300 Production of Plans

300.1 General

The requirements provided in the ***Plans Production*** section of the ***FDM*** (the ***300 Series***) and the ***FDOT CADD Manual*** form the basis for contract plans format and assembly.

Many chapters contain "generic" exhibits that provide examples of the plan sheets covered by that chapter. These exhibits were developed using the Department's criteria and standards in force at the time of their creation. These exhibits are not to be used as a source for criteria unless specified as such within the ***FDM*** chapter.

Abbreviations may be used to save space. A list of standard abbreviations is given in the ***Standard Plans Cover***. Additional deviations from these standard abbreviations are allowed, provided that the abbreviation used is clear and easily understood.

Standard symbols for Roadway Design are shown in the Symbol Cell Library, and in other CADD sources.

300.1.1 Converting from Metric to English

When converting metric values related to surveys, R/W, and other geometric alignment use the U.S. Survey Foot taken to a minimum of 8 decimal places:

1 foot = 0.30480061 meters

For other direct mathematical conversions use the SI definition to 4 decimal places:

1 foot = 0.3048 meters

Display direct mathematical (soft) converted values to 2 decimal places.

On resurfacing projects where the original construction was done in metric, hard convert typical section dimensions (e.g., lane widths, shoulder widths) where existing conditions permit.

Use direct mathematical (soft) conversion for existing pavement widths in curbed sections, existing R/W widths, and existing median widths.

300.2 Displaying Information and Data

Text and plan details should be readable from either the bottom or right edge of the sheet. Orientation of text is as follows:

(1) Horizontal Line: Read left to right

(2) Vertical Line: Read bottom to top

(3) Diagonals: Read left to right

Apply the following rules for displaying information and data:

(1) Dimensioning Requirements:

- (a) Typical Section Elements, including lane widths and shoulder widths - in feet, typically as a whole number.
- (b) Horizontal control points on plans, including survey centerline, baseline, intersections and alignment - in feet to 2 decimal places.
- (c) Vertical alignment control points, (e.g., PVC, PVI, PVT) and profile grade elevations - in feet to 2 decimal places.
- (d) Profile Grade - in percent to 3 decimal places.
- (e) Proposed flow lines - in feet to 2 decimal places.
- (f) Manhole tops and grate elevations - in feet to 2 decimal places.
- (g) Ditch elevations - in feet to 1 decimal place (to nearest 0.05 when controlled by percent of grade).
- (h) Box or Three-sided Culvert Spans and Heights - Show inside dimensions using “span by height” format (10 x 6 means the span is 10 feet and the height is 6 feet). In feet as a whole number for new construction; in feet to 2 decimal places for extensions of existing box culverts.

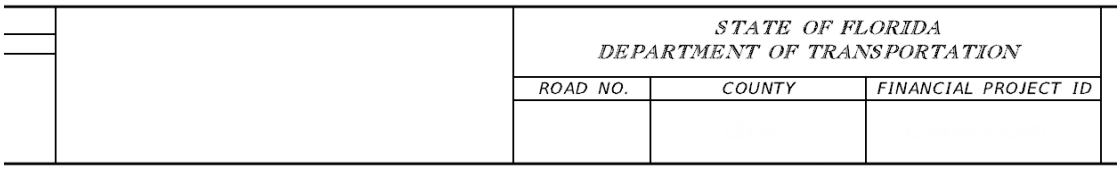
(2) Display alignment bearings, degree of curve and delta angles for curve data in degrees, minutes and seconds, rounded to the nearest second.

(3) Express slope ratios in vertical to horizontal (V:H) format; e.g., 1:6, 1:4.

300.3 Base Sheet Format

All plan sheet formats are contained in the FDOT CADD Software. Sheet borders include a project information block to place the Financial Project ID as shown below:

Figure 300.3.1 Project Information Block



The road number box is intended for the state road number; i.e., same state road number that is shown on the Key Sheet. Place the prefix “SR” before the number for clarification. When a county road is shown in the box use the prefix “CR”. The box should remain blank when the facility is neither a state nor county road.

The title block immediately left of the project information block is to contain information for the Professional of Record that Signs and Seals the sheet, as discussed in ***FDM 130***.

PDFs of contract plans must be to scale at size B (11" X 17"). These PDF files are to be generated from CADD design files in accordance with the ***CADD Manual***. Sheets that feature grids (e.g., cross sections, plan-profile) may be created with minor grid lines turned off or on. The minor grids are to be half-toned when shown. The FDOT CADD Software provides plot example configuration files for this task.

Plan sheets may use photography (aerial or other) when approved by the District Design Engineer. Using photography for Drainage Maps or SWPPP supplemental site maps do not require approval.