



## Request for FTE Design Exceptions & Variations Checklist

Date:

District:

Project Name:

Project Section

BMP:

EMP:

Exemption BMP:

EMP:

FPID:

New Construction

RRR

Requested Control Element(s):

Design Speed\*

Lane Width

Shoulder Widths

Design Loading

Horizontal Curve

Vertical Clearance\*\*

Maximum Grade

Structural Capacity\*

Radius

Superelevation

Stopping Sight Distance

Cross Slopes

Other \_\_\_\_\_

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

\*\*Requires Utility Accommodation Manual (UAM) Exception Submittals

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### Submittal/Approval Letter (independent file from report)

Short description of project, applicable criteria and reason for variation request

Applicable signature fields, names, and titles listed

### Design Exception/Variation Report

Report Cover

Project Title, FPID, digital sign, seal and date

Project description

General project information, typical section, begin/end milepost, county section number

Include Work Mix, To – From, Objectives, Obstacles and Schedule.

Description of the variation element and applicable criteria (AASHTO and Department value or standard)

Detailed explanation of why the criteria or standard cannot be complied with or is not applicable

Description of any proposed value for project and why it is appropriate

Amount and character of traffic using the facility

Description of the anticipated impact on Operations, Adjacent Sections, Level Of Service, Safety, Long and Short Term Effects

Is the variation  temporary or  permanent?

Description of the anticipated Cumulative Effects

A plan view or aerial photo of the variation location

Showing right of way lines, and property lines of adjacent property.

A photo of the area.

Typical section or cross-section of variation/exception location

The milepost and station location of the variation/exception

Any related work programmed or in future work plans

**The Project Schedule Management (PSM) Project Schedule**

**Activities submitted**

- < Phase I     Phase I – Phase II     Phase II – Phase III  
 Phase III – Phase IV     > Phase IV

Letting:

- All mitigating efforts
- An explanation of what if any associated existing or future Limitations as a result of public or legal commitments.
  - Description and explanation of any practical alternatives, the selected treatment and why.

**Comments on the most recent 5-year crash history**

- Including all pertinent crash reports
- Is the location of the variation on the High Crash List?

**Description of the anticipated Cost (Social and to the Department – Benefit/Cost)**

**Summary Conclusions**

**Summary description of included support documentation such as:**

- Location map or description
- Typical section
- Aerial or Photo logs when they best illustrate the element issues
- Crash History and analysis
- Plan sheets in the area of the variation elements
- Profiles in the area of vertical alignment variation elements
- Tabulation of pole offsets for horizontal clearance variation
- Applicable Signed and Sealed Engineering Support Documents

For the specified conditions the following additional documentation is required:

For design speed on FHIS/SIS

- Provide typical sections at mid blocks and at intersections.

For lane width

- Provide locations of alternative routes that meet criteria
- Proposal for handling drainage
- Proposed signing and pavement markings

For shoulder width

- Proposal for handling stalled vehicles
- Proposal for handling drainage

For bridge width

- Plan view of the approaching roadways
- Existing bridge plans (these may be submitted electronically)

For a bridge with a design inventory load rating less than 1.0

- Written evaluation and recommendation by the Office of Maintenance is required
- Load rating calculations for the affected structure

For vertical clearance

- Locations of alternative routes that meet criteria

For cross-slope

- Proposal for handling drainage
- Details on how the cross slope impacts intersections

For conditions that may adversely affect the roadway's capacity

- Provide the comments on compatibility of the design and operation with the adjacent sections
- Effects on capacity (proposed criteria vs. AASHTO) using an acceptable capacity analysis procedure
- Calculate reduction for design year, level of service

For superelevation

- Provide the side friction factors for the curve for each lane of different cross-slope at the PC of the curve, the point of maximum cross-slope, and the PT of the curve using the following equation.  
$$f = (V^2 - 15Re)/(V^2e + 15R)$$

For areas with crash histories or when a benefit to cost analysis is requested

- 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 Exception/Variation.
  - Roadside Safety Analysis Program (RSAP)
  - Historical Crash Method (HCM)

**Design guidance for preparing and submitting Design Exceptions & Variations  
(Do not submit guidance sheets along with the FTE Check List)**

- 1.) Ensure Design Exceptions & Variations are succinct, well organized, and easy to follow. The expectation is that someone unfamiliar with the project could review the document and ascertain it's validity without having to sift through appendices or other project documents.
- 2.) Anticipate at least two rounds of ERC reviews (Draft & Pre-Final) for all Design Exceptions & Variations prior to submitting to the Turnpike District Design Engineer for approval. Additional rounds of comments may be generated on a case-by-case depending on the quality of report.
- 3.) All Design Exceptions & Variations are required to document and summarize the FDOT and AASHTO design criteria for any given design element.
- 4.) A review of the 5-Year Crash History, including the long-forms within areas of the deficiency, are required to be reviewed summarized in the discussion of the reports.
- 5.) Include what the Highway Safety Manual and the Highway Capacity Manual has to say about a given design element.
- 6.) Benefit/Cost Analysis are required whenever a crash can be attributed to a deficient design element. If there are no correctable crashes then a B/C analysis is not required, however, designers need to explain in the report why a B/C analysis is not being prepared.
- 7.) Include R/W impacts in the discussion for all Design Variation & Exception request. Identify the acreage and cost of the R/W that would be required to correct a deficiency as well as documenting the R/W impacts of allowing a deficiency to remain. If there are no R/W impacts associated with the design element then it will need to be explicitly stated as such in the report.
- 8.) Include a rough cost estimate and summarize the associated cost of correcting a deficiency.
- 9.) Document potential mitigating strategies for all Design Variation & Exceptions and explicitly document which of the mitigating strategies are being implemented on the project. If any mitigating strategies are not being implemented then explain in the report why they are not being implemented.
- 10.) Coordinate with the FTE Project Manager to determine if there are planned or future projects that would correct the deficient design elements and include the results in the reports. Explicitly state whether there are or are not any planned or future projects.
- 11.) All items listed on this check list and the FDOT PPM Chapter 23, Section 23.5, must be addressed in all Design Variations and Exceptions. If something is excluded because it is not applicable or no impacts, a brief explanation as to why it is not applicable/no impacts is necessary for the completeness of the report. Items not addressed in the report are assumed to have been missed during the evaluation and will receive comments regarding its absence.
- 12.) Submit three PDF files each time the Exception/Variation is submitted to FTE:
  - a. Request for FTE Design Exceptions + Variations Checklist

- b. Submittal/Approval Letter
- c. Design Exception/Variation Report

13.) The Design Exception/Variation Report PDF file must include bookmarks for each major section of the report as well as each Appendix. Be sure to set the bookmarks tab to open when the file is opened so others viewing the PDF file can easily navigate between sections. In Adobe: File → Properties → Initial View → set Navigation tab dropdown to **Bookmarks Panel and Page** → OK.