



**Florida's Turnpike Enterprise Checklist for:**  
*Design Exception, Formal Design Variation, and Project Design Variation Memorandum*

Date: \_\_\_\_\_ District: \_\_\_\_\_

FPID: \_\_\_\_\_ Design Criteria  New Construction  RRR

Project Name: \_\_\_\_\_

Project Section: \_\_\_\_\_ Project Limits BMP: \_\_\_\_\_ to EMP: \_\_\_\_\_

Version: \_\_\_\_\_ Exemption Limits BMP: \_\_\_\_\_ to EMP: \_\_\_\_\_

**Requested Controlling Design Element(s):**

- |                                         |                                                  |                                               |                                                             |
|-----------------------------------------|--------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Design Speed*  | <input type="checkbox"/> Horizontal Curve Radius | <input type="checkbox"/> Maximum Grade        | <input type="checkbox"/> Design Loading Structural Capacity |
| <input type="checkbox"/> Lane Width     | <input type="checkbox"/> Superelevation Rate     | <input type="checkbox"/> Cross Slope          | <input type="checkbox"/> Other: _____                       |
| <input type="checkbox"/> Shoulder Width | <input type="checkbox"/> Stopping Sight Distance | <input type="checkbox"/> Vertical Clearance** |                                                             |

\*Requires supplementary review (i.e. Planning/Structures/etc)

\*\*May require Utility Accommodation Manual (UAM) Design Alternatives Submittals

Documentation Component	Complete	N/A
<b>(1) Submittal/Approval Letter (Form 122-A, see FDM 103)</b>		
(a) Provided as an independent file from report	<input type="checkbox"/>	<input type="checkbox"/>
(b) Short description of project, applicable criteria and reason for variation request	<input type="checkbox"/>	<input type="checkbox"/>
(c) Applicable signature fields, names, and titles listed	<input type="checkbox"/>	<input type="checkbox"/>
(d) Include Central Office concurrence signatures as per FDM 122.7.4 and FDM Table 122.7.1.	<input type="checkbox"/>	<input type="checkbox"/>
(e) Include District Traffic Operations Engineer as required	<input type="checkbox"/>	<input type="checkbox"/>
<b>(2) Report Cover</b>		
(a) Project Title, FPID, digital sign, seal and date	<input type="checkbox"/>	<input type="checkbox"/>
(b) Verified all required Central Office signature blocks have been included in the Submittal/Approval Letter from all required individuals as noted in FDM Table 122.7.1 and discussed in FDM 122.7.4.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(3) Project Description</b>		
(a) General project information, location map, existing roadway characteristics, project limits (Turnpike System mile markers), county section number, work mix, objectives, and obstacles.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Include any associated or future limitations that exist as a result of public or legal commitments.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(4) Project Schedule and Lifespan</b>		
(a) Include the letting date and other important production dates associated with the project.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Include discussion of whether the DE/DV/DVM is a temporary/interim/permanent condition.	<input type="checkbox"/>	<input type="checkbox"/>
(c) Include FPID of any future planned or programmed projects to address the deficient condition.	<input type="checkbox"/>	<input type="checkbox"/>
(d) Provide a brief description and anticipated schedule of the future projects listed in (c).	<input type="checkbox"/>	<input type="checkbox"/>
<b>(5) Exception/Variation Description</b>		
(a) Table of specific design criteria that will not be met (current AASHTO & FDM) compared to proposed value. Detailed explanation of why the criteria or standard cannot be complied with or is not applicable. Description of any proposed value for the project or location and why it is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>
(b) A plan view, plan sheet, or aerial photo of the Design Exception/Variation location.	<input type="checkbox"/>	<input type="checkbox"/>
(c) Plan sheets that includes highlighted location of the specific design criteria deviation requested	<input type="checkbox"/>	<input type="checkbox"/>

Documentation Component	Complete	N/A
(d) A plan view, plan sheet, or aerial photo of the location, showing the design speed, posted speed, target speed, right of way lines, and property lines of adjacent property.	<input type="checkbox"/>	<input type="checkbox"/>
(e) Plan sheets that includes highlighted location of the specific design criteria deviation requested that is listed on the summary table.	<input type="checkbox"/>	<input type="checkbox"/>
(f) A photo of the area of the deficiency.	<input type="checkbox"/>	<input type="checkbox"/>
(g) Typical section or cross-section of the Design Exception/Variation location.	<input type="checkbox"/>	<input type="checkbox"/>
(h) Include dimension to the design criteria deviation requested that is listed on the summary table.	<input type="checkbox"/>	<input type="checkbox"/>
(i) The milepost and station location of the Design Exception/Variation.	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
<b>(6) Alternative Designs Considered</b>		
(a) Provide a discussion on alternative designs meeting Department criteria, meeting AASHTO criteria, partial correction, and the no-build (existing) condition.	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
<b>(7) Impacts of the Exception/Variation</b>		
(a) Safety Performance	<input type="checkbox"/>	<input type="checkbox"/>
(b) Description of the anticipated impact on safety, long and short-term effects. Description of any anticipated cumulative effects.	<input type="checkbox"/>	<input type="checkbox"/>
(c) Summary of the most recent 5-year crash history including any pertinent crash reports.	<input type="checkbox"/>	<input type="checkbox"/>
(d) For crash analysis, use the latest <u>Released</u> <b>CARS</b> data range per FDM 122.6.1	<input type="checkbox"/>	<input type="checkbox"/>
<u>Released</u> crash data: from _____ to _____		
<u>Unreleased</u> crash data: from _____ to _____		
(e) For crash analysis, use latest <b>SIGNAL FOUR</b> data range per FDM 122.6.1 for the <u>Unreleased</u> <b>CARS</b> crash data.	<input type="checkbox"/>	<input type="checkbox"/>
From _____ to _____		
(f) For crash analysis, delete duplicate <b>SIGNAL FOUR</b> crashes that are provided in the <u>Unreleased</u> <b>CARS</b> crash data.	<input type="checkbox"/>	<input type="checkbox"/>
(g) Develop a collision diagram and heat map for all crashes within project limits to be included with the crash analysis.	<input type="checkbox"/>	<input type="checkbox"/>
(h) For non-existing or proposed conditions, a comparison of the predicted or expected crash frequency <u>must</u> be included along with a discussion of the 5-year crash history.	<input type="checkbox"/>	<input type="checkbox"/>
(i) Capacity - Effects on capacity (proposed criteria vs. AASHTO) using an acceptable capacity analysis procedure and calculate reduction for design year, level of service.	<input type="checkbox"/>	<input type="checkbox"/>
(j) Right-of-way impacts for any of the alternatives.	<input type="checkbox"/>	<input type="checkbox"/>
(k) Community impacts for any of the alternatives.	<input type="checkbox"/>	<input type="checkbox"/>

Documentation Component	Complete	N/A
<b>(8) Costs</b>		
(a) Include cost estimates for:		
(i) Alternatives (Meeting Department criteria, partially meeting criteria, no build...etc)	<input type="checkbox"/>	<input type="checkbox"/>
(ii) Mitigation Measures	<input type="checkbox"/>	<input type="checkbox"/>
<b>(9) Mitigation Measures</b>		
(a) Description and explanation of any practical mitigation measures or alternatives that were considered and any selected treatments implemented on the project.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Clearly note all the mitigation measures that are to be included in the design plans and provide those design plans in the appendix.	<input type="checkbox"/>	<input type="checkbox"/>
(b) For all the mitigation measures that were not implemented include a discussion on why it was not included as part of the project.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(10) Summary and Conclusions</b>		
Include discussion that restate and summarize the required criteria vs the deviation, the justification for why it is not feasible, and mitigation measures in the plans.	<input type="checkbox"/>	<input type="checkbox"/>
<b>*For the specified conditions below, the following additional documentation is required:</b>		
<b>(11) Design Speed (see FDM 122.5)</b>		
(a) Provide the length of section with reduced design speed compared to the overall length of the project.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Include any existing or proposed measures used within the transitions to adjacent roadway sections having higher or lower design (or operating) speeds.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(12) Lane Width (see FDM 122.5)</b>		
(a) Provide locations of alternative routes that meet criteria and a proposal for handling drainage.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Include a typical section or plan of the proposed signing and pavement markings associated with the lane width exception.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(13) Shoulder Width (see FDM 122.5)</b>		
(a) Provide a proposal to address stalled vehicles, enforcement activities, emergency operations, and drainage in the documentation for the exception.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Include Typical Section of the deficient shoulder depicting specific condition and exact field measurements (i.e. under bridge, on bridge, at box culvert..etc)	<input type="checkbox"/>	<input type="checkbox"/>
<b>(14) Horizontal Curve Radius (see FDM 122.5)</b>		
(a) No additional documentation beyond what is covered in FDM 122.4 is required.	<input type="checkbox"/>	<input type="checkbox"/>
<b>(15) Superelevation Rate (see FDM 122.5)</b>		
(a) Provide side friction factors for each curve at the PC, Midpoint, and PT of the curve, and at the location of maximum provided superelevation. For multi-lane facilities, provide values for each lane. Use the following equation:	<input type="checkbox"/>	<input type="checkbox"/>
$f = \frac{V^2 - 15Re}{V^2e + 15R}$		
where:		
f = Side Friction Factor		
V = Design Speed (mph)		
R = Radius (feet)		
e = Superelevation (ft/ft) at the station evaluated		

Documentation Component	Complete	N/A
<b>(16) Stopping Sight Distance (see FDM 122.5)</b>		
(a) Provide profiles in the area of vertical alignment related Design Exception or Design Variations for stopping sight distance.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Provide plan views with sight triangles for horizontal stopping sight distance evaluations.	<input type="checkbox"/>	<input type="checkbox"/>
(c) Include AutoTurn analysis of sight lines placed every 20' around curves for horizontal stopping sight distance evaluations.	<input type="checkbox"/>	<input type="checkbox"/>
(d) Stopping Sight Distance associated with Express Lane Markers: Conduct a predictive crash analysis using the HSM and B/C.	<input type="checkbox"/>	<input type="checkbox"/>
(e) Calculated Vertical Stopping Sight Distance Provided vs Vertical Stopping Sight Distance Required as well as K value required vs K value provided and description of why the stopping sight distance cannot be provided.	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
<b>(17) Maximum Grade (see FDM 122.5)</b>		
(a) Verify SSD using Downgrade adjustment FDM Table 211.10.1 & 211.10.2.	<input type="checkbox"/>	<input type="checkbox"/>
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<b>(18) Cross Slope (see FDM 122.5)</b>		
(a) Provide a proposal for handling drainage.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Provide details on how the cross slope impacts intersections.	<input type="checkbox"/>	<input type="checkbox"/>
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<b>(19) Vertical Clearance (see FDM 122.5)</b>		
(a) A written evaluation of the vertical clearance deficiency and recommendation by the State Office of Maintenance is required and should be attached to all Vertical Clearance Variations and Exceptions.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Provide locations of alternative routes that meet criteria.	<input type="checkbox"/>	<input type="checkbox"/>
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<b>(20) Design Loading Structural Capacity (see FDM 122.5)</b>		
(a) Load rating calculations for the affected structure.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Verification of safe load-carrying capacity (load rating) for State unrestricted legal loads or routine permit loads.	<input type="checkbox"/>	<input type="checkbox"/>
(c) Verification of Federal legal loads for bridges and tunnels on the Interstate.	<input type="checkbox"/>	<input type="checkbox"/>
(d) A written evaluation and recommendation by the State Office of Maintenance.	<input type="checkbox"/>	<input type="checkbox"/>
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<b>(21) Benefit/Cost (B/C) Analysis (see FDM 122.6 and FTE Guidance)</b>		
(a) For areas with crash histories or when a benefit to cost analysis is required, provide a time value analysis between the benefit to society (quantified in dollars) and the costs to society (quantified in dollars) over the life of the Design Exception/Variation. Both Historical (HCM) and Predictive (RSAP and HSM) methods are acceptable for performance of a benefit/cost analysis.		
(i) <b>Historical Crash Method (HCM)</b> This method can be used for sites with a crash history.	<input type="checkbox"/>	<input type="checkbox"/>
(ii) <b>Roadside Safety Analysis Program (RSAP)</b> When hazards cannot be removed or relocated, designers need to determine if a safety device, such as a guardrail or a crash cushion, is warranted to protect motorists from the roadside obstacle. This method can be used to perform a benefit/cost analysis comparing a potential safety treatment with the existing or baseline conditions (i.e., the do-nothing option) or alternative safety treatments.	<input type="checkbox"/>	<input type="checkbox"/>
(iii) <b>Highway Safety Manual (HSM)</b> This method can be used for sites with or without a crash history.	<input type="checkbox"/>	<input type="checkbox"/>

Documentation Component	Complete	N/A
<b>(22) Project Design Variation Memo Guidance</b>		
(a) A Project Design Variation Memorandum is required for items that are non-controlling design elements that do not meet Department criteria and for design elements that are not included in the list for Formal Design Variations. Confirm there are no elements in Project Design Variation Memorandum that are listed as a Formal Design Variation.	<input type="checkbox"/>	<input type="checkbox"/>
(b) Confirm the following design items are submitted separately and not included with the Project Design Variation Memorandum Form 122B: (i) <i>Deviation from FTE Lane Closure Policy use Form 122A</i> (ii) <i>Design Speed Reduction during MOT use Form 122A</i> (iii) <i>Deviation from GTR use pre-formatted form from website</i> <u>Link</u> : <a href="https://floridasturnpike.com/wp-content/uploads/2021/06/GTR-Deviation-Submittal-Letter.docx">https://floridasturnpike.com/wp-content/uploads/2021/06/GTR-Deviation-Submittal-Letter.docx</a>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Include table or matrix comparing all required criteria (FDM, AASHTO...etc) vs proposed value and disposition.	<input type="checkbox"/>	<input type="checkbox"/>
(e) Include Plan sheets of deviation highlighting the location being requested.	<input type="checkbox"/>	<input type="checkbox"/>
(f) For deviations from Lateral Offsets or width related deficiencies include a typical section or representative cross section at the exact location showing the deviation from criteria.	<input type="checkbox"/>	<input type="checkbox"/>
(g) For existing deficient conditions to remain include a recent site photo.	<input type="checkbox"/>	<input type="checkbox"/>
(h) Include cost required to meet Department criteria vs partial cost if applicable.	<input type="checkbox"/>	<input type="checkbox"/>
(i) For deviations involving guardrail length include plan view sheets clearly highlighting the guardrail and the deviation from Department criteria.	<input type="checkbox"/>	<input type="checkbox"/>
(j) Detailed documentation can be referred to other S&S document (e.g. Drainage Documents, Pavement Design Package...etc) and does not need to be attached again to the Project Design Variation Memorandum. Provide specific reference to the location of the supporting documents.	<input type="checkbox"/>	<input type="checkbox"/>

**I certify that I have thoroughly read through the checklist and confirm the information presented is accurate to the best of my knowledge.**

**Engineer of Record**

**Project Quality Manager**