

2-2.17 Pavement Delineation Plans, Details, and Quantities

General

When there is not sufficient space to allow the final pavement delineation work to be shown on the project plan layouts, separate pavement delineation plans, details (if needed) and quantity sheets shall be used.

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

Temporary pavement delineation, if required on the project, should be included in the stage construction or traffic handling plans (see Section 2-2.16).

Pavement Delineation Plans

Pavement delineation plans provide a visual representation in plan view aspect of all final traffic lines, pavement markings, delineators, channelizers (left in place), and object markers used for the direction of public traffic.

A modified version of the base mapping for the project layout sheets is typically used as the background for the final pavement delineation plans. The design features such as pavement edges, dikes, sidewalks, etc, should be shown as existing (dropped out). Design features not directly related to pavement delineation should not be shown.

Alignment lines not in conflict with a traffic stripe may be left solid. If an alignment line is in conflict with a traffic stripe, the preferred method to handle this situation is to drop out the alignment line and show the traffic stripe in a non-drop out format. Final pavement delineation work should be shown in solid format, since it is performed after roadway work is completed.

Traffic lines and pavement markings shown on the final pavement delineation plans shall include, as applicable to the project:

- Centerlines
- Lanelines
- Edgelines
- Channelizing lines at exit and entrance ramp gores
- Crosswalks
- Limit lines (stop lines)
- Arrows
- Words
- Other appropriate delineation

Lane widths shall be indicated.

Details of standardized traffic lines and pavement markings, typically used for pavement delineation, are included in the standard plans. The details, as they appear in the standard plans, for these standardized traffic lines and pavement markings are not to be repeated in the project plans.

The standard plan detail number for each traffic stripe used in the project plans and its begin and end points with arrowheads and end terminator shall be shown on the plans. The begin and end points should be referenced to an alignment line by plus stations if the project uses stationing to identify limits of construction. If the project uses only post miles to identify limits of work and construction, then the limits or location of pavement delineation work should also be identified by post mile.

A single broken traffic stripe (gaps in traffic stripe detail) should be represented by a dashed line. A single traffic stripe that is not broken should be represented by a single solid line. For convenience, a double traffic stripe that consists of two solid lines or one solid line and one broken line should be represented by a single solid line. If sufficient space is available on the plan sheet, double traffic stripe may be graphically represented as two lines. Use the CT line styles shown in the CADD Users Manual.

Pavement markings (arrows, symbols, words and numerals) should be graphically shown on the pavement delineation plans in the same configurations as they appear in the standard plans and at a size consistent with the plotting scale used for the plan sheet.

If word pavement markings are illegible at the plotting scale used, symbols may be used to show the location of the word message. Show the symbol and its definition in the legend or show a symbol at the marking location and use a leader line coming off the symbol to spell out the pavement marking words.

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. Symbols to identify the standard plan traffic stripe detail numbers are typically enclosed in a distinct geometric shape (typically a circle, an oval or an elongated hexagon).

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

Pavement delineation plan sheets may not be required for less complex projects if pavement delineation details and quantity tables can adequately describe the limits and locations of striping and pavement markings. An example of a less complex project would be the application of a seal coat or placement of surfacing on existing pavement of a two-lane highway.

Pavement Delineation Details

In the rare event, the details shown in the standard plans do not fit a particular situation for pavement delineation, special details for the particular situation shall be included on the pavement delineation detail sheets.

If the pavement delineation detail required for the project is a modification or combination of two standard plan details, then it shall be shown as a special modified detail on the pavement delineation detail sheets and so identified. Sufficient information shall be provided for the modified detail so that the quantities involved are calculable.

Pavement Delineation Quantities

A summary of quantities for the items of traffic stripe, pavement markings, and pavement markers, as applicable to the project, shall be included on the pavement delineation quantity sheets.

For complex projects that require use of many different types of traffic stripe and pavement markings that are located by stationing, the quantity table should include individual columns on the left side of the table with these headings:

- "PLAN SHEET NUMBER"
- "STATION LIMITS" (to identify where a striping detail number or pavement marking is to be used)
- "DETAIL No."
- "PAVEMENT MARKING"

Under the column heading of "DETAIL No.," each striping detail number shown on each plan sheet should be listed on their own individual row of the table to assist in determining items related to that detail, specifically number and type of pavement markers. Under the column heading of "PAVEMENT MARKING," each pavement marking shown on each plan sheet should be listed on their own individual row of the table.

For less complex projects (example: resurfacing existing pavement on a 2-lane highway) where only a few types of traffic stripe may be required, each plan sheet number may not need to be shown in the quantity table. The overall project limits of the traffic stripe and locations of pavement markings may be identified only by stationing or post mile depending on how the limits of construction are identified on the project.

Individual columns shall be provided in the quantity table for all final pavement delineation 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.

Items of work shown in the columns of the quantity table which are not a separate bid item (payment included in other items of work), shall be indicated with the symbol "(N)" in the column heading for such items and by adding the following note to the sheet:

(N) - Not a separate bid item.

Where pavement delineation quantities can be shown in a table on one plan sheet, quantity totals for each bid item column shall appear at the bottom of the table.

Where more than one sheet is necessary to show pavement delineation quantities, the column headings in the table shall be the same on all sheets of the summary to facilitate checking item totals

Where more than one sheet is necessary to show pavement delineation 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 pavement delineation summary of quantities. Sheet totals shall be totaled and shown as "GRAND TOTAL" or "TOTAL."

Quantities for delineators, channelizers (left in place), and markers (object and post mile), as applicable to the project, shall be included on the pavement delineation quantity sheets. These quantities may be included in the pavement delineation table or a separate table.

If final pavement delineation and permanent project signing are combined on the same plan sheets, a summary of quantities shall be prepared for each type of work, one for the final pavement delineation and one for the permanent project signing. For additional information regarding summary of quantities for permanent project signing, see Section 2-2.18.