

TURNPIKE DESIGN HANDBOOK (TDH)

DESIGN CRITERIA – PART 3



FLORIDA'S TURNPIKE ENTERPRISE PRODUCTION DESIGN DEPARTMENT

OCOEE, FL

January 2019

Introduction

As part of the Turnpike's continuing quality enhancement effort, the ***Turnpike Design Handbook (TDH)*** has been developed to provide consultants, reviewers and management with a single source of additional Turnpike-specific requirements that modify or add to the requirements included in the ***Florida Department of Transportation (FDOT) Design Manual (FDM)***.

The ***FDM*** and the ***TDH*** are both three-part documents:

- Development and Processes – Part 1
- Design Criteria – Part 2
- Plans Production – Part 3

The ***TDH*** also includes the [***Turnpike Guide Drawings***](#), which are available electronically on the Turnpike Design website.

For Turnpike requirements related to tolling, please see the [***General Tolling Requirements \(GTR\)***](#) which is a separate document.

The ***TDH*** table of contents for Parts 1, 2, and 3 show the ***FDM's*** chapters and sections that have been modified. If a section has been modified, the user can refer to the specific section in the ***TDH*** shown in the Table of Contents.

The ***TDH*** is updated on an annual basis, following the official revision of the ***FDM***. Interim updates to the ***TDH*** will be issued as Addenda to the annual revision.

Should you have any comments or suggestions for this ***TDH*** document, please contact the Turnpike Design Engineer.

300 Production of Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

300.2 Displaying Information and Data

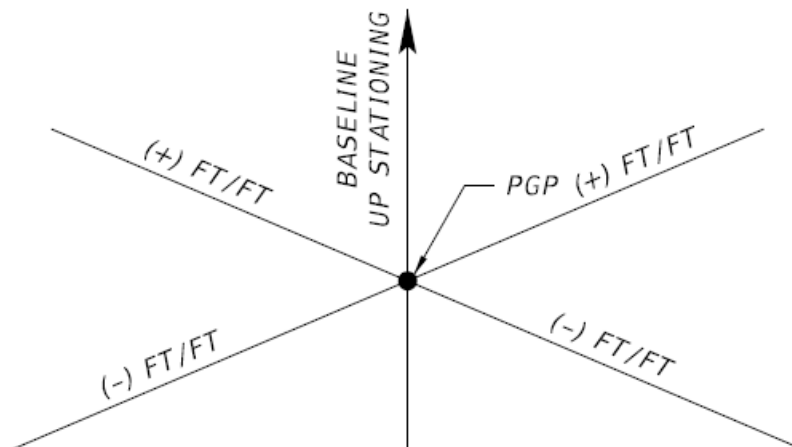
Add the following section

300.2.1 Cross Slope Sign Convention

The sign convention for roadway cross slopes as detailed in the roadway plans must be as follows:

Any cross slope which slopes away from the PGP is considered a negative (-) cross slope.

Any cross slope which slopes towards the PGP is considered a positive (+) cross slope.



301 Sequence of Plans Preparation

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

301.1 General

Add the following paragraphs

If the plans are for a stand-alone landscape project the landscape plans are the lead project. Any other sheets incidental to the project typically found in the roadway plans or other component plans (i.e., drainage, traffic control, etc.) are included in the plans and numbered consecutively.

Review and become familiar with the August 21, 2013 Agreement and Global Settlement between FDOT and Florida Gas Transmission (FGT) which describes the dimensions of the FGT Specified Width associated with FGT facilities within the Turnpike's right of way. For all design submittals up to and including Phase IV, show, label, and dimension the FGT Specified Width on applicable sheets in the component plan sets. Applicable sheets include roadway, signing, lighting, ITS, architecture, structures, and toll facility plans including, plan sheets, roll plots, typical sections, details, cross sections, drainage structures, and utility adjustment sheets. Do not include the FGT Specified Width on the final signed and sealed contract plans. This paragraph does not apply to landscaping plans.

Minor projects, such as milling and resurfacing, may not require a full set of plan sheets. When directed by the Turnpike Project Manager, develop a full set of plan sheets on aerial background, to be used in gathering utility data. The scale should typically be 1"=200'. When available, aerial photographs will be supplied by the Turnpike.

Landscape projects may not require a full Design Survey. When directed by the Turnpike Project Manager, develop a full set of plan sheets on aerial background, to be used in gathering project and utility data utilizing best available data. The scale should not be less than 1"=100'. When available, aerial photographs and project data will be supplied by the Turnpike.

301.2 Phase Submittals

Add the following paragraphs

Modification for Non-Conventional Projects:

Delete **TDH 301.2** and follow **TDH 301.3**.

All phase and interim submittals will include an additional plan sheet(s) titled 'Notes for Reviewers'. This sheet must also be added to the phase submittal listings in **FDM 301.2.1 to 301.2.4**. To ensure completeness, the 'Notes to Reviewers' sheet(s) must be submitted to the Turnpike Project Manager two weeks prior to the regular phase submittals.

This sheet will also contain Design Variations, Exceptions, and Technical Memorandums.

Examples of Variations and Exceptions could say, "The ramp 'A' crest K value of 8 falls below **FDM** value of 9 due to proximity of right of way and CR 44 (Submitted 6-6-96)."

Special directives will note the source and date of the directive. Variations and Exceptions must note the latest current phase submittal status (preparing, submitted, approved/denied), and the appropriate date. Each note is not meant to be more than one or two sentences long. It must locate and define the issue's impact. Full details are not needed. These notes are to be a log or diary of issues as they occur and must be updated as described above.

Without exception, Phase I (30%) Plans or the first submittal in the case of a project with reduced submittal requirements must show all existing underground and overhead utilities, regardless of size or type.

Landscape Plans:

Stand-alone landscape projects must have four phase submittals as follows, two of which must be accompanied by a full Electronic Plans Review process:

- Phase I Submittal (30% plans) (Limited Review)
- Phase II Submittal (60% plans) (Full ERC Review)
- Phase III Submittal (100% plans) (Full ERC Review)
- Phase IV Submittal (Final Plans) (Limited Review)

Final Plans will be submitted following acceptable resolution of all Phase III ERC comments. The Final Plans review will consist of a back-check by the Turnpike Landscape Architect or assignee.

Table 301.2.1 Summary of Phase Submittals***Replace Table 301.2.1 with the following table****Provide the sheets listed as applicable*

ITEM	PHASE I	45%	PHASE II*	PHASE III	PHASE IV
Key Sheet	P	P	P	C	F
Signature Sheet			P	C	F
Summary of Pay Items			P	C	F
Drainage Map	P	P	C	C	F
Interchange Drainage Map	P	P	C	C	F
Typical Section	P	P	C	C	F
Summary of Drainage Structures			P	C	F
Optional Materials Tabulation			P	C	F
Project Layout	P	P	C	C	F
Project Control	P		C	C	F
Roadway Plan-Profile	P	P	P	C	F
Traffic Monitoring Site			P	C	F
Special Profile	P	P	P	C	F
Back-of-Sidewalk Profile	P	P	C	C	F
Interchange Layout	P	P	P	C	F
Ramp Terminal Details			P	C	F
Intersection Layout/Detail	P	P	P	C	F
Drainage Structures			P	C	F
Lateral Ditch Plan-Profile		P	P	C	F
Lateral Ditch Cross Section		P	P	C	F
Retention/Detention Ponds		P	C	C	F
Cross Section Pattern			P	C	F
Roadway Soil Survey		P	P	C	F
Cross Sections	P	P	P	C	F
Stormwater Pollution Prevention Plan		P	C	C	F
Temporary Traffic Control Plans	P	P	P	C	F
Utility Adjustments			P	C	F
Selective Clearing and Grubbing			P	C	F
Developmental Standard Plans			C	C	F
Mitigation Plans		P	C	C	F
Miscellaneous Structures Plans		P	P	C	F
Signing and Pavement Marking Plans			P	C	F
Signalization Plans			P	C	F
Intelligent Transportation System (ITS) Plans			P	C	F
Lighting Plans			P	C	F
Landscape Opportunity Plans	F	F	F	F	F
Landscape Plans	P		P	C	F
Utility Work by Highway Contractor Agreement Plans				C	F
Summary of Quantities				C	F
3D Model Files	P	P	P	C	F
KMZ Files		P	P	C	F
Toll Facility Plans**					

Status Key: P - Preliminary C - Complete but subject to change F - Final

* Projects with structures plans component must submit the latest set with the 60% roadway submittal.

** For toll facilities plan sheet status for each phase submittal see the General Toll Requirements (GTR).

301.2.1 Phase I Submittal

Add the following plan set elements

LANDSCAPE OPPORTUNITY PLAN (LOP)

Applies to roadway projects with no landscape component. Landscape Opportunity Plan can be a roll plot for the Phase I submittal and must include at a minimum, the following elements:

- Project Centerline
- Edge of pavement (edge of travel lanes)
- Curbs and gutter
- Drainage systems
- Guardrails
- Right of way and/or limited access fence line
- Sidewalls or other planned or existing structures
- Lighting, signs, and signal poles
- Intersections and driveways which are noted in the plans
- Existing and proposed overhead and underground utilities
- Clear Zone/Lateral offset (should be plotted or noted frequently on each plan sheet)
- Outdoor advertising signs and view zones for permitted signs
- Existing vegetation (to remain or be removed)
- Existing off site features and conditions that affect or are affected by the project
- Fence and gate locations
- Setbacks from structural elements or drainage system
- Limits of clear sight
- Transit facilities
- Proposed planting areas (bubble diagram noted as association type: trees, shrubs, etc.)

LANDSCAPE PLANS – PHASE I (CONCEPTUAL)

Phase I Landscape Plans may be submitted as a roll plot and must include at a minimum, the following elements:

- North Arrow and Scale
- Drainage divides and ground elevations (if available)
- Drainage areas and flow direction arrows
- Street names
- Baseline of Survey or Project Centerline
- Begin & end stations of project, construction and exceptions
- Existing structures and pipes with relevant information
- Existing conditions analysis including but not limited to:
 - Steep Slopes
 - Significant erosion
 - Soil conditions
 - Existing vegetation
- Existing off site features and conditions that affect or are affected by the project
- Edge of pavement and traffic lanes
- Curbs or curb and gutter
- Guardrails
- Right of way and/or limited access fence line and gate locations
- Sidewalks or other planned or existing structures
- Lighting, signs, signal poles and ITS facilities
- Existing and proposed overhead or underground utilities
- Clear Zone/Lateral offset (plotted and noted frequently on each plan sheet)
- Outdoor advertising signs and view zones for permitted outdoor advertising signs
- Limits of clear sight
- Transit facilities
- Proposed planting plan (plant symbols and quantities)

VEGETATION DISPOSITION PLANS

Vegetation Disposition Plans are intended to be included in the Roadway Plans set as details for Selective Clearing and Grubbing and include detailed plans showing existing vegetation to be removed, preserved or relocated.

LANDSCAPE PLANS – DETAILS AND CROSS SECTIONS

Applicable landscape details as identified in the project scope

Add the following paragraph

During the scoping and estimating of the project, determine if a conceptual master signing plan is required. When required, the conceptual master signing plan must be submitted concurrently with the Phase 1 Submittal. Prepare a signing roll plot at a legible scale and include existing signs; proposed regulatory, warning and guide signs on the mainline, ramps and cross street approaches; route markers; service and logo signs; post-interchange signs; call box locations; mile markers; dynamic message signs (DMS); toll signs; destination signs; lane control signs; proposed pavement markings; and proposed roadway geometry. The plan must use symbols to represent overhead cantilevers, overhead truss spans, bridge mounts, single post and multi post ground mount sign structure types. Include basic notes to indicate sign removals and relocates. The intent of conceptual master signing plan is to confirm overall traffic operations, sign spacing and sign messages.

301.2.2 Phase II Submittal***Add the following plan set elements*****TRAFFIC CONTROL PLANS**

Identify Pay Items

LANDSCAPE PLANS - TABULATION OF QUANTITIES AND PLANT SCHEDULE

Project Specific

LANDSCAPE PLANS - TABULATION OF QUANTITIES AND SCHEDULE FOR IRRIGATION AND SITE AMENITIES

Project Specific

LANDSCAPE PLANS – PLANTING PLAN SHEETS

- Project centerline
- Edge of pavement (edge of traffic lanes) Curbs or curb and gutter
- Drainage systems Guardrails
- Right of way and/or limited access fence line Sidewalks or other planned or existing structures
- Lighting, signs, and signal poles
- Intersections and driveways which are noted in the plans
- Existing and proposed overhead and underground utility locations
- Clear Zone/Lateral offset (should be plotted or safety setback

- distances noted frequently on each plan sheet)
- View zones for permitted outdoor advertising signs
- Canopy limits
- Existing vegetation (to remain or be removed)
- Existing off site features and conditions that affect or are affected by the project
- Fence and gate locations
- Setbacks from structural elements or drainage system
- Limits of clear sight Transit facilities
- Proposed Planting Plan (Plant symbols and Plant quantities)

LANDSCAPE PLANS - IRRIGATION PLAN SHEETS (IF APPLICABLE)

- Type of system
- Location and size of mainlines and lateral lines
- Type and location of spray heads and rotors
- Type and location of valves, sleeves, controllers, water sources/point of connection, backflow preventers, and isolation valves

LANDSCAPE PLANS – DETAILS SHEET

- Applicable landscape details
- Irrigation symbology with associative descriptions (if applicable)

301.2.3 Phase III Submittal

Add the following sentence

Phase III Landscape plans submittals must include the Landscape Maintenance Plan.

301.3 Design-Build Phase Submittals

Add the following paragraph

The Design/Build Team has the option to adopt the Landscape Opportunity Plan (LOP) that was provided as a reference document (or attachment) in the RFP or create their own LOP as part of the Technical Proposal.

Table 301.3.1 Summary of Design-Build Phase Submittals***Add the following sheet requirements***

<u>ITEM</u>	<u>TECHNICAL PROPOSAL</u>	<u>90% PLANS</u>	<u>FINAL PLANS</u>
Landscape Plans	LOP	C	F

Status Key: LOP – Landscape Opportunity Plan

301.3.2 Technical Proposal Submittal Requirements

Add the following plan set elements

LANDSCAPE OPPORTUNITY PLAN (LOP)

- Landscape Opportunity plan can be a roll plot for the Technical Proposal submittal
- Project Centerline
- Edge of pavement (edge of travel lanes)
- Curbs and gutter
- Drainage systems
- Guardrail
- Right of way and/or limited access fence line
- Sidewalls or other planned or existing structures
- Lighting, signs, and signal poles
- Intersections and driveways which are noted in the plans
- Existing and proposed overhead and underground utilities
- Clear Zone/Lateral offset (must be plotted or noted frequently on each plan sheet)
- Outdoor advertising signs and view zones for permitted signs
- Existing vegetation (to remain or be removed)
- Existing off site features and conditions that affect or are affected by the project
- Fence and gate locations
- Setbacks from structural elements or drainage system
- Limits of clear sight
- Transit facilities
- Proposed planting areas (bubble diagram noted as association type: trees, shrubs, etc.)

VEGETATION DISPOSITION PLANS

Vegetation Disposition Plans are intended to be included in the Roadway Plans set as details for Selective Clearing and Grubbing and include detailed plans showing existing vegetation to be removed, preserved or relocated.

301.3.3 90% Plans Component Submittal Requirements

Add the following sentence

Landscape Opportunity Plans must be submitted with the 90% submittal as a roll plot and must include at a minimum, the following elements:

Replace all landscape plan set elements with the following elements

LANDSCAPE PLANS – PHASE I (CONCEPTUAL)

- North Arrow and Scale
- Drainage divides and ground elevations (if available)
- Drainage areas and flow direction arrows
- Street names
- Baseline of Survey or Project Centerline
- Begin & end stations of project, construction and exceptions
- Existing to remain or proposed roadway improvements, structures and drainage facilities with relevant information
- Existing conditions analysis including but not limited to:
 - Steep Slopes
 - Significant erosion
 - Soil conditions
 - Existing vegetation (to remain, be relocated or removed)
- Existing off site features and conditions that affect or are affected by the project
- Edge of pavement and traffic lanes
- Curbs or curb and gutter
- Guardrails
- Right of way and/or limited access fence line and gate locations
- Sidewalks or other planned or existing structures
- Lighting, signs, signal poles and ITS facilities
- Existing and proposed overhead or underground utilities

- Clear Zone/Lateral offset (plotted and noted frequently on each plan sheet)
- Outdoor advertising signs and view zones for permitted outdoor advertising signs
- Limits of clear sight
- Transit facilities
- Proposed areas which are reserved for landscape improvements (shown in bubble diagram format)

VEGETATION DISPOSITION PLANS

Vegetation Disposition Plans are intended to be included in the Roadway Plans set as details for Selective Clearing and Grubbing and include detailed plans showing existing vegetation to be removed, preserved or relocated.

LANDSCAPE PLANS – DETAILS AND CROSS SECTIONS

Applicable landscape details as needed or identified in the project scope.

302 Key Sheet

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

302.4 Project Location Map and North Arrow

Add the following sentence

When applicable, the county milepost as well as the Turnpike system milepost must be shown correct to three decimal places under the begin project station.

302.6 Index of Roadway Plans

Add the following sentence

Each sheet in the plan set must have a unique sheet number. Do not duplicate sheet numbers within the plan set.

302.10 Revisions

Add the following paragraphs

If the “REVISIONS” area becomes so large that a new sheet is required to allow for the additional text, include the Lead Key Sheet in the revision for reference. Place a numbered revision triangle as well as “See Sheet 1A” note in the “REVISIONS” area on the Lead Key Sheet.

If new sheets are being introduced as a part of the revision, identify those added sheets in the “REVISIONS” area as shown in the example below:

REVISIONS

FPID 406096-1-52-01

Roadway 1, 2A, 4 THRU 22, 120, 121, 285 (REVISED 2017-10-24)

Roadway 285A THRU 285C (ADDED 2017-10-24)

Structures B-1, B-2A, BW-1 THRU BW-5 (REVISED 2017-10-24)

Structures BW-6 (DELETED 2017-10-24)

If new sheets are being introduced as a part of the revision, identify those added sheets in the Index of Plans.

If sheets are deleted, include these sheets in the Revision log and modify the Index of Plans.

See both the ***TDH*** and ***FDM 131*** for additional information on formatting the plan sheets for revisions.

303 Signature Sheet

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

303.2 Title Block

Add the following sentence

In most cases, the licensed professional listed on the Key Sheet is also responsible for the creation of the Signature Sheet.

303.7 Index

Add the following sentence

List the Signature Sheet under each professional listed on the sheet.

304 Summary of Pay Items

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

305 Drainage Map and Bridge Hydraulic Recommendation Sheet

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

305.1 Drainage Map

Replace the 2nd sentence in paragraph 1 with the following sentence

Drainage maps must be developed using an aerial base map and must be included in the construction plans.

305.1.1 Plan View

Add the following to Number (4)

- (4) Show and label (in acres) pond drainage basins on maps and include pond basin names.

Add the following plan view requirements

- (8) General location of landfills or contamination sites must be indicated on the plan view of the drainage maps.
- (9) Wellfield Protection areas, if any, must be shown on the plan view. Include the wellfield name and associated regulatory agency.
- (10) FDEP impaired water body basin boundaries, if any, must be shown on the plan view. Include the impaired water body name.
- (11) Place the datum conversion from NAVD to NGVD on the drainage map. For example, NAVD 88 EL. 1.00 = NGVD 29 EL. 2.50.

306 Typical Sections

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

306.1 General

Add the following paragraph

Include typical sections for each proposed electronic toll point. These typical sections must represent the required 100 feet of loop pavement underneath the toll gantry. Include these typical sections in contract plans and the typical section package.

306.4 Required Data

Add the following traffic data to item (1)

- (f) Truck DDHV

306.5 Standard Notes for Typical Section Sheets

Add the following standard note requirement

- (4) Embankment slope requirements are as follows:
 - (a) 1:6 for fill to 5'
 - (b) 1:6 to edge of clear zone & 1:4 for fills 5' to 10'
 - (c) 1:6 to edge of clear zone & 1:3 for fills 10' to 20'
 - (d) 1:2 with guardrail for fills over 20' and must include shoulder gutter
 - (e) Shoulder gutter is required in areas of guardrail where embankment slopes are steeper than 1:4 and any pavement is sloped toward the embankment

307 Summary of Quantities

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

308 Summary of Drainage Structures and Optional Materials Tabulation

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

308.1 General

Replace the 1st sentence of the 3rd paragraph with the following

The Optional Materials Tabulation sheet is required to provide acceptable options for pipe material and sizes that will satisfy the Design Service Life.

308.3 Optional Materials Tabulation

Replace the blue box with the following

Modification for Non-Conventional Projects:

Delete **FDM 308.3** and see **Chapter 6** of the [Drainage Manual](#) for Optional Material requirements. Designate installed material on the Optional Materials Sheet, Summary of Drainage Structures, or on the plan sheets.

309 Project Layout

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

309.1 General

Add the following section

309.1.1 Format and Scale

The following are recommended scales for plans.

Project Layout

1:400 Scale – 500' stations for mainline, 100' stations on ramps

310 Project Control

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

311 General Notes

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

Exhibit 311-1 General Notes

Add the following note

5. If a concrete collar/jacket is required in the plans to join a new pipe to an existing pipe, the existing pipe must be removed to the nearest joint to begin the placement of the new pipe; unless it would require encroachment into the adjacent lane. The concrete must be cured and inspected to confirm the integrity of the collar prior to placement of fill material.

Note: With the above comment, an additional 8' length of pipe must be added to the quantities for each tie in site where a concrete collar would have been used. A mechanical type collar is preferable to the concrete collar/jacket, if the site conditions permit.

312 Roadway Plan-Profile

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

312.1 General

Add the following section

312.1.1 Format and Scale

The following are recommended scales for plans.

Plan Sheet (RRR Projects Only)

Mainline and Ramp

1:200 Scale (2,800' per sheet) - show 500' station callout with 100' minor ticks

Plan Sheet (including Traffic Control)

Mainline

1:100 Scale (1400' per sheet) - show 500' station callouts with 100 minor ticks

Ramp

1:50 Scale (700' per sheet) - show 100' station callouts

1:100 Scale (1400' per sheet) - Traffic Control - show 100' station callouts

Profile Sheets (including Traffic Control)

Mainline

1:100 Scale horizontal (1400' per sheet) - Show 100' station - on standard 2x2 grid

1:5 Scale vertical (50' vertical) – Show 2' elevations on standard 2x2 grid

Ramp

1:50 Scale horizontal (700' per sheet) - Show 100' station - on standard 2x2 grid

1:5 Scale vertical (50' vertical) - Show 2' elevations on standard 2x2 grid

Ramp Terminal

Plan

1:50 Scale – 100' stations

Profile

1:50 Scale – Horizontal – Show 100' station on standard 2x2 grid sheet

1:5 Scale – Vertical – Show 2' elevations on standard 2x2 grid sheet

312.2 Roadway Plan Portion

312.2.2 Horizontal Curves

Replace the paragraph 2 with the following paragraph

Horizontal curve information must be shown on their own individual sheets known as “Coordinate and Curve Data” and must contain all horizontal curve information as identified in the ***FDM*** and the ***TDH*** as well providing the “Northing/Easting” information for the PC, PI, PT, and CC of the curves.

Add the following item to the Curve Data information

DS (Design Speed)

313 Special Profile and Back-of-Sidewalk Profile

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

Add the following section

313.4 Treatment/Attenuation Swales

The following labels must be used to locate and identify treatment swales in the profile view of the plans:

Begin Treatment/Attenuation Swale Sta. 99+99 LT (or Right)

End Treatment/Attenuation Swale Sta. 108+46 LT (or RT)

Construct Ditch Block; Sta. 99+99 Left (or Right); Top Elevation 10.30

Begin Treatment/Attenuation Berm Sta. 99+99 LT (or RT); Top Elevation 10.50

End Treatment/Attenuation Berm Sta. 108+46 LT (or RT); Top Elevation 10.50

For plan sets that do not have a profile view, the stations and elevations above must be summarized in a table that uses the same naming convention. Suggested formats are shown below.

Summary of Treatment/Attenuation Swale Locations				
Begin Station	Begin DPI	End Station	End DPI	Side
99+99	10.30	108+46	10.30	LT
103+02	10.70	106+53	10.20	RT
107+98	9.45	110+78	9.00	RT

Summary of Ditch Blocks		
Station	Side	Top Elev.
99+99	LT	10.30
100+02	RT	11.25
123+56	LT	9.70

Summary of Treatment/Attenuation Berm Locations				
Begin Station	Begin Top Elev.	End Station	End Top Elev.	Side
99+99	12.30	108+46	12.30	LT
103+02	13.00	106+53	12.50	RT

Note that treatment/attenuation berm locations need to be specified only if a special longitudinal berm is constructed above natural ground to increase storage in the swale. If the outside boundary of the treatment/attenuation swale is the intersection between the backslope and natural ground, confirm that the design high water does not exceed 0.5 foot below the elevation of the intersection point and no special berm information is necessary in the plans.

314 Intersection and Interchange Layout and Details

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

314.1 General

Replace the 1st paragraph with the following paragraph

These sheets provide layouts and details for intersections and interchanges, with consideration for turning and weaving movements of vehicular traffic. For a safe and efficient roadway system (including provisions for bicycles, pedestrians and landscaping), these areas must be designed with special attention to channelization, turning movements, signalization, drainage, aesthetics and vertical alignment.

315 Drainage Structures

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

315.2 Required Information

Replace the bullets in paragraph five with the following:

- Size
- End treatment
- Flow line elevations
- Structure number
- Standard Plan numbers
- Station number
- Flow direction arrows

Add the following to the paragraph “If existing structures are to be filled...”

If the existing abandoned structure conflicts with the proposed drainage structure, show the portion to be removed in the drainage structure section.

Add the following paragraph

Show all wall zones and label all wall zone pipes in cross sections. Refer to **Appendix D** of the [FDOT Drainage Manual](#).

316 Stormwater Facilities

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

317 Special Details

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

318 Soil Survey

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

318.3 Other Soil Surveys

Add the following paragraphs

Soil surveys for Stand Alone Landscape projects will include selective sampling of soils and testing in key areas within the project limits for purposes of implementing Florida-friendly landscaping principles and to aide in successful implementation of the FDOT Highway Beautification Policy.

Work includes hand auger borings to a depth typical for the root zone of trees and palms (not less than a 4' depth). The scope of this task also includes performing percolation tests (using an agreed upon method) and taking hand auger samples of existing soils in proposed planting areas as depicted on the Landscape Construction Plans. Prepare soil samples for shipment and lab testing for organic content, pH, soluble salts, macro and micro nutrients. Test results will be used in the final determination of proposed plant species to support the landscape design. The results of this analysis will form the basis of any specifications or notes needed on the plans to assure maximum planting performance.

Soil testing locations and quantity of tests will be approved by the Turnpike.

319 Cross Sections

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

319.1 General

Add the following section

319.1.1 Format and Scale

The following are recommended scales for plans.

Cross Sections (including Traffic Control)

1:50 Horizontal

1:10 Vertical = 30'-50' elevations per section – 2 sections per sheet, show 10' elevations on standard 5x10 grid

319.2 Required Information

Add the following paragraph

Critical cross sections must be provided on all projects containing new bridges, widening of existing bridges, new toll gantries, and existing toll gantries if the roadway pavement underneath the gantry is being modified. Critical cross sections must be provided at the beginning and end of all bridges, at the beginning and end of the toll loop pavement area and at the center line of the toll gantries. Critical cross sections must be included in all temporary traffic control plan phases affecting the design elements mentioned in this paragraph.

320 Stormwater Pollution Prevention Plan (SWPPP)

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

320.3 Site Map

Add the following site map information requirement

- (9) The limits of construction, traffic control plan work zones, and silt fence installation must be indicated at the same location on the plans.

321 Temporary Traffic Control Plan

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

322 Utility Adjustments

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

322.2 Required Information

Replace paragraph 2 with the following paragraph

Clearly show and label all proposed and relocated utilities (overhead and buried) on the plans using line types and standard utility symbols (see the [CADD Manual](#)). Clearly indicate the disposition of existing utilities; e.g., "To Remain", "To Be Removed", "To Be Adjusted", "To Be Relocated". For existing FTE and utility facilities that are to be removed (water, sewer, power, communications, ITS, etc.), add a line type and symbols which include x's to indicate the extent of the removal; e.g., ----x----W(B)----x-----.

Show the line voltage for all overhead electrical power lines. Show power line height where overhead lines to remain may impact proposed construction.

Add the following after paragraph 2

Where there are multiple overhead electrical power lines at locations within or adjacent to the project area, accurately locate and show each of the electrical power lines. Survey may be required to accurately locate each of the overhead lines.

Information about the type and material of the utility facility, the owner of the utility facility, the proposed disposition of the utility facility, and the method of placement, relocation, or removal of the utility facility (e.g., by others employed or contracted by the utility owner, by the Contractor through a UWHC, etc.) should be shown on the plans in the following manner:

Type of Utility/Proposed Disposition of Utility

Utility Owner/Method of Placement, Relocation, or Removal

Examples:

1. 18" DIP WM / Proposed

Broward County / By others

2. 4" PE GM / To Remain

TECO-Peoples Gas

3. 8" PVC FM / To be lowered

City of Hialeah / By others

4. (4) 4" Conduit (PVC) / To Be Removed

City of Homestead / UWHC

5. 59 KV OE / To Remain

FPL

323 Selective Clearing and Grubbing Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

324 Miscellaneous Structures Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section

325 Signing and Pavement Marking Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

325.4 Tabulation of Quantities and Pay Item Notes

Add the following paragraph

The format of the quantity sheets must include a breakdown of pay items by type. For example, quantities for RPM's must be categorized by RPM type (mono-directional white, bi-directional yellow, bi-directional white/red, etc.)

325.5 General Notes Sheet

Add the following paragraph

Typical General Notes are shown in the [Traffic Guide Drawings, Sheet 101-1](#). The applicable notes shown on the guide drawing must be added to the plans.

325.7 Guide Sign Worksheet

Add the following paragraph

The use of **Transoft GuidSign Program (GuidSign)** is encouraged. This software includes numerous user options that must be set as described following this paragraph to obtain acceptable output.

- (1) Coordinate settings (i.e., x and y) must not be used.
- (2) Code names for symbols, shields and arrows in the spacing table must not be used.
- (3) All elements (shields, symbols, arrows, etc.) must be properly dimensioned within the sign layout area.
- (4) The panel dimensions in the summary table must not include the size of the exit number panel.

325.8 Multi-Post Sign Supports

Add the following paragraph

All multi-post signs must have cross-sections as follows:

- (1) The cross sections must include the location of ditches, guardrails, barrier walls, right of way lines, potentially conflicting utilities and lane lines for proper location of the signs.
- (2) Sign cross sections must be drawn as viewed by approaching traffic.
- (3) The edge of travel elevation of the roadway and all references to this point must be clearly labeled.
- (4) More than one multi-post cross section may be placed within a single cross section sheet as long as legibility is maintained.
- (5) These cross sections do not require full roadway coverage.
- (6) The recommended scale for the cross section is 1"= 10' horizontally and vertically.
- (7) A graphic representation of each sign panel legend must be shown on the cross section sheet.

325.9 Overhead Sign Cross Section and Support Structure

Add the following paragraph

All proposed overhead truss span, overhead cantilever and bridge-mounted signs require cross sections as follows:

- (1) Sign panel replacements on overhead structures require cross sections.
- (2) The cross sections must include the location of ditches, guardrails, barrier walls, right of way lines, potentially conflicting utilities and lane lines for proper location of the signs.
- (3) Sign cross sections must be drawn as viewed by approaching traffic.
- (4) The grade elevation at the top of the sign foundation and location, the elevation at the highpoint of the roadway directly beneath the structure and the vertical clearance from the high point of the roadway directly beneath the structure to the bottom of the sign luminaries must be clearly labeled.
- (5) A graphic representation of each sign panel legend must be shown on the cross section sheet.

- (6) For overhead signs with down arrows, up arrows at 45 degrees, or other lane specific legends, for which lateral placement is critical, that portion of the legend must be shown over the corresponding lane for correct placement relative to the roadway.
- (7) Any arrows, including down arrows and up arrows (straight or at 45 degrees), that designate lane assignments must be located within the center 1/3 of the associated lane.
- (8) For overhead signs with down or up arrows, show the lane lines on the sign cross section so that the down arrow is centered over the appropriate lane.
- (9) Where applicable, for historical documentation, a note must be added to each sign structure cross-section and to the sign structure table of variables that the design accounts for the 25 percent increase in area.
- (10) Show overhead structure identification numbers no later than the Phase III (90%) submittal. The overhead structure identification numbers are also required to be shown on the structure table of variables. Refer to **TDH 261.2** for more information.

326 Lighting Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

326.2 Key Sheet

Replace the lighting plans assembly list with the following list

- (1) Key Sheet
- (2) Tabulation of Quantities
- (3) Lighting General Notes
- (4) Legend Sheet *
- (5) Pole Data *
- (6) Underdeck Luminaire Data *
- (7) Sign Luminaire Data *
- (8) Layout Sheets (as applicable)
- (9) Plans Sheets
- (10) Underdeck Lighting Plan Sheets
- (11) Underdeck Lighting Section/Details Sheet
- (12) Load Center Schematic One-Line Diagram, Power Riser Diagram, Service Point Details, Panelboard Schedules, and Grounding Details Sheet(s)
- (13) Power Riser Diagram and Panelboard Schedules (for projects with box girders) Sheet(s)
- (14) Miscellaneous Details Sheet (as applicable)
- (15) Foundation Details - High Mast (if required)
- (16) Boring Data Sheets - High Mast (if required)

Note: * - Sheets may be combined based on project size.

326.4 Tabulation of Quantities and Standard Notes

Add the following paragraph

Provide pay item notes below the Tabulation of Quantities table on first sheet only or reference the location of the pay item notes in all Tabulation of Quantities tables (if not shown on the first sheet).

326.5 General Notes Sheet

Add the following paragraph

A lighting General Notes sheet must be provided (see the [Lighting Guide Drawings](#)). All notes must be modified as necessary to make them project specific and to describe any special considerations and directions to the Contractor. Remove general notes that do not apply. A note indicating “not all notes are applicable” or similar is not acceptable.

326.6 Pole Data and Legend Sheet

Add the following items to the pole information requirements

- (7) Pole number - Pole numbering must be coordinated and follow the maintenance scheme.
- (8) Tilt angle (in degrees) for pole-top luminaires
- (9) Aiming angle and direction/orientation for each luminaire on high mast poles

Add the following paragraphs



When a pole has two arms, then the number "t2" must be placed under the respective arm and luminaires column.

Pole numbering must be coordinated and follow the maintenance scheme.

Provide a tilt angle convention detail for all fixtures types that are tilted.

Add the following section**326.6.1 Legend**

The Legend section of this sheet should include the following information:

- (1) Provide a separate and unique symbol for each condition. Basically, a separate symbol is needed for each pay item number used on the tabulation of quantities. Do not use the same light pole luminaires symbol for two different mounting heights or two different mounting types.
- (2) Provide symbol with proper description for the conduit and pull boxes that are embedded in the bridge structures or traffic barrier walls.
- (3) Remove any symbols that are not applicable. A note indicating “not all symbols are applicable” or similar is not acceptable.
- (4) For existing lighting conduits, pull boxes, and lighting system components that are to be removed, add a line type and symbols which include x's to indicate removal; e.g., ---x---BE---x---,  .

Add the following section**326.6.2 Sign Luminaire**

The following information must be given for each sign luminaire:

- (1) Sign panel
- (2) Circuit number
- (3) Roadway station and offset
- (4) Arm length
- (5) Tilt angle (in degrees)
- (6) Luminaire wattage
- (7) Luminaire placement (configuration, sign size, spacing dimensions)

Add the following section

326.6.3 Underdeck Luminaire

The following information must be given for each underdeck luminaire:

- (1) Luminaire name
- (2) Circuit number
- (3) Roadway station and offset
- (4) Luminaire wattage
- (5) Mounting height
- (6) Pay item number

326.7 Lighting Plan Sheets

326.7.1 Required Information

Replace item (1) of the lighting plan sheet requirements with the following item

- (1) Show the lighting layout in plan format using symbols which represent poles, conduits, service points, underdeck luminaires, pull boxes and all necessary light fixtures and electrical devices to be part of the project design.

Add the following item to the lighting plan sheet requirements

- (7) All widening, resurfacing, and All Electronic Tolling (AET) projects must show existing light fixture locations.
- (8) For existing lighting conduits, pull boxes, and lighting system components that are to be removed, add a line type and symbols which include x's to indicate the extent of the removal; e.g., ----x----BE----x-----.

Add the following section**326.7.1.1 Lighting Plan**

The load center details on the Lighting Plan sheet must show the following:

- (1) Label and identify the power company point of service.
- (2) The plan must show the routing of the service feeder from the power company service pole to the load center.
- (3) The plan must show the branch circuit conduit runs from the last light pole to the load center with a wiring call-out identifying the circuit designations in addition to the conductor sizes and quantities (in cross section).
- (4) The phase, neutral, and ground conductors must be clearly identified.
- (5) Provide a detailed description of the load center to include the following information:
 - (a) Load center designation
 - (b) Station and offset of the load center
 - (c) Full description of the service voltage
 - (d) Service type (overhead or underground)
- (6) Specifics for grounding must be shown in equipment details in the plans. Notes must not be solely relied upon for grounding.

Add the following section**326.7.1.2 Underdeck Lighting Plan**

An underdeck lighting plan sheet must be prepared for each underdeck lighting location.

- (1) The plan must be drawn to scale with the scale used clearly identified.
- (2) The plan must use the bridge plan as background with the intensity reduced.
- (3) The plan must indicate the electrical work associated with bridge mounted signs if applicable.
- (4) The plan must show the location of the embedded junction boxes, conduits and associated electrical work with standard notation to indicate the items that are incidental to the bridge.

- (5) A separate section/detail sheet must be prepared to show all necessary mounting details and associated hardware needed for the installation of the underdeck luminaires.

Add the following section

326.10 Box Girder Maintenance Lighting and Power Plan Sheet

Standard Plans, Index 715-240 must be used as a guide in the preparation of the box girder lighting/power plans. The Box Girder Maintenance Lighting Notes are minimum requirements except as revised hereafter.

- (1) A sheet must be prepared for each box girder.
- (2) This sheet must show the internal lighting, receptacles, switches, load centers, life safety devices, and wiring needed for maintenance.
- (3) The sheet must be drawn to scale and must provide a list or table identifying the quantity of each electrical item within each box girder.
- (4) A panelboard schedule must be provided for the distribution panelboard and for each mini power center.

Add the following section

326.11 Load Center Schematic One-Line Diagram, Power Riser Diagram, Service Point Details, Panelboard Schedules, and Grounding Details Sheet

Provide a detailed design of the load center that includes the following information:

- (1) Load center designation.
- (2) Station and offset of the load center.
- (3) Full description of the service voltage.
- (4) Service type (overhead or underground).
- (5) Indicate whether the enclosure will be pole mounted or pedestal mounted.
- (6) Indicate the enclosure NEMA rating.
- (7) Requirements for a photocell.
- (8) Power distribution riser diagram with short circuit values.
- (9) Conductor ampacities (sizes) and insulation type.

- (10) Circuit interrupting devices and fault current interrupting capability.
- (11) Location and characteristics of surge protective devices.
- (12) Main and distribution equipment, control devices, locations and sizes.
- (13) Load computations.
- (14) Grounding and bonding must indicate the following:
 - a. Type and location of grounding electrodes.
 - b. Bonding requirements.
 - c. Testing requirements.
 - d. Conductor material type, size and protection requirements.
 - e. Connections of separate grounding systems, bonded, and use requirements.
- (15) A note requiring shop drawings for all the electrical equipment associated with the load center. The load connected to each branch circuit breaker and the overall total load connected.
- (16) If future luminaires are included in the branch circuit conductor size, the affected lighting plans must be provided with a note defining the number of future luminaires included.

Add the following section

326.12 Lighting Design Analysis Report (LDAR)

A Lighting Design Analysis Report (LDAR) must be provided. An [LDAR Template](#) can be found on the Turnpike Design website. LDAR guidelines must be modified as necessary to be project specific and to describe any special considerations.

327 Signalization Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

327.2 Key Sheet

Add the following items to the signalization plans assembly list

- (11) Temporary Signalization Sheets (if required)
- (12) Internally Illuminated Street Name Signs Detail(s) (if required)
- (13) Electrical Power Service Detail (if required)

327.5 General Notes Sheet

Add the following sentence

Coordinate with the maintaining agency of the traffic signal and include the appropriate notes that comply with maintaining agency requirements.

327.6 Signalization Plan Sheet

327.6.1 Required Information

Replace items (7) and (8) in the list of signalization plan sheet requirements

- (7) Electrical service location and proposed electrical service routing.
- (8) Location of signal poles and span wires, include ground and roadway crown elevations and bearing data.

Add the following item to the signalization plan sheet requirements

- (17) For existing signal conduits, pull boxes, and signal system components that are to be removed, add a line type and symbols which include x's to indicate the extent of the removal; e.g., -----x-----x-----. Include the "to be removed" line type and symbols in the signalization legend if one is included.

327.7 Interconnect/Communication Plan Sheet

Add the following sentence

Coordinate with the traffic signals maintaining agency and verify if proposed interconnect cables and conduits are required.

328 Intelligent Transportation Systems Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

328.5 Project Layout Sheet

Show project layout on a separate Project Layout sheet. The project layout sheet shows all existing and proposed ITS devices, hubs and toll gantries/buildings located in the project limits.

328.6 ITS Plan Sheets

328.6.1 Required Information

Add the following items to the ITS plans assembly list

- (6) Service voltage.
- (7) Circuit numbers with load center identification.
- (8) Label the number and size of ungrounded conductors, neutral conductors, and equipment grounding conductors on all ITS power conduit call-outs.
- (9) Directional drill details under canals, wetlands and other surface waters, as appropriate.
- (10) Every ITS infrastructure including pull/splice box, device, hub, service point must be identified by a unique ID. Refer to the Standard Naming Convention under the FDOT ITSFM Standards. Example of IDs include CCTV-SR91-126.2-NB-A; EPB-SR528-4.8-SB-B; FSV-SR417-52.2-WB-A.
- (11) For existing ITS conduits, pull boxes, and ITS system components that are to be removed, add a line type and symbols which include x's to indicate the extent of the removal; e.g., -----x-----x-----. Include the "to be removed" line type and symbols in the ITS legend.

328.6.1.5 Fiber Optic Cable and Interconnect

Add the following paragraphs

A detail must be included for the design of the ITS splice box. The splice box must be a concrete drainage style manhole.

328.6.1.6 Vehicle Detection and Data Collection

Add the following paragraph

For express lane projects, include cross sections at every non-intrusive express lane detector location showing detector pole, detector mounting, detector cabinet and detection zones.

Add the following section

328.6.1.7 Power Service Details

Provide service point details with one-line diagrams and panel schedules. Panel schedules must include the following:

- (1) Panel Ratings: Voltage, Phases, Capacity (Main Lugs or Main Circuit Breaker) and Short Circuit Current Rating
- (2) Enclosure type
- (3) Neutral Bus and Ground Bus requirements
- (4) Capacity of the Circuit breakers
- (5) Circuit loads
- (6) Total and demand loads

The panel schedules must match the load analysis submitted as part of the ITS Power Design Analysis Report (PDAR). Location of source points and ITS load centers must be stationed in the ITS plans. Specifics for grounding must be shown in equipment details in the plans. Notes must not be solely relied upon for grounding.

The ITS PDAR must include all items in **TDH 231.7** including the power company correspondence and maximum available fault current letters. Technical special provisions (TSP) must be provided for automatic transfer switches (ATS), fuel tank and engine generators, where permanent ITS generators are required as part of the ITS scope of the project.

329 Landscape Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

329.1 General

Add the following section

329.1.1 Phase Submittals

Stand-alone landscape projects must have four phase submittals as follows, two of which must be accompanied by a full ERC review:

- (1) Phase I Submittal (30 percent plans) (limited review)
- (2) Phase II Submittal (60 percent plans) (full ERC review)
- (3) Phase III Submittal (100 percent plans) (full ERC review)
- (4) Phase IV Submittal (Final plans) (limited review)

Final plans will be submitted following acceptable resolution of all Phase III ERC comments. The final plans review will consist of a back-check by the Turnpike Landscape Architect or assignee.

Depending on the project size and complexity, there may be the need for the development of a Purpose, Need and Feasibility Study which includes a comprehensive inventory and analysis of the existing conditions and preparation of a Concept Level or Landscape Opportunities Plan. The Purpose, Need and Feasibility Study is submitted for full ERC review.

329.4 Tabulation of Quantities and Plant Schedule

Add the following section

329.4.1 Bid Factor Tabulation of Quantities

Landscape projects that are scheduled to be let through the Bid Factor Contract must include a separate spread sheet tabulation of quantities showing the item no., plant type,

size, quantity and price in accordance with the applicable Bid Factor Contract documents. This spreadsheet is not intended to be a part of the contract documents.

329.5 General Notes

Add the following paragraphs

General notes must identify [FDOT Standard Specifications](#) sections and included materials sections that are appropriate for the landscape project.

If the [FDOT Standard Specifications](#) do not exist or if they are not adequate for the landscape design, existing site conditions or proposed plant materials, provide technical specification sections as required to include:

- (1) Soil mixtures
- (2) Fertilizer requirement for different plant materials
- (3) Mulches
- (4) Plant material
- (5) Vegetation
- (6) Irrigation systems
- (7) Site amenities
- (8) Hardscape elements
- (9) Fences or lighting included in the project.

Landscape designs must comply with the [Turnpike Landscape Brand Guidelines](#), which can be found on the Turnpike Design web site.

Maintenance of Traffic (MOT) General Notes are included as part of the [Roadway Guide Drawings](#). The applicable traffic control notes and regional contact information from the MOT General Notes should be added to the plans.

Add the following utility notes to the General Notes section:

- (1) Utility information shown in the drawings is schematic in nature and a graphic depiction only. No utility facilities will be relocated. If a utility conflicts with the proposed landscape, notify the Engineer immediately.
- (2) Comply with Chapter 556 of the Florida Statutes during the performance of excavation or demolition operations. Notify utility owners through Sunshine State One Call of Florida, Inc. (ph# 811). Have a representative present when the utility

company designates their facilities. Have all utilities designated prior to the commencement of any construction.

- (3) Department owned utilities will not be located through the Sunshine State One Call system. Department owned utility facilities may include buried electric, ITS fiber optic lines, buried telephone, water, and sewer. Designate all Department owned subsurface utility facilities within the project limits and, if necessary, physically expose Department owned utility facilities that may be affected.
- (4) There is no separate compensation for performing this utility locate work. All costs must be included in the unit cost for plant materials.
- (5) Exercise extreme care while excavating near utilities. The Contractor is responsible for the repair of any damage to existing utilities caused because of the work of this contract.

For Bid Factor Contract projects add the following note to the general notes section:

- (1) Determine if more than one acre of soil will be disturbed as a result of the construction activities. If more than one acre of soil is disturbed, the contractor is responsible for submittal of a Notice of Intent (NOI) to the Florida Department of Environmental Protection (FDEP) for use of the NPDES permit, per FDOT Specification 104. The Contractor is responsible for any information necessary to use the NPDES permit, including a sediment control plan and a SWPPP.

Prepare an erosion and sediment control plan as well as a SWPPP if more than one acre of soil is anticipated to be disturbed, based on the proposed construction activities. The following note must be used in the general notes section:

- (1) Determine if more than one acre of soil will be disturbed as a result of the construction activities. If more than one acre of soil is disturbed, the Contractor is responsible for submittal of a Notice of Intent (NOI) to the Florida Department of Environmental Protection (FDEP) for use of an NPDES permit, per [**FDOT Standard Specification 104**](#). Use the provided erosion and sediment control plan and SWPPP within the plan set, or develop independent documentation for submittal to FDEP.

329.6 Landscape Plan Sheets

Replace all with the following paragraphs

Contract Plan sheets must be prepared in a manner that is consistent with a set of construction documents rather than an illustrative plan. Plan sheets must utilize simplified symbols depicting the location of materials in a legible manner. Plan sets must employ a level of detail and clarity that allows the reviewer to assess the relationship between the

proposed landscape design, the roadway plans, utilities, outdoor advertising signs, and adjoining land use.

Concept Plans and Landscape Opportunity Plans must be plotted on a roll plot and be of sufficient size and scale as to adequately depict the inventory, analysis and concept design.

All Landscape Plans must include the following general notes:

- (1) Restore all landscaped areas to roadway plan grading specification and cross section to original grade or grades acceptable to the Engineer.
- (2) Landscaping must be located such that drainage pipes, ditches and swales are not blocked or flows impeded. When available, the design high water (DHW) of ditches, swales and ponds must be shown on landscaping plans. If DHW elevations are not available, approximate pond breaks (top and bottom of mainstream berm at side slope breaks) and top and bottom of swales/ditches must be shown within the plans. Landscaping location must consider maintenance access along and across ditches and around stormwater management facilities. Maintenance access must be provided so that maintenance forces can access the facility.
- (3) All planting details for beds on a 2:1 (1:2 rise:run) slopes or greater must include the use of weed control and erosion control fabric. Fabrics must be anchored or toed so that storm water cannot run underneath the mat. Weed control fabric and erosion control fabric must be biodegradable within 3 years.
- (4) The planting plans and maintenance plans must clearly indicate the limits of the installation, Contractor's mowing limits, and maintenance limits. Mowing limits must be a minimum of 6 feet outside the outermost plant when plants are "bedded" or 6 feet around a tree which is located in a turfgrass area.
- (5) Bid Factor Contract projects do not require landscape general notes, specifications or details. This information is included in the contract specifications. Bid Factor plans must be prepared in accordance with these documents. Project cost estimates must be generated utilizing the bid factor units included in the Bid Factor contract.
- (6) Bid Factor Contract plans do not require an establishment period Maintenance Plan. A post-establishment Maintenance Plan is required for all projects.

Although the clear zone, horizontal clearance or guardrail setback distance is plotted on the plans, these distances may not be enough to satisfy horizontal sight distance requirements along every horizontal curve, particularly along ramps and loop ramps at interchanges. There may be cases where the horizontal sight offset requirement is outside either the clear zone or the guardrail setback line. In these instances the greater

controlling criteria (e.g. the horizontal sight offset) must be shown on the plans and be free from obstructions.

Setbacks from roadway and other related features to proposed landscape materials must be as indicated on the ***FTE Minimum & Preferred Landscape Setbacks for Installation and Maintenance Operations***. Should there be conflicts between any FDOT standards or Indexes, the FDOT criteria must control.

329.6.1 Required Information

Add the following sentence to item (4) in the list of basic information required

(including existing and proposed storm sewer systems, cross drains, underdrain systems, french drain systems, ditches, retention and detention facilities, and floodplain compensation areas).

Add the following item the list of basic information required

(20) All Turnpike owned utilities

329.7 Landscape Details Sheet

Add the following paragraph

Bid Factor Contract projects may not include details or specifications which materially differ from the FDOT standard details. Details describing unique effects, locations or which modify the FDOT standard details based on unique environmental conditions may be utilized.

330 Utility Work by Highway Contractor Agreement Plans

The following are changes, additions or deletions to the January 2019 FDOT Design Manual (FDM), Topic #625-000-002, for use on Turnpike projects only.

No changes to this section