

# Memorandum

*Serious drought.  
Help Save Water!*

**To:** DEPUTY DISTRICT DIRECTORS, Construction  
DEPUTY DIVISION CHIEF, Structure Construction  
CONSTRUCTION MANAGERS  
SENIOR CONSTRUCTION ENGINEERS  
RESIDENT ENGINEERS

**Date:** May 11, 2016

**File:** Division of Construction  
CPD 16-6

**From:** RACHEL FALSETTI, Chief  
Division of Construction



**Subject:** **GUARDRAIL END TERMINAL INSPECTION**

Guardrail end terminals are safety elements used to protect those using the transportation system. It is important that end terminals are installed in accordance to manufacturer's recommendations and proper quality assurance reviews are performed prior to construction contract acceptance. This directive provides direction on how to ensure these end terminals are properly installed and reviewed.

Before commencing work on any project, the *Construction Manual* should be reviewed including Section 5-006, "Maintenance Reviews." If the project includes end terminals, it is essential to ensure the assembly and installation at each location is in accordance with the manufacturer's recommendations.

To ensure adequate quality assurance reviews for the installation of end terminals, implement the following steps for each end terminal location before, during, and after the end terminal is completely installed:

- Prior to the beginning of work, the contractor must inform the resident engineer of the type of end terminal to be installed at each location. The resident engineer will request from the contractor the manufacturer's documentation and checklist for the type of end terminal to be installed.
- Before installation begins, the ground where the end terminal will be installed must be graded and soil must be compacted in accordance with project specifications and contract plans.
- At any time prior to and during end terminal installation, the resident engineer will consult with the project's design engineer about any necessary changes based on the site condition.
- During installation, the inspector will use the manufacturer's checklist to check end terminal components and details as recommended by the manufacturer. The inspector will notify the installer of any issues that do not conform to the manufacturer's recommendations.

- At completion of installation, the inspector will do a thorough quality assurance review using the manufacturer's checklist and make sure all components are set as required by the manufacturer's recommendations. The inspector must file a copy of the completed checklist in Category 46, "Assistant Resident Engineer's Daily Reports," of the project records. Grading and compaction of soil underneath the end terminal must be rechecked for proper grading and compaction.
- Pictures of the completed end terminal must be taken and placed in the project records.
- Information about the type of end terminal installed must be recorded on the project as-built plans.

While training for end terminal installation is being developed, if the resident engineer wants assistance with the quality assurance review, the Division of Maintenance (Maintenance) is willing to accompany the resident engineer during the review of the installation of end terminals. The attached memorandum, from the Maintenance Division Chief, dated April 22, 2016, informs Maintenance region managers that the district construction resident engineer might contact them for assistance with the quality assurance review for end terminals.

For more information regarding this directive, contact Samir Ead, Division of Construction, at [samir.ead@dot.ca.gov](mailto:samir.ead@dot.ca.gov) or (916) 654-4580.

Attachment: Division of Maintenance Memorandum, "Maintenance Assistance on Quality Assurance Reviews for Guardrail and Guardrail End Treatments," dated April 22, 2016

c: Tony Tavares, Chief, Division of Maintenance  
Tom Hallenbeck, Chief, Division of Traffic Operations  
Kuo-Wei Lee, Chief, Office of Roadway Maintenance