support the distribution of critical equipment to the end users (the Districts' Maintenance, Design, Construction and Operations divisions).

To achieve operational uniformity and to reduce maintenance cost, Caltrans requires that engineers maintain Caltrans owned or licensed software installed in the controller units. This applies to state-highway intersections, ramp meters, and inductive loop-based detectors stations as well as local-agency intersections that are operated and/or maintained by Caltrans.

This policy reduces maintenance costs for training staff on standardized products such controllers, cabinets, and software. The use of standardized software, that has been fully tested for reliability, improves the safety record, and preserves the integrity of the traffic control systems. This policy also results in cost savings through a master purchase agreement for the procurement of all Department Furnished electrical equipment in large quantities. This long-standing policy is also intended to reduce Caltrans' exposure to tort liability.

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**TRAFFIC OPERATIONS POLICY DIRECTIVE****DEFINITIONS**

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

- 1) **Standard** – a statement of required, mandatory or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.
  - 2) Guidance – a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underline type. The verb should is typically used. Guidance statements are sometime modified by Options.
  - 3) Option – a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb may is typically used.
  - 4) Support – an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs shall, should and may are not used in Support statements.
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