# **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  $\pm$  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.

<u>NOTE:</u> 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

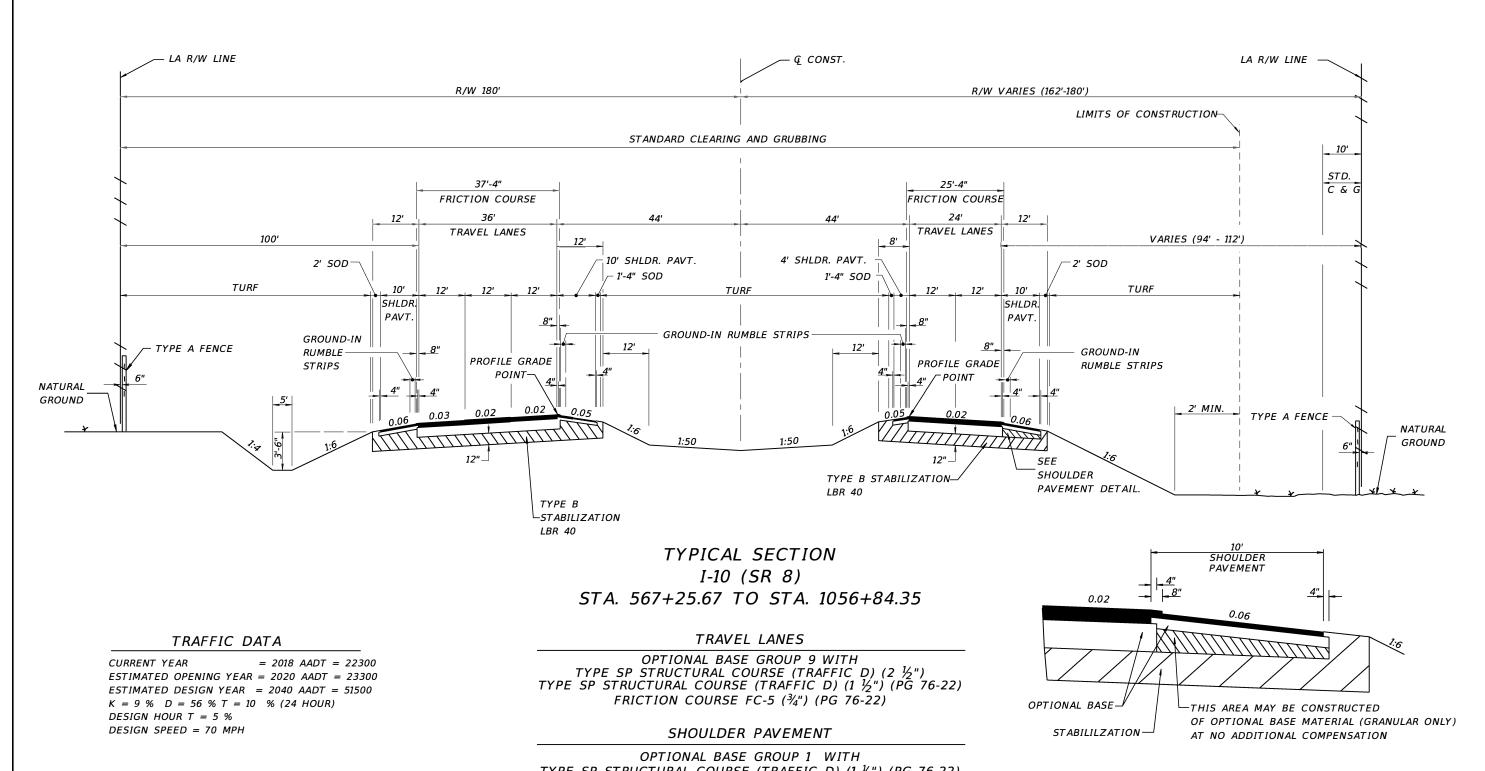
Show the following standard notes on typical section sheets as applicable:

- (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.



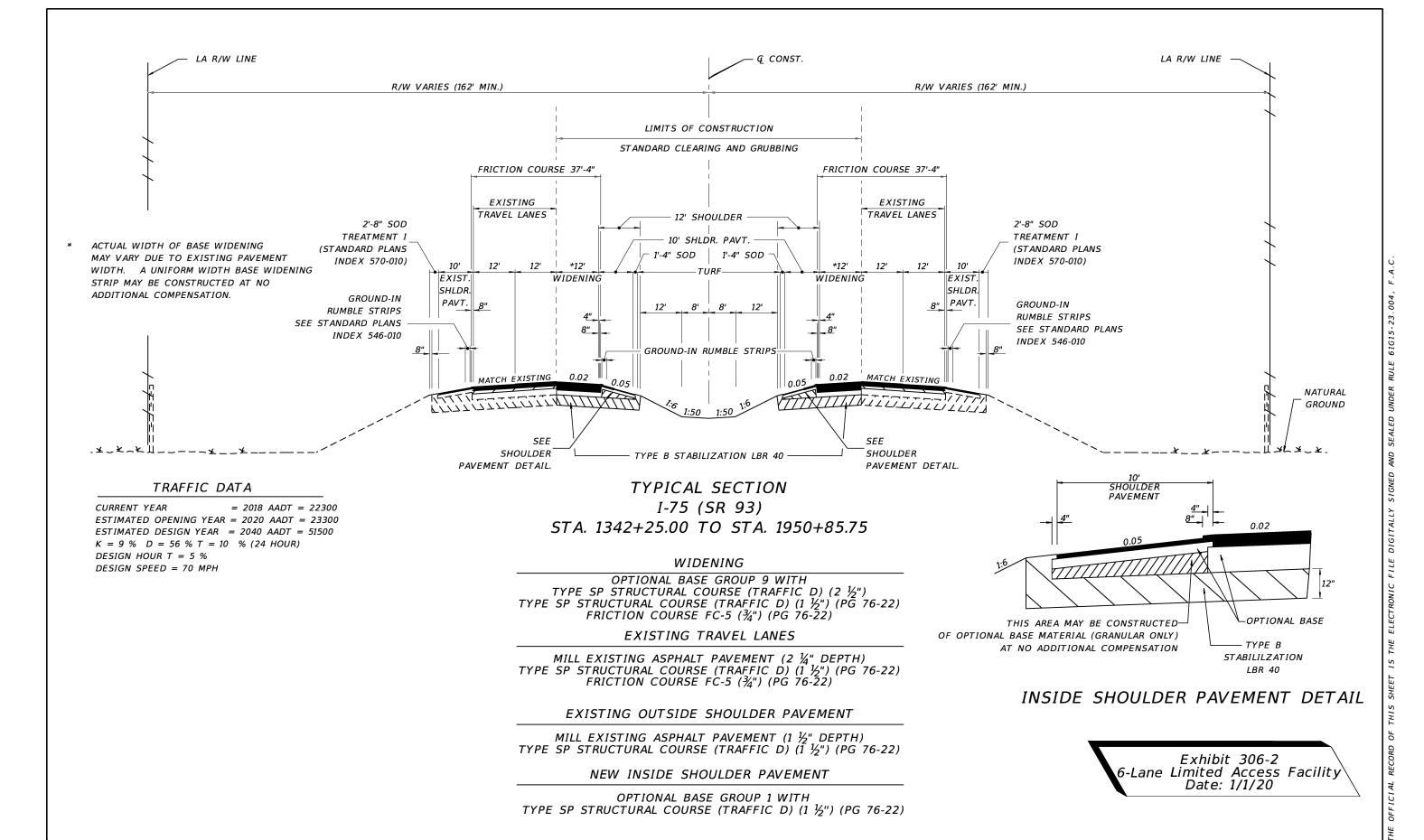
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ½") (PG 76-22)



Exhibit 306-1 Limited Access Facility Date: 1/1/20

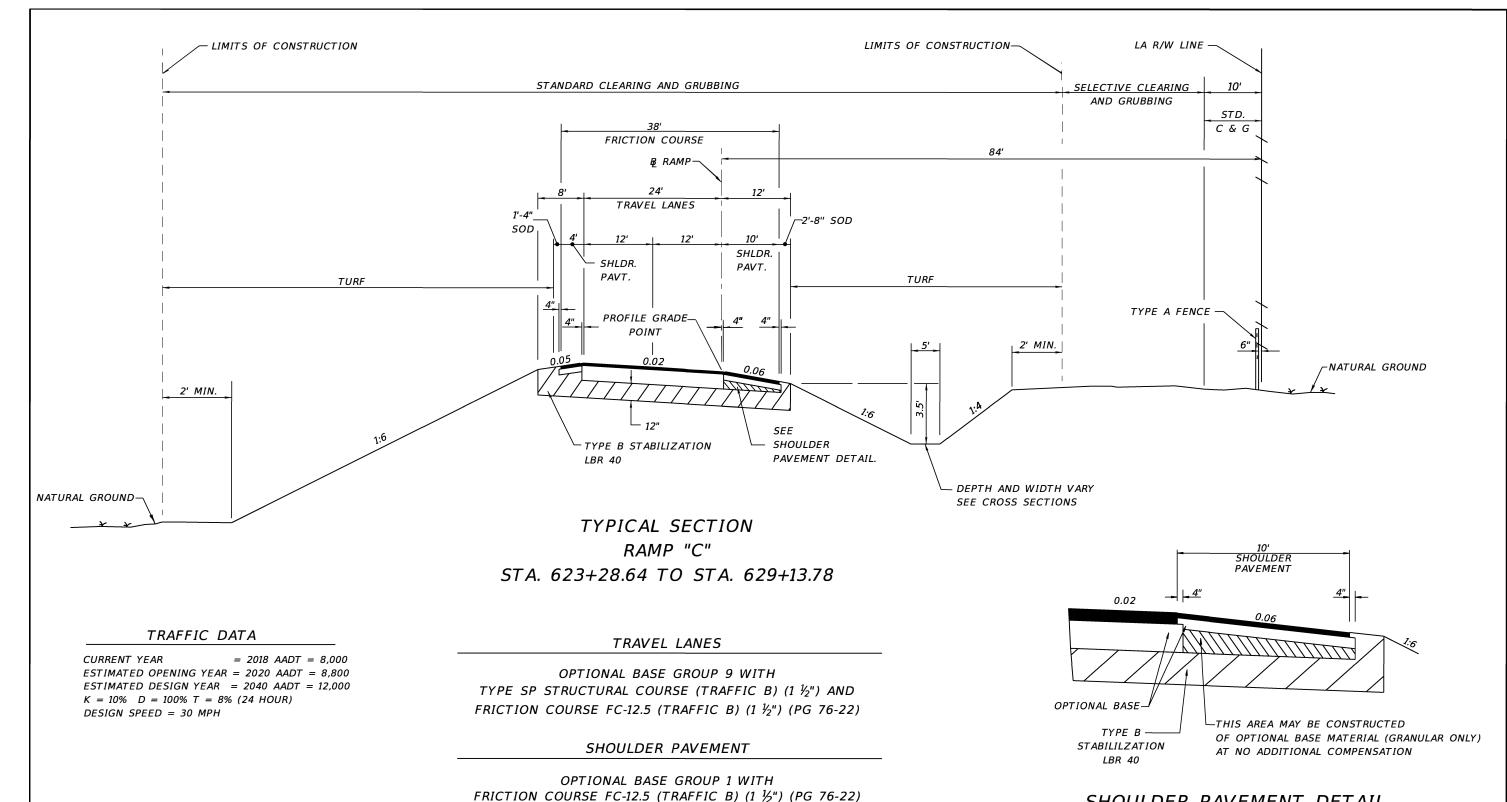
	REVISIONS			LUKE S. WALKER. P.E.		STATE OF FLORIDA		
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. NO.: 99991	DEP		ANSPORTATION	
				ROADWAY ENGINEERS, INC. 123 MAIN STREET	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
				TALLAHASSEE, FL 32301	SR 8	BAY	123456-1-52-01	

TYPICAL SECTION



REVISIONS LUKE S. WALKER, P.E. STATE OF FLORIDA DESCRIPTION DATE DESCRIPTION DATE P.E. NO.: 99991 DEPARTMENT OF TRANSPORTATION ROADWAY ENGINEERS, INC. FINANCIAL PROJECT ID ROAD NO. COUNTY 123 MAIN STREET TALLAHASSEE, FL 32301 SR 93 BAY 123456-1-52-01

TYPICAL SECTION



LUKE S. WALKER, P.E.

ROADWAY ENGINEERS, INC.

P.E. NO.: 99991

123 MAIN STREET TALLAHASSEE, FL 32301

REVISIONS

DATE

DESCRIPTION

DESCRIPTION

DATE

SHOULDER PAVEMENT DETAIL

Exhibit 306-3 Ramp Date: 1/1/20

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO. | COUNTY | FINANCIAL PROJECT ID

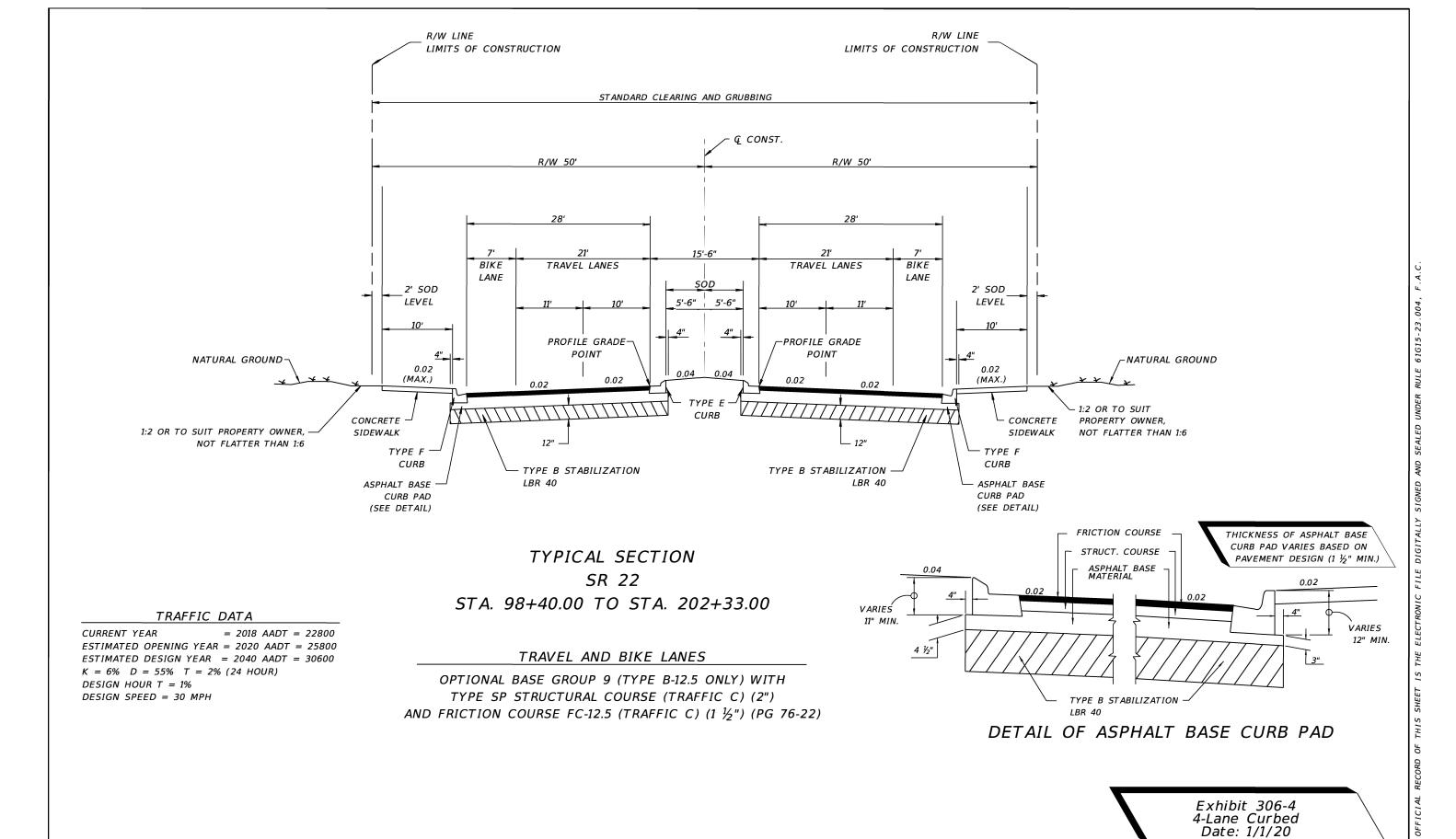
123456-1-52-01

SR 93

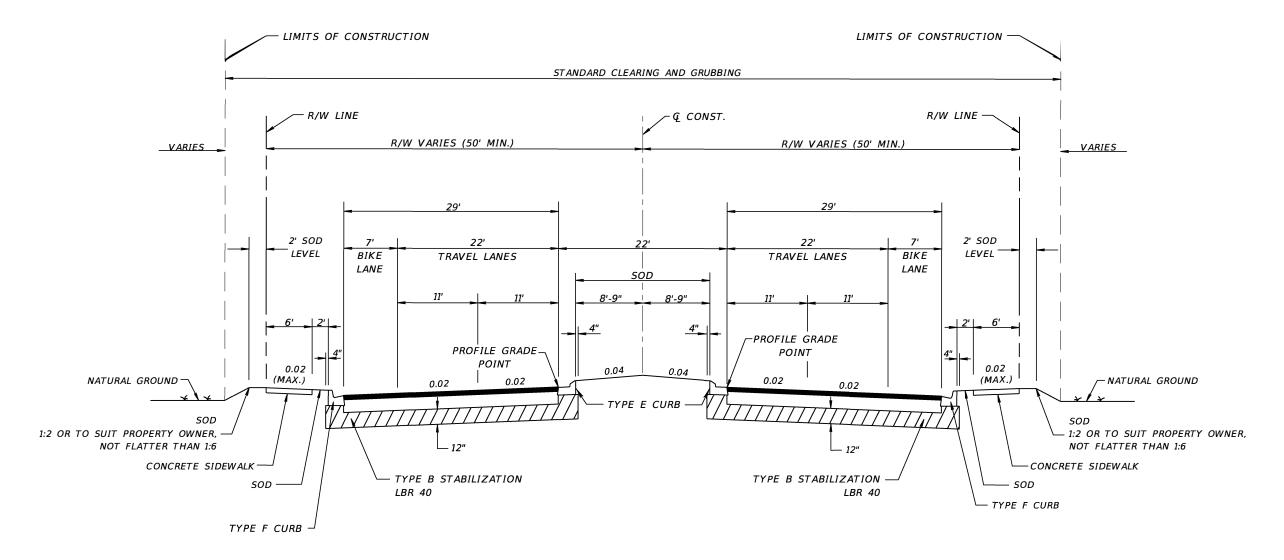
TYPICAL SECTION

SHEET NO.

0.415 (2010)



REVISIONS LUKE S. WALKER, P.E. STATE OF FLORIDA SHEET DESCRIPTION DATE P.E. NO.: 99991 DEPARTMENT OF TRANSPORTATION ROADWAY ENGINEERS, INC. TYPICAL SECTION ROAD NO. COUNTY FINANCIAL PROJECT ID 123 MAIN STREET TALLAHASSEE, FL 32301 SR 22 BAY 123456-1-52-01



CURRENT YEAR = 2018 AADT = 22800ESTIMATED OPENING YEAR = 2020 AADT = 25800ESTIMATED DESIGN YEAR = 2040 AADT = 30600K = 6% D = 55% T = 2% (24 HOUR) DESIGN HOUR T = 1%DESIGN SPEED = 40 MPH

# TYPICAL SECTION SR 22 STA. 202+33.00 TO STA. 560+50.00

#### TRAVEL AND BIKE LANES

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

Exhibit 306-5 4-Lane Curbed Date: 1/1/20

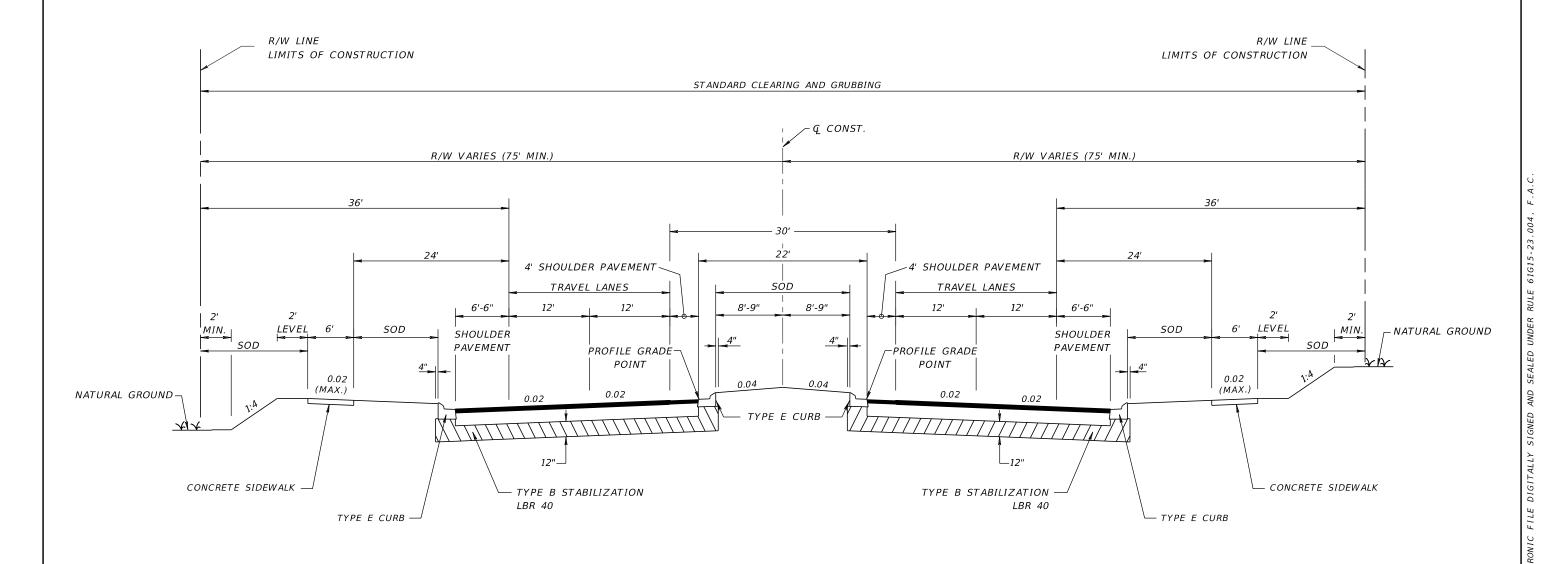
REVISIONS LUKE S. WALKER, P.E. STATE OF FLORIDA DATE DESCRIPTION DATE DESCRIPTION P.E. NO.: 99991 DEPARTMENT OF TRANSPORTATION ROADWAY ENGINEERS, INC. 123 MAIN STREET ROAD NO. FINANCIAL PROJECT ID COUNTY TALLAHASSEE, FL 32301 BAY 123456-1-52-01 SR 22

TYPICAL SECTION

SHEET NO.

9/19/2019 10·38·23 AM

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC !



CURRENT YEAR = 2018 AADT = 22800ESTIMATED OPENING YEAR = 2020 AADT = 25800ESTIMATED DESIGN YEAR = 2040 AADT = 30600 K = 6% D = 55% T = 2% (24 HOUR)DESIGN HOUR T = 1%DESIGN SPEED = 50 MPH

# 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)

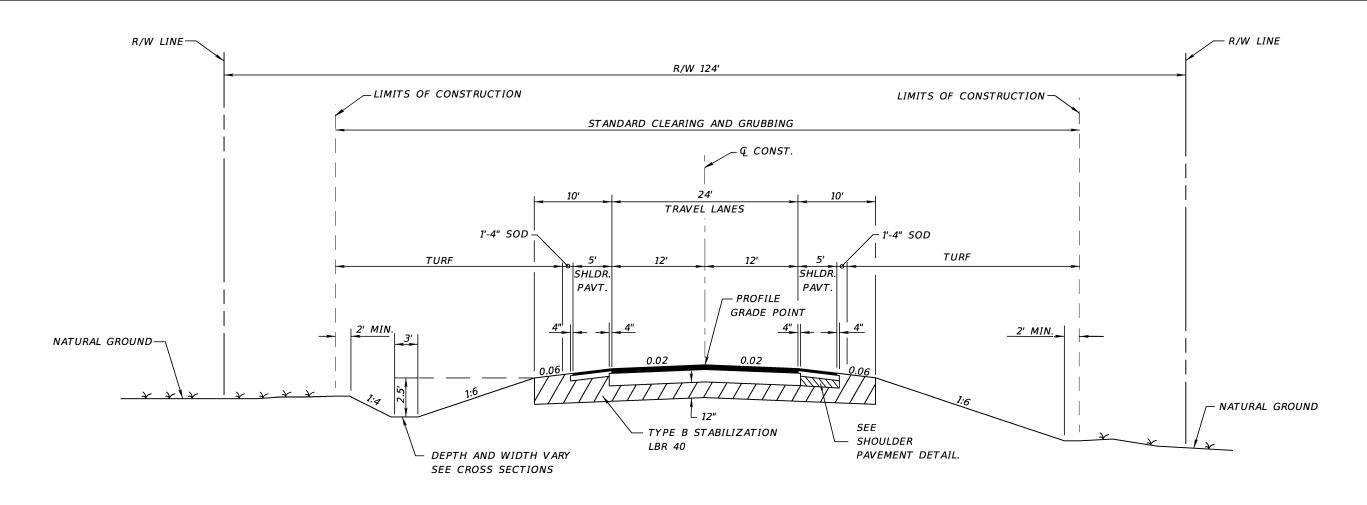
Exhibit 306-6 4-Lane High Speed Curbed Date: 1/1/18

REVISIONS				LUKE S. WALKER, P.E.		STATE OF I	FLORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. NO.: 99991	DEP.	ARTMENT OF TRA	
				ROADWAY ENGINEERS, INC. 123 MAIN STREET	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
				TALLAHASSEE, FL 32301 CERTIFICATE OF AUTHORIZATION: 12345	SR 22	BAY	123456-1-52-01

TYPICAL SECTION

SHEET NO.

0/10/2010 10:20:27 AM



# TYPICAL SECTION SR 22 STA. 10+00.00 TO STA. 98+40.00

#### TRAFFIC DATA

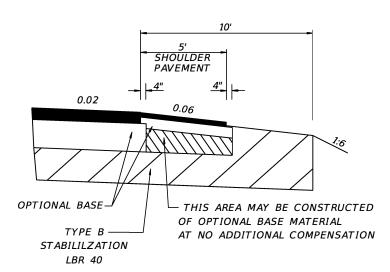
CURRENT YEAR = 2018 AADT = 6800ESTIMATED OPENING YEAR = 2020 AADT = 7600ESTIMATED DESIGN YEAR = 2040 AADT = 12000K = 6% D = 55% T = 2% (24 HOUR) DESIGN HOUR T = 1%DESIGN SPEED = 55 MPH

#### TRAVEL LANES

OPTIONAL BASE GROUP 8 WITH TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2") AND FRICTION COURSE FC-12.5 (TRAFFIC C) (1  $\frac{1}{2}$ ") (PG 76-22)

#### SHOULDER PAVEMENT

OPTIONAL BASE GROUP 1 WITH
FRICTION COURSE FC-12.5 (TRAFFIC C) (1 ½") (PG 76-22)



# SHOULDER PAVEMENT DETAIL

Exhibit 306-7 2-Lane Flush Shoulder Date: 1/1/20

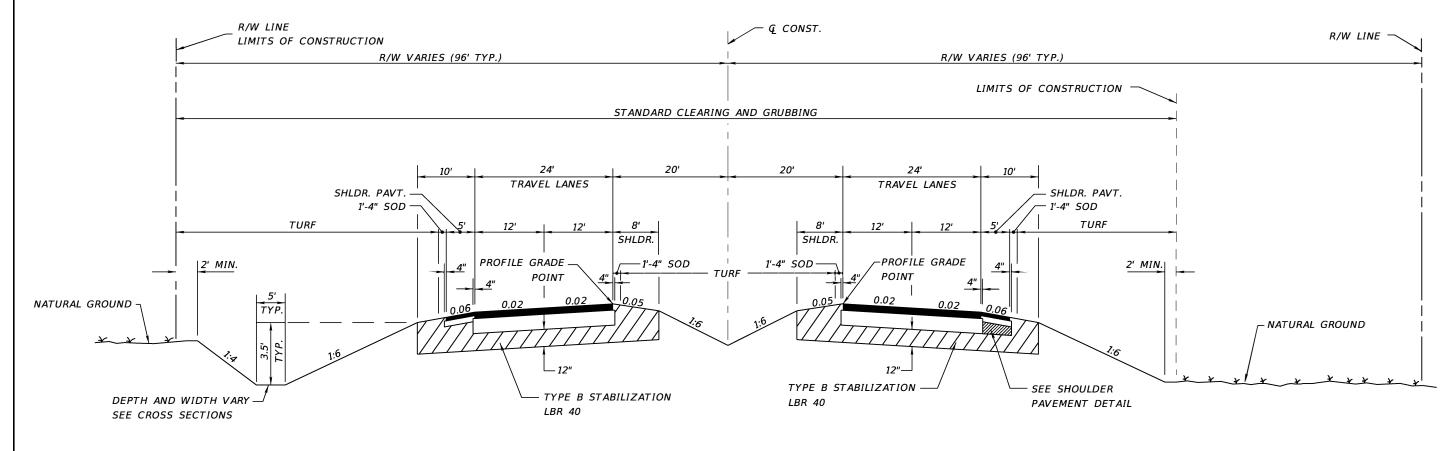
REVISIONS				LUKE S. WALKER, P.E.		STATE OF	FLORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. NO.: 99991	DEPAI		ANSPORTATION
				ROADWAY ENGINEERS, INC. 123 MAIN STREET	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
				TALLAHASSEE, FL 32301	SR 22	RΔY	123456-1-52-01

TYPICAL SECTION

SHEET NO.

9/19/2019 10:39:52

THE OFFICIAL RECORD OF THIS SHEET IS



CURRENT YEAR = 2018 AADT = 22300ESTIMATED OPENING YEAR = 2020 AADT = 23300 ESTIMATED DESIGN YEAR = 2040 AADT = 51500 K = 9% D = 56% T = 10% (24 HOUR) DESIGN HOUR T = 5%

DESIGN SPEED = 55 MPH

OPTIONAL BASE

STABILILZATION—

SHOULDER **PAVEMENT** 

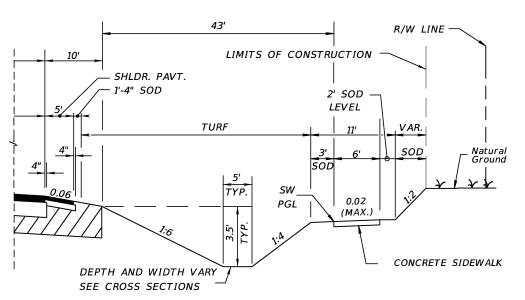
# TYPICAL SECTION SR 22 STA. 63+65.42 TO STA. 328+65.14

### TRAVEL LANES OPTIONAL BASE GROUP 9 WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (2") TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ½") (PG 76-22)

AND FRICTION COURSE FC-5 ( $\frac{3}{4}$ ") (PG 76-22)

#### SHOULDER PAVEMENT

OPTIONAL BASE GROUP 1 WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2") (PG 76-22) AND FRICTION COURSE FC-5 ( $\frac{3}{4}$ ") (PG 76-22)



# TYPICAL SECTION STA. 157+75.40 TO STA. 215+45.22

Exhibit 306-8 4-Lane Flush Shoulder Date: 1/1/20

## SHOULDER PAVEMENT DETAIL

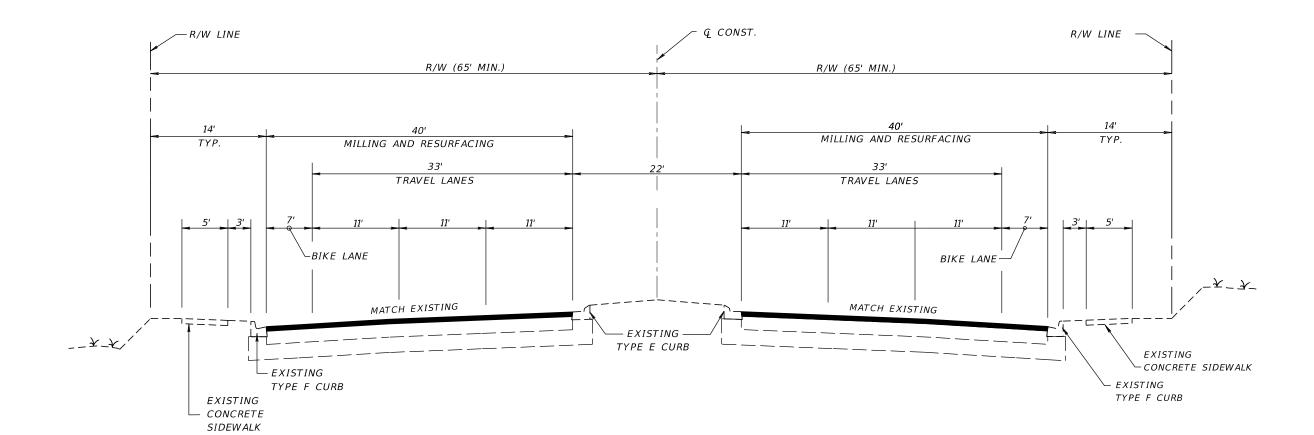
-THIS AREA MAY BE CONSTRUCTED

AT NO ADDITIONAL COMPENSATION

OF OPTIONAL BASE MATERIAL (GRANULAR ONLY)

	REVIS	SIONS		LUKE S. WALKER. P.E.		STATE OF FL	LORIDA	
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. NO.: 99991	DEP	ARTMENT OF TRAN		
				ROADWAY ENGINEERS, INC.			,51 01(1111101)	
				123 MAIN STREET	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
				TALLAHASSEE, FL 32301	SR 22	BAY	123456-1-52-01	

TYPICAL SECTION



# TYPICAL SECTION SR 22

STA. 101+21.00 TO STA. 221+44.00

#### TRAFFIC DATA

DESIGN SPEED = 45 MPH

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%

TRAVEL AND BIKE LANES

MILL EXISTING ASPHALT PAVEMENT (1  $\frac{1}{2}$ " AVG. DEPTH) FRICTION COURSE FC-12.5 (TRAFFIC C) (1  $\frac{1}{2}$ ") (PG 76-22)

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

REVISIONS

LUKE S. WALKER, P.E.

DATE DESCRIPTION

DATE DESCRIPTION

P.E. NO.: 99991

ROADWAY ENGINEERS, INC.
123 MAIN STREET

TALLAHASSEE, FL 32301

CERTIFICATE OF AUTHORIZATION: 12345

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

FINANCIAL PROJECT ID

CERTIFICATE OF AUTHORIZATION: 12345

SR 22

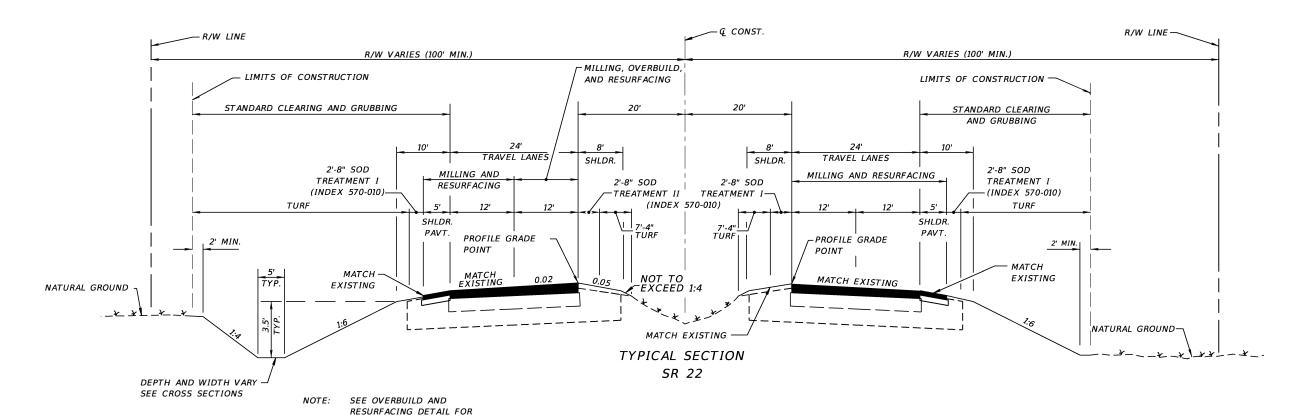
BAY

123456-1-52-01

TYPICAL SECTION

SHEET NO.

9/19/2019 10:40:43 AM



CURRENT YEAR = 2018 AADT = 18100 ESTIMATED OPENING YEAR = 2020 AADT = 21000 ESTIMATED DESIGN YEAR = 2036 AADT = 38900 K = 11% D = 58% T = 22% (24 HOUR) DESIGN HOUR T = 11% DESIGN SPEED = 60 MPH POSTED SPEED = 55 MPH

#### *SOUTHBOUND* INSIDE TRAVEL LANE

MILL EXISTING ASPHALT PAVEMENT (3" DEPTH) OVERBUILD TYPE SP STRUCTURAL COURSE (TRAFFIC D) (THICKNESS VARIES) RESURFACE WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1  $\frac{1}{2}$ ") (PG 76-22) AND FRICTION COURSE FC-5 (3/4") (PG 76-22)

#### SOUTHBOUND OUTSIDE TRAVEL LANE NORTHBOUND TRAVEL LANES

STA. 145+00.00 TO STA. 166+00.00

MILL EXISTING ASPHALT PAVEMENT (1 1/2" DEPTH) RESURFACE WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1  $\frac{1}{2}$ ") (PG 76-22) AND FRICTION COURSE FC-5 (34") (PG 76-22)

#### OUTSIDE SHOULDER PAVEMENT

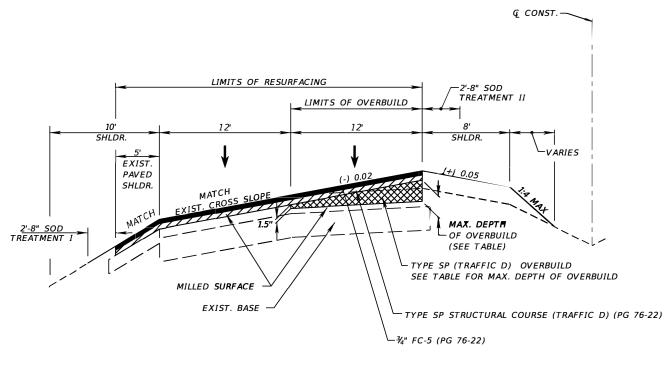
MILL EXISTING ASPHALT PAVEMENT (1 1/2" DEPTH) RESURFACE WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2") (PG 76-22) AND FRICTION COURSE FC-5 (3/4") (PG 76-22)

> Exhibit 306-10A 4-Lane Flush Shoulder Date: 1/1/20

REVISIONS				LUKE S. WALKER, P.E.		STATE OF	FLORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	P.E. NO.: 99991	DEPA	ARTMENT OF TR	ANSPORTATION
				ROADWAY ENGINEERS, INC. 123 MAIN STREET	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
				TALLAHASSEE, FL 32301	SR 22	BAY	123456-1-52-01

INSIDE SOUTHBOUND LANE.

TYPICAL SECTION



# OVERBUILD AND RESURFACING DETAIL

NTS

STA. 145+00.00 TO STA. 166+00.00

SR 22 SOUTHBOUND LANES

OVERBUILD DETAILS						
	LOCATION		PROPOSED SLOPE (%)	MAX. DEPTH OF OVERBUILD	WIDTH OF OVERBUILD	AREA OF OVERBUILD (SQ. FT.)
STATION	LANE	,		(IN.)	(FT.)	(3Q. F1.)
145+00.00	SOUTHBOUND - INSIDE	(+) 1.6	EXIST.	0.0	12.0	0.0
146+00.00	SOUTHBOUND - INSIDE	(+) 1.0	(-) 2.0	5.1	12.0	2.8
147+00.00	SOUTHBOUND - INSIDE	(+) 1.6	(-) 2.0	5.8	12.0	3.1
148+00.00	SOUTHBOUND - INSIDE	(+) 0.9	(-) 2.0	4.7	12.0	2.5
149+00.00	SOUTHBOUND - INSIDE	(+) 0.4	(-) 2.0	3.9	12.0	2.2
150+00.00	SOUTHBOUND - INSIDE	(+) 0.9	(-) 2.0	4.5	12.0	2.5
151+00.00	SOUTHBOUND - INSIDE	(+) 0.4	(-) 2.0	3.5	12.0	1.9
152+00.00	SOUTHBOUND - INSIDE	(+) 0.3	(-) 2.0	3.8	12.0	2.1
153+00.00	SOUTHBOUND - INSIDE	(+) 0.0	(-) 2.0	3.4	12.0	1.9
154+00.00	SOUTHBOUND - INSIDE	(+) 0.6	(-) 2.0	4.2	12.0	2.3
155+00.00	SOUTHBOUND - INSIDE	(+) 1.2	(-) 2.0	5.2	12.0	2.8
156+00.00	SOUTHBOUND - INSIDE	(+) 1.4	(-) 2.0	5.6	12.0	3.0
157+00.00	SOUTHBOUND - INSIDE	(+) 0.8	(-) 2.0	4.7	12.0	2.9
158+00.00	SOUTHBOUND - INSIDE	(+) 1.1	(-) 2.0	5.6	12.0	3.0
159+00.00	SOUTHBOUND - INSIDE	(+) 1.0	(-) 2.0	4.9	12.0	2.6
160+00.00	SOUTHBOUND - INSIDE	(+) 1.2	(-) 2.0	5.4	12.0	2.9
161+00.00	SOUTHBOUND - INSIDE	(+) 2.2	(-) 2.0	7.5	12.0	4.1
162+00.00	SOUTHBOUND - INSIDE	(+) 2.2	(-) 2.0	7.1	12.0	3.8
163+00.00	SOUTHBOUND - INSIDE	(+) 1.2	(-) 2.0	5.4	12.0	2.9
164+00.00	SOUTHBOUND - INSIDE	(+) 0.8	(-) 2.0	4.7	12.0	2.5
165+00.00	SOUTHBOUND - INSIDE	(+) 0.6	(-) 2.0	4.6	12.0	2.4
166+00.00	SOUTHBOUND - INSIDE	(+) 1.5	EXIST.	0.0	12.0	0.0

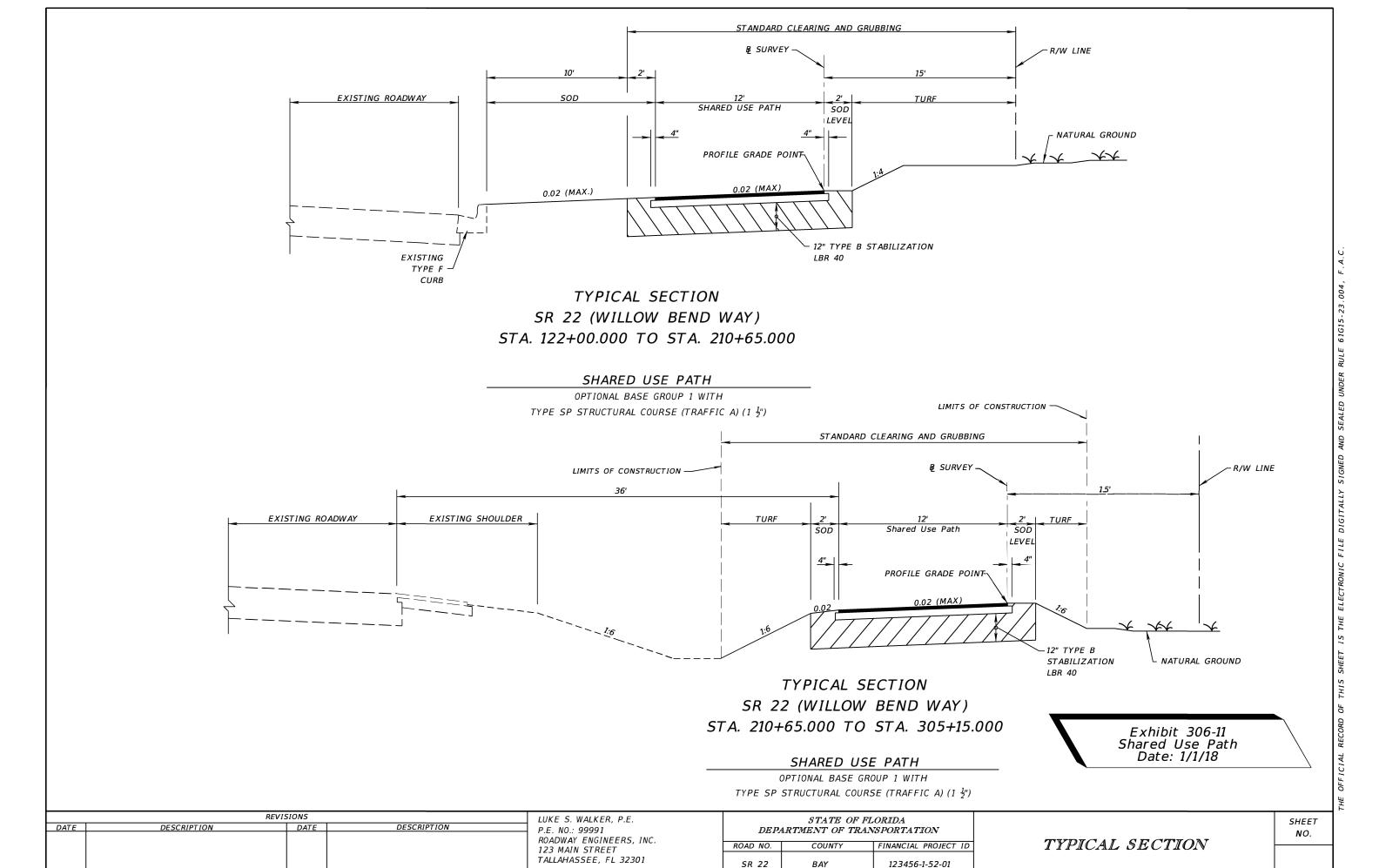
Include the subtotals in the Summary of Pavement sheet as a line item named "Summary of Overbuild". Do not include contingency quantities associated with overbuild.

Exhibit 306-10B Overbuild Details Date: 1/1/20

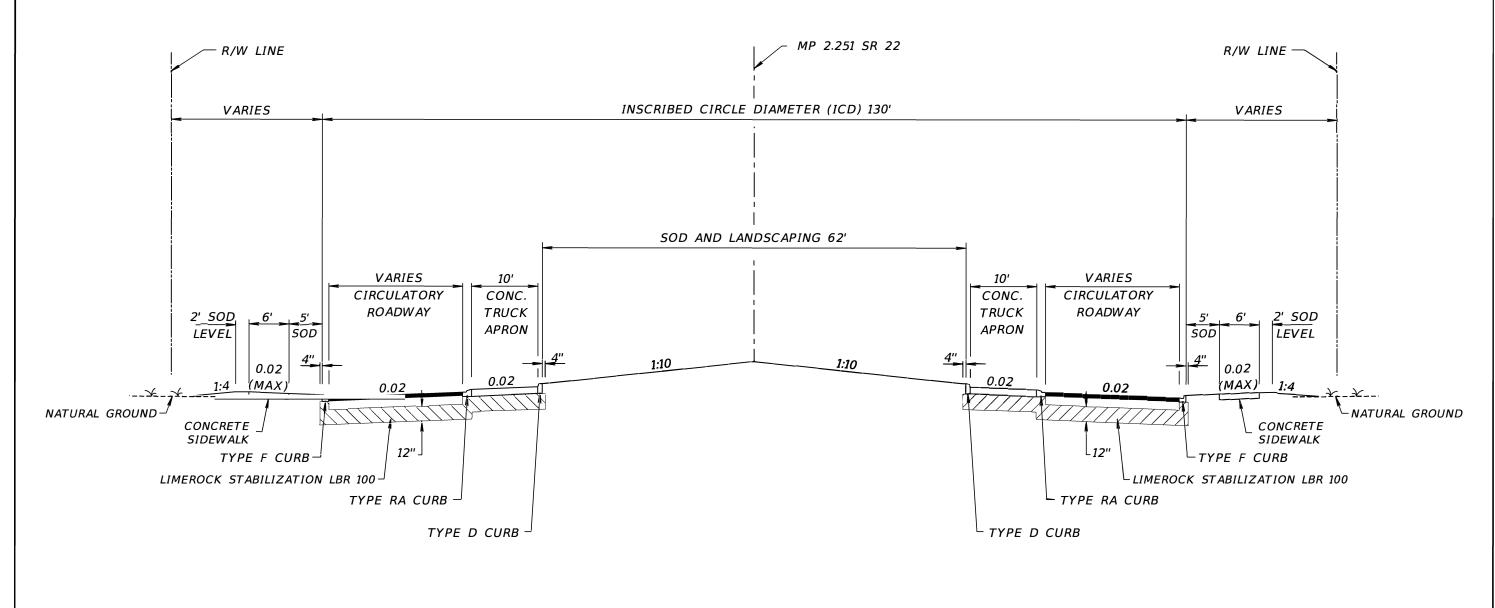
	REVISIONS		LUKE S. WALKER, P.E.	
TE DESCRIPT.	ION DATE	DESCRIPTION	P.E. NO.: 99991	
			ROADWAY ENGINEERS, INC.	
			123 MAIN STREET	ROA
			TALLAHASSEE, FL 32301	SF

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION						
ROAD NO.	COUNTY	FINANCIAL PROJECT ID				
SR 22	BAY	123456-1-52-01				

TYPICAL SECTION



7/26/2019 11:34:51



# TYPICAL SECTION MP 2.251 SR 22 = Q ALDERAAN RD.

#### TRAFFIC DATA

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

#### CIRCULATORY ROADWAY

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

> Exhibit 306-12 Roundabout Date: 1/1/20

> > NOT TO SCALE

REVISIONS

DATE DESCRIPTION DATE DESCRIPTION

DATE DESCRIPTION

DATE DESCRIPTION

P.E. NO.: 99991

ROADWAY ENGINEERS, INC.
123 MAIN STREET

TALLAHASSEE, FL 32301

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO. COUNTY FINANCIAL PROJECT ID

SR 22 BAY 123456-1-52-01

TYPICAL SECTION