

2-2.18 Sign Plans, Details, and Quantities

General

These signs are permanent roadside and overhead signs that provide regulation, warning, and guidance information for road users.

The California Manual on Uniform Traffic Control Devices (CA MUTCD) contains uniform standards for all official traffic control devices. Part 2 of the CA MUTCD deals exclusively with permanent signs and is available at this website:

<http://www.dot.ca.gov/trafficops/engineering/>

Sign designations with "(CA)" suffix indicate signs unique to California. You can find links to drawings for both California signs and Federal signs at this website:

<http://www.dot.ca.gov/trafficops/tcd/specs.html>

Temporary signs are those signs required for the direction of public traffic through and around the work during project construction. For detailed information regarding temporary signs, see Sections 2-2.14, 2-2.15 and 2-2.16 of this manual

Sign Plans

When there is not enough space to show permanent sign work on the project plan layouts, separate sign plans shall be used.

For convenience, permanent project signing and final pavement delineation may be shown on the same sheets because they are interrelated. If final pavement delineation

work is combined on the same sheet with the permanent signing, the sheet name should reflect both types of work involved. The combined sheet name would be "Pavement Delineation and Sign Plan." The sheet identification code for the plan sheet is "PD."

The base mapping for the project layout sheets is typically used as the background for the permanent sign plans. The background information should be shown as existing (dropped out), and permanent sign work should be shown in solid format.

The sign plans show the proposed locations of new roadside signs and overhead signs, which are to be installed or constructed, and existing roadside signs and overhead signs that are to be removed, salvaged, relocated, reset, modified, or reconstructed.

The first sheet of the plans should contain notes, legends, symbols, and a list of abbreviations. Do not include standard plan abbreviations or acronyms as part of the listed abbreviations.

Each roadside sign or sign structure shall be assigned an individual project sign number or alpha designation enclosed in a distinct geometric shape. Different geometric shapes may be used to distinguish between roadside signs and overhead signs. The individual project sign number or alpha designation used on the sign plan sheets shall correspond to those shown on the sign details and sign quantities.

The graphic symbol used to indicate the actual location of a sign shall show the sign panel on the side of the sign post(s) where the sign message will appear to approaching traffic. The locations of roadside signs and overhead signs are shown graphically on the sign plan sheet and may include their station locations.

The individual project sign number or alpha designation, sign designation, and a schematic depiction of the sign panel message (if special or variable message sign) shall be shown on the sign plan sheet so that they can be read without rotating the plan sheet.

Standardized signs shall be identified by their California or Federal sign designation. Nonstandard signs should be identified as special signs.

Each sheet of the sign plans shall have this note included on them: "APPROVED FOR SIGN WORK ONLY." If pavement delineation work is combined with signing work the note would read: "APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY."

Sign Details

A detailed drawing of each standard sign panel is not required in the project plans.

Special sign panels and variable message sign panels shall be shown on the sign detail sheets. Each sign panel detail (layout) shall include:

- Individual project sign number or alpha designation
- Overall dimensions of the sign panel (length and depth)

- Message (legend) placement on panel, (letters and symbols depicted as they will appear on sign panel)
- Uppercase and lowercase letters for words
- Size of symbols, arrows and letters
- Offset distances from edges of panel to arrows and symbols
- Width of border around panel (if not standard)

Sign panels for permanent signs, installed or constructed as part of project construction work, are to be contractor furnished. In the past, sign panels for permanent signs, installed or constructed as part of project construction work, were state furnished. The same information (sign/installation order) previously furnished to sign manufacturer by the district sign coordinator for state furnished signs now must be included in the project plans. The details sent to sign manufacturer for sign panels are to be dimensioned in inches only.

This material summary for sign panels shall include the following information for each sign panel:

- Sign colors
- Sign designation
- Sign size (length and depth)
- Single or double faced
- Sign facing and legend reflectivity
- Sign panel substrate material and framing requirements

The basic guide for selection of sign facing material is available at this website:

<http://www.dot.ca.gov/trafficops/tcd/specs.html>

The material for the sign panel substrate is determined from the information presented in Standard Plans S81 through S95.

An elevation view of each overhead sign structure (sign panel and sign supports) shall be included in the sign detail sheets, see the examples of overhead sign details and quantities at this website:

http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/reference-sheets/refer_sheets.html

Sign Quantities

Sign quantities for roadside signs and overhead signs shall be summarized in tabular format.

The tables for sign quantities shall identify each sign by:

- Their individual project sign number or alpha designation, and
- Their California or Federal sign designation (nonstandard signs identified as special signs).

Individual columns shall be provided in the table for all permanent signing items of work. The column headings for bid items shall read the same as the description for the bid item shown in the Engineer's Estimate.

Roadside sign panels are paid for by the square foot for furnish sign of the various types specified on the plans. This square foot cost is for fabricating and furnishing the sign panel.

Installation of the roadside signs are paid for separately, by the unit price for the various work item for that location, such as "Roadside Sign - Two Post." This item of

work includes payment for the furnishing and installing sign supports (placing wood posts in the ground, in this case) and installation of the sign panel.

Overhead sign panels are paid for by the square foot for furnish sign of the various types specified on the plans. Installation of the overhead sign panel is included in the price paid per pound for the item to install overhead sign structure for new overhead sign locations. For the item of work, "Install Sign Panel on Existing Sign Structure," sign panel installation is paid for by the square foot.

The metal structure to support the overhead sign panel is paid for separately by the pound for the items for furnish sign structure and install sign structure of the various types specified on the plans (tubular, truss, lightweight, etc.).

Overhead sign structure posts are typically supported on cast-in-drilled-hole pile foundations. These pile foundations are measured and paid for by the linear foot and are not final pay items.

The furnish sign structure bid items are only designated as final pay quantities in the Engineer's Estimate by using an "(F)." Furnish overhead sign structure is not designated specialty work, because the contractor only has to order material.

Installation of overhead signs is work performed by a specialty contractor, therefore the bid item is also designated as specialty work. Since it is specialty work and final pay, the quantities are only designated in the Engineer's Estimate using a "(S-F)."

Do not use final pay or specialty item designation on the plans.

For a listing of final pay items and specialty work, refer to Section 7 of the Construction Contract Development Guide (formerly RTL Guide) located at this website:

https://oe.dot.ca.gov/project_control_and_support/rtl/CCD-Guide.pdf

Where sign quantities can be shown in a table on one plan sheet, quantity totals for each bid item shall appear at the bottom of the table. Where more than one sheet is necessary to show sign quantities, the totals for each bid item shall appear at the bottom of the table on each individual sheet. The totals for the bid items shall be identified as "SHEET TOTALS." Sheet totals for each bid item shall appear on the last sheet of the sign summary of quantities. Sheet totals shall be totaled and shown as "GRAND TOTAL" or "TOTAL."