306 Typical Sections

306.1 General

Typical Section sheets provide detailed cross section depictions of the principal roadway elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown on the plan sheets.

306.2 Typical Section Sheet

Typical sections should only show typical conditions that are found within the limits applicable to that section. Non-standard conditions that prevail for short distances should not be shown. Typical sections are to show existing elements that are to be incorporated into the final roadway section, along with the proposed elements.

Show the station limits or milepost of each section below the typical section title. Typical section stationing must cover the entire project. Include transitions from one typical to another 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.

Place Typical Section sheets in the plans in the following order:

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

The FDOT CADD 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 306-1 through 306-11.

306.2.1 Half Sections and Details

Half sections and details supplement or support typical sections. They 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 (e.g., number of lanes, border width, ditch or drainage features, clearing and grubbing, R/W width).

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

306.3 Typical Section Information

Include the following information on the typical sections:

(1) Cross Slopes
   (a) Express cross slopes of roadway pavement, shoulder surfaces, sidewalks and bridge decks as a decimal part of a foot vertical per foot horizontal. These cross slopes should be rounded to two decimal places, i.e., 0.02, 0.06. Three decimal places may be used when required.
   (b) Show median and outer slopes by ratio, vertical to horizontal, i.e., 1:4, 1:2.
   (c) Include either feathering details or notes (or both) 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, include special milling and layering details showing the method of correction in the plans.

(2) Location of profile grade point.

(3) Depict pavement construction 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.

(4) Limits of grassing.

(5) Sidewalk location and width.

(6) Curb and gutter location and type (show Type E or F, not the dimension).
(a) On new construction curb and gutter projects which include Asphalt Base, Type B-12.5 only, indicate the asphalt curb pad on the typical section and provide a detail.

(7) Limits of standard clearing and grubbing unless selective clearing and grubbing is present.

(8) R/W line and limits of construction.

(9) Pavement dimensions.

(10) For widening projects, provide a dimension for total pavement width (existing and proposed). Show the pavement widening width with an asterisk. Show Note 3, of FDM 306.5, as near to this noted asterisk as possible.

(11) Shoulder dimensions; paved and total width

(12) Label shoulder treatment on RRR projects (See FDM 210.4.4)

### 306.4 Required Data

Include the following data for each typical section:

(1) Traffic data (as identified in FDM 120.2.2) consistent with the data used for pavement design.
   (a) Current Year and AADT
   (b) Estimated Opening Year and AADT
   (c) Estimated Design Year and AADT
   (d) K, D, T (24 hour) and T (Design Hour) factors.
   (e) Design Speed: The estimated opening and design year traffic data is not required for skid hazard projects.

(2) Approved pavement designs described in the order of construction:
   (a) For new construction start with Option Base Group and end with friction course.
   (b) For resurfacing projects start with milling depth, then list the structural courses and end with friction course.

(3) Standard notes. Refer to FDM 306.5 for standard notes for typical sections.

(4) Template dimensions:
For widening projects, show the existing pavement width as a ± dimension, and show the base widening width with an asterisk. Show Note 3, of FDM 306.5, as near to this noted asterisk as possible.

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

(5) Identify shoulder treatment where applicable on RRR projects (See FDM 210.4.4)

306.5 Standard Notes for Typical Section Sheets

Show the following standard notes on typical section sheets as applicable:

(1) For details and limits of selective clearing and grubbing see ______.
(2) (Under paved shoulders):
   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. A uniform width base widening strip may be constructed at no additional compensation.
TYPICAL SECTION

I-10 (SR 8)

STA. 567+25.67 TO STA. 1056+84.35

TRAFFIC DATA

CURRENT YEAR = 2020 AADT = 22300
ESTIMATED OPENING YEAR = 2040 AADT = 34500
K = 8 %  D = 34 %  T = 10 % (24 HORE)
DESIGN HOUR = 5 %
DESIGN SPEED = 70 MPH

TRAVEL LANES

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2") (PG 76-22)
FRICITION COURSE FC-5 (3/4") (PG 76-22)

SHOULDER PAVEMENT

OPTIONAL BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2") (PG 76-22)

SHOULDER PAVEMENT DETAIL

Exhibit 306-1
Limited Access Facility
Date: 1/1/20
**TYPICAL SECTION 1-75 (SR 93)**

STA. 1342+25.00 TO STA. 1950+85.75

**WIDENING**

OPTIONAL BASE GROUP 9 WITH

- **TYPE SP STRUCTURAL COURSE (TRAFFIC D) (2 ½") (PG 76-22)**
- **FRICTION COURSE FC-5 (¾") (PG 76-22)**

**EXISTING TRAVEL LANES**

MILL EXISTING ASPHALT PAVEMENT (2 ½" DEPTH)

- **TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ½") (PG 76-22)**
- **FRICTION COURSE FC-5 (¾") (PG 76-22)**

**EXISTING OUTSIDE SHOULDER PAVEMENT**

MILL EXISTING ASPHALT PAVEMENT (1 ½" DEPTH)

- **TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ½") (PG 76-22)**

**NEW INSIDE SHOULDER PAVEMENT**

OPTIONAL BASE GROUP 1 WITH

- **TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ¼") (PG 76-22)**

**INSIDE SHOULDER PAVEMENT DETAIL**

Exhibit 306-2

6-Lane Limited Access Facility

Date: 1/1/20
**TYPICAL SECTION**

**RAMP "C"**

STA. 623+28.64 TO STA. 629+13.78

**TRAFFIC DATA**

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<td>ESTIMATED OPENING YEAR</td>
<td>2020</td>
<td>AADT = 8,800</td>
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<td>ESTIMATED DESIGN YEAR</td>
<td>2040</td>
<td>AADT = 12,000</td>
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**TRAVEL LAKES**

**OPTIONAL BASE GROUP 9 WITH**

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1 ½") AND
FRICITION COURSE FC-12.5 (TRAFFIC B) (1 ½") (PG 76-22)

**SHOULDER PAVEMENT**

**OPTIONAL BASE GROUP 1 WITH**

FRICITION COURSE FC-12.5 (TRAFFIC B) (1 ½") (PG 76-22)

**SHOULDER PAVEMENT DETAIL**

Exhibit 306-3

Ramp

Date: 1/1/20

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**STATE OF FLORIDA**

DEPARTMENT OF TRANSPORTATION

SR 93

BAY

123456-1-52-01

CERTIFICATE OF AUTHORIZATION: 12345

FINANCIAL PROJECT NO.
TYPICAL SECTION

SR 22
STA. 98+40.00 TO STA. 202+33.00

TRAFFIC DATA
CURRENT YEAR = 2018 AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 6%  D = 55%  T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 30 MPH

TRAVEL AND BIKE LANES
OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH
TYPE 5P STRUCTURAL COURSE (TRAFFIC C) (2")
AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2") (PG 76-22)

DETAIL OF ASPHALT BASE CURB PAD

REFERENCES:
- Exhibit 306-4
- 4-Lane Curbed
- Date: 1/1/20
TYPICAL SECTION

5R 22
STA. 202+33.00 TO STA. 560+50.00

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 232000
ESTIMATED OPENING YEAR = 2020 AADT = 258000
ESTIMATED DESIGN YEAR = 2040 AADT = 306000
K = 4\%  D = 55\%  T = 2\% (24 HOUR)
DESIGN HOUR T = 1\%
DESIGN SPEED = 40 MPH

TRAVEL AND BIKE LINES

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1 1/2")
AND FRICTION COURSE FC-12.5 (TRAFFIC B) (1 1/2") (PG 76-22)

NATURAL GROUND
LEVEL
2' SOD

CONCRETE SIDEWALK
2'
SOD

TYPE F CURB

TYPE B STABILIZATION
LBR 40

TYPICAL SECTION

Exhibit 306-5
4-Lane Curbed
Date: 1/1/20
TYPICAL SECTION
SR 22
STA. 560+50.00 TO STA. 882+25.00
TRAVEL LANES AND SHOULDER PAVEMENT
OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2\(\frac{1}{2}\)')
AND FRICTION COURSE FC-12.5 (TRAFFIC B) (1\(\frac{1}{2}\)') (PG 76-22)

Date: 1/1/18

Exhibit 306-6
4-Lane High Speed Curbed

DESIGN SPEED = 50 MPH

LIMITS OF CONSTRUCTION
R/W LINE
LIMITS OF CONSTRUCTION
SHEET NO.
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
 Luke S. Walker, P.E.
P.O. Box 99981
Roadway Engineering, Inc.
123 Main Street
Tallahassee, FL 32301

CERTIFICATE OF AUTHORIZATION: 12345
TYPICAL SECTION

ROAD NO.
COUNTY
FINANCIAL PROJECT ID
SR 22
BAY
123456-1-52-01

TYPICAL SECTION

CURRENT YEAR
- 2018 AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 4% D = 95% T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 50 MPH
TYPICAL SECTION
SR 22
STA. 10+00.00 TO STA. 98+40.00

TRAFFIC DATA
CURRENT YEAR = 2018 AADT = 6800
ESTIMATED OPENING YEAR = 2020 AADT = 7600
ESTIMATED DESIGN YEAR = 2040 AADT = 12000
K = 6% D = 55% T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 55 MPH

TRAVEL LANES
OPTIONAL BASE GROUP B WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2")
AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2") (PG 76-22)

SHOULDER PAVEMENT
OPTIONAL BASE GROUP 1 WITH
FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2") (PG 76-22)

SHOULDER PAVEMENT DETAIL
Exhibit 306-7
2-Lane Flush Shoulder
Date: 1/1/20
TYPICAL SECTION

SR 22

STA. 63+65.42 TO STA. 328+65.14

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 22,300
ESTIMATED OPENING YEAR = 2020 AADT = 23,300
ESTIMATED DESIGN YEAR = 2040 AADT = 51,500
X = 9% O = 56% T = 10% (24 HOUR)
DESIGN HOUR T = 5%
DESIGN SPEED = 55 MPH

TYPICAL SECTION

STA. 157+75.40 TO STA. 215+45.22

SHOULDER PAVEMENT DETAIL

Optional Base Group 9 with
Type SP Structural Course (Traffic D) (2")
Type SP Structural Course (Traffic D) (1 1/2") (PG 76-22)
AND Friction Course FC-5 (2") (PG 76-22)

Optional Base Group 1 with
Type SP Structural Course (Traffic D) (1 1/2") (PG 76-22)
AND Friction Course FC-5 (2") (PG 76-22)

This area may be constructed of optional base material (granular only) at no additional compensation.
TYPICAL SECTION

SR 22

STA. 101+21.00 TO STA. 221+44.00

TRAFFIC DATA
CURRENT YEAR = 2028 AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 6%  D = 55%  T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 45 MPH

TRAFFIC AND BIKE LANES

MILL EXISTING ASPHALT PAVEMENT (1 ½" AVG. DEPTH)

FRICTION COURSE FC-12.5 (TRAFFIC C) (1 ½") (PG 76-22)

Exhibit 306-9
6-Lane Curbed
Date: 1/1/20

TYPICAL SECTION
OVERBUILD DETAILS

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<th>PROPOSED SLOPE (%)</th>
<th>MAX DEPTH OF OVERBUILD (IN)</th>
<th>WIDTH OVERBUILD (FT.)</th>
<th>AREA OF OVERBUILD (SQ. FT.)</th>
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OVERBUILD AND RESURFACING DETAIL

STA. 145+00.00 TO STA. 166+00.00

SR 22 SOUTHBOUND LANES

Include the subtotals in the Summary of Pavement sheet as a line item named "Summary of Overbuild". Do not include contingency quantities associated with overbuild.
TYPICAL SECTION

MP 2.251 SR 22 = Q. ALDERAAN RD.

TRAFFIC DATA

CURRENT YEAR  = 2018 AADT = 25800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 4%; D = 55%; T = 2% (24 HOUR)
DESIGN HOUR T = 1%

CIRCULATORY ROADWAY

OPTIONAL BASE GROUP 9 WITH
TYPE SR STRUCTURAL COURSE (TRAFFIC C) (1'')
AND FRICTION COURSE FC-9.5 (TRAFFIC C) (2'')

Exhibit 306-12
Roundabout
Date: 1/1/21