Chapter 6

Typical Sections

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6.1 General

Typical sections are detailed cross section depictions of the highway's principal elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown on the various plan sheets throughout the plans package.

Typical sections should show typical conditions only. Non-standard conditions that prevail for short distances only should not be shown. Existing elements that are to be incorporated into the highway's final section are depicted in conjunction with the proposed elements.

When more than one typical section is necessary for a project, the station limits of each section shall be shown below the typical section title. Typical section stationing shall cover the entire project. Transitions from one typical to another shall be included in the stationing of one or the other typical section. Sheets that feature more than one typical section should read from the top down, with the sections in the order in which they occur within the project.

The hierarchy for typical sections shall be as follows:

1. Project mainline
2. Ramps and service roads (for projects which include an interchange)
3. Crossing side roads
4. Minor side streets

Half sections and details which supplement or support various typical sections should be placed on the same sheet as the typical section to which they apply. In the event that this is not possible, additional sheets for details should be placed behind the typical section sheet(s).

Half sections are necessary when changes occur that affect several typical section elements such as number of lanes, border width, ditch/drainage features, clearing and grubbing, R/W width, etc.

Details and partial sections are necessary for the clarification of construction techniques or sequence, and to show alternates, such as the placement of shoulder gutter in high fill areas, changes in sidewalk location, etc. Judgment will be necessary in making decisions about when and where details should be shown.

The Department Engineering/CADD Systems Software contains a number of typical sections that can be used and adjusted to suit the conditions of a particular project. Usually typical sections are not created to scale, but the horizontal dimensions should be proportionate.

For illustrations of various typical sections, see ***Exhibits TYP-1*** thru ***TYP-16***.

6.2 Mandatory Information

Typical sections for all projects shall include the following data:

1. Design speed for each typical section
2. Traffic data (description, date and 2-way AADT)
   a. Current Year
   b. Estimated Opening Year
   c. Estimated Design Year
   d. K, D and T factors. Distinguish between T(peak hour) and T(24 hour)

   For skid hazard projects, only the current year or estimated opening year for traffic data (AADT) is required to be noted.

   All traffic data shown shall be consistent with the data used for pavement design.
3. Cross Slopes
   a. Cross slopes of roadway pavement, shoulder surfaces, sidewalks and bridge decks shall be expressed as a decimal part of a foot vertical per foot horizontal. These cross slopes shall be rounded to two decimal places, i.e., 0.02, 0.06. (See ***Volume I, Chapter 2***).
   b. Median and outer slopes shall be shown by ratio, vertical to horizontal, i.e., 1:4, 1:2. (See ***Volume I, Chapter 2***).
   c. Either feathering details or notes (or both) shall be shown when resurfacing without milling in urban curb and gutter sections is specified or when milling depth is less than the overlay thickness.
   d. When cross slope correction is necessary, special milling and layering details showing the method of correction shall be shown in the plans. (See ***Exhibits TYP- 9*** thru ***9B***).
4. Profile grade point shall be flagged when applicable.
5. Pavement construction shall be described in a clear, precise manner by indicating the LBR requirement and the thickness of the subgrade stabilization, subbase or base, as well as thickness for structural course, friction course and shoulder pavement. Use 4 inches for both base extension on rural sections and for stabilization extension on curbed sections.

   Pavement structure information shall be obtained from the approved pavement design and shall be described in the order of construction, i.e. starting with bottom layer and ending with friction course. Show pavement thickness descriptions for

leveling, overbuild, structural course and friction course in inches (and fractions of an inch). The thickness shown should be to the nearest ½" (except for FC-5 which is a standard ¾").

6. Limits of grassing.

7. Sidewalk location and width.

8. Curb and gutter location and type (show Type "E" or "F", not the dimension).

   On new construction curb and gutter projects which include Asphalt Base, Type B-12.5 Only, the asphalt curb pad shall be indicated on the typical section and a detail provided. (See ***Exhibit TYP – 6A***)

9. Limits of clearing and grubbing, where applicable.

10. R/W, where applicable.

11. Template dimensions:

    For widening projects, the existing pavement width shall be shown as a +/- dimension, and the base widening width shall be shown with an asterisk. Note 3, of ***Standard Notes for Typical Section Sheets (Exhibit 6-1)***, shall be shown as near to this noted asterisk as possible.

    NOTE: For typical sections with varying dimensions, the dimensions shall be clearly indicated on the plan-profile sheets.

12. Standard notes for typical sections are shown on ***Exhibit 6-1***.

13. Shoulder treatment shall be identified where applicable on RRR projects (See ***Volume 1, Section 25.4.8***)

Exhibit 6-1 Standard Notes for Typical Section Sheets

Below are standard notes that shall be shown on typical section sheets as applicable.

1. For details and limits of selective clearing and grubbing see _____.
2. (Under paved shoulders):

   At the contractor's option, this area may be constructed of base material at no additional compensation.
3. (On widening projects):

   Actual width of base widening may vary due to actual existing pavement width. Contractor may elect to place uniform width base widening strip at no additional cost to the Department.

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