DESIGN EXCEPTION REQUEST FORM

TO: Choose One

FROM: Choose One

DATE: **Click here to enter a date.**

This form is to be used on projects requesting a Design Exception where roadway projects do not meet the 10 controlling elements of the geometric design criteria.

Design Exception:

Type I Exception to Controlling Criteria

- Design Speed
- Design Loading Structural Capacity

For exceptions based on Type I Criteria, all roadways on the **NHS** may require FHWA's review. The Regional Project Development Director (PDD) provides final approval. Exceptions to Type I criteria are rare and additional information shall be provided.

Type II Exception to Controlling Criteria

- Lane Width
- Horizontal Curve Radius
- Stopping Sight Distance
- Shoulder Width
- Cross Slopes
- Vertical Clearance
- Superelevation Rate
- Maximum Grade

For exceptions based on Type II Criteria, all roadways on the **NHS** with design speeds **≥** 50 mph may require FHWA's review. The regional PDD provides final approval.

All other roadways (non-NHS) exceptions to controlling criteria do not require FHWA's review; the regional PDD provides final approval.

Note:
Roadways on the Appalachian Development Highway System, or FHWA Projects of Division Interest (PODI) may require FHWA's review for design exceptions regardless of the controlling criteria.

DOCUMENTATION

A design ***exception*** is a variance based on one or more of the controlling criteria (either Type I or Type II). All requests shall be documented on this form. Plan sheets, location map, and supplemental information (i.e. Google maps) must be enclosed for a timely review by the Department. All design exception requests must be justified based on the objective and context demonstrating compliance with accepted transportation engineering principles and reasons for the decisions. The proposed variation shall not

diminish the existing operation and safety of the facility. Historical in-service performance or a traffic engineering study (on site or simulation) may be required.

Type I Exception to Controlling Criteria requires additional documentation:

- Design Speed exceptions. Length of section with reduced design speed compared to overall length of project. Measures used in transitions to adjacent sections with higher or lower design or operating speeds.
- Design Loading Structural Capacity exceptions. Verification of safe load-carrying capacity (load rating) for all State unrestricted legal loads or routine permit loads, and in the case of bridges and tunnels on the Interstate, all Federal legal loads.

Type II Exception to Controlling Criteria requires additional documentation:

- Specific design criteria that will not be met.
- Existing roadway characteristics.
- Alternatives considered.
- Comparison of the safety and operational performance of the roadway and other impacts such as right-of-way, community, environmental, cost, and usability by all modes of transportation.
- Proposed mitigation measures.
- Compatibility with adjacent sections of roadway.

Additional guidance can be found in the Highway Capacity Manual, Highway Safety Manual, Performance Based Practical Design, and Flexibility in Design. Design Exception Requests located within the city limits require a letter from the local agency approving the request.

All other geometric design variances on facilities outside the category I and II criteria shall be documented on a Design Waiver Request form.

PROJECT DATA	
Current Project Phase	**Context/Scoping** ☐ **Footprint Established** ☐ **Plan-in-Hand** ☐ **PS&E** ☐
County/ City	
PIN	
Federal Project No.	
State Project No.	
Project Limits	
Local Program Project **State Let** **Local Let**	Yes☐ No ☐ If yes, then Yes☐ No ☐ Yes☐ No ☐
Project Type	New Alignment ☐ Reconstruction ☐ Resurfacing ☐ Road Diet/Road Reconfiguration ☐ (Note: Road Diet Evaluation form may be required) Maintenance ☐ Road Safety Audit ☐ Bridge Repair ☐ Bridge Rehabilitation ☐ Signalization ☐ Other ☐
US Route/NHS	Yes☐ No ☐
State Route	Yes☐ No ☐
Appalachian Development Highway System	Yes☐ No ☐
FHWA PODI Project	Yes☐ No ☐
Project Scope (Briefly describe the objective of project)	
Project Commitments	

ROADWAY GEOMETRIC DESIGN DATA	
Highway Functional Classification: **(See Green Book 2011 Section 1.3)**	Freeway ☐ Arterial ☐ Collector ☐ Local Road/Street ☐
Rural or Urban Context	Rural ☐ Rural Town (city limits) ☐ Suburban (initially designed as rural but currently in city limits) ☐ Urban (city limits) ☐ Urban Core (in the metropolitan government jurisdiction) ☐
Roadway Typical Section Standard Drawing:	_____
Existing Design Speed:	_____Contact the Plans Sales Office to find original plans stating the design speed or use existing design elements to reverse engineer the design speed.
Existing Posted Speed:	_____
Proposed Design Speed:	_____
Proposed Posted Speed:	_____
Type of Terrain:	Level ☐ Rolling ☐ Mountainous ☐
Traffic Data:	ADT (20XX):_____ D: _/_ ADT (20XX): _____ T: _____% DHV: _____
Access Control	None☐ Partial ☐ Full☐
Multimodal Design Elements Included in the scope of the Project	Pedestrian ☐ Curb Ramps ☐ Pedestrian Signals ☐ Shared-Use Path ☐ New sidewalks ☐ Non-motorized Enhancement ☐ Bicycle ☐ (including bike route/lane, tract addition to existing roadway facility)
Bus Route	Yes ☐ No ☐

GEOMETRIC DESIGN CONTROLLING CRITERIA **Design Exception Requests** Controlling elements must be completed for items where an exception is requested.			
	Existing	**Proposed**	**Exception**
Design Speed:			
Design Loading structural capacity:			
Lane width:			
Shoulder width (inside/outside):			
Cross Slope:			
Superelevation Rate:			
Horizontal Curve Radius:			
Stopping Sight Distance:			
Maximum Grade:			
Vertical Clearance:			
Navigational			
Waterway:			
Grade separation:			
Railroad crossing:			

BRIDGE DESIGN FEATURES Complete if the bridge feature values differ from those listed in the Geometric Design Controlling Criteria Section.				
	Existing	**Proposed**	**Exception**	**REQ**
Traffic Lane Widths:				☐
Outside Shoulder Widths:				☐
Inside Shoulder Widths:				☐
Sufficiency Rating:				☐

CRASH HISTORY SUMMARY REPORT			
Years Reviewed	Total Crashes	Fatal Crashes	Injury Crashes

TDOT DIRECTIVES TO BE CONSIDERED FOR THE EXCEPTION REQUEST			
	YES	**NO**	**N/A**
SAFETY			
Crash history data has been reviewed and is enclosed.	☐	☐	☐
All roadway and roadside safety mitigation measures have been considered and provided.	☐	☐	☐
The proposed variance from the minimum roadway design standards does not adversely affect the safety of the facility.	☐	☐	☐
The Highway Safety Manual was used to justify the design exception.	☐	☐	☐

OPERATIONS			
The operation of the proposed typical cross-section is comparable with operation of the adjacent cross-sections.	☐	☐	☐
The proposed design does not cause a reduction in capacity or adversely affect traffic flow of the facility.	☐	☐	☐
The proposed design does not adversely affect long-term operations.	☐	☐	☐
The proposed design does not impact the existing access control.	☐	☐	☐
Travel demand management solutions have been evaluated.	☐	☐	☐
ROADWAY DESIGN			
It is not feasible to meet the minimum roadway design standards due to right-of-way restrictions, environmental impacts, etc.	☐	☐	☐
The proposed design maintains the same level of service compared to the design based on minimum roadway design standards.	☐	☐	☐
The proposed design results in a significant cost savings compared to the design based on minimum roadway design standards.	☐	☐	☐
ENVIRONMENTAL (Consult TDOT Environmental Division, if needed)			
Does the request affect the NEPA environmental boundary?	☐	☐	☐
Does the request affect environmental permit requirements? (TDEC/TVA/CORPs/TWRA, etc.)	☐	☐	☐
Does the request affect Historical Section 106?	☐	☐	☐
WORK ZONE			
Will the proposed variation affect the TMP?	☐	☐	☐

DESCRIBE THE REASONING AND JUSTIFICATION OF THE DESIGN EXCEPTION REQUEST:

(Address project needs, with consideration of all transportation modes, community engagement, safety, and with consistency towards long term planning and vision. Provide an explanation of the requested design exception and describe other nationally recognized guidance that is met and that the design is based upon. Attach documentation of the specific design guidance met.)

DESIGN EXCEPTION REQUEST – JUSTIFIED BASED ON GUIDANCE FROM THE FOLLOWING:					
Design Guidance Source	Design Guidance Met				
	YES	NO	N/A	Do Not Know	Source Reference if answered “Yes” (page, section, drawing, etc.)
AASHTO Publication	☐	☐	☐	☐	
Highway Safety Manual	☐	☐	☐	☐	
Highway Capacity Manual	☐	☐	☐	☐	
FHWA Publication	☐	☐	☐	☐	
NCHRP Publication	☐	☐	☐	☐	
TRB Publication	☐	☐	☐	☐	
TDOT Design Guidelines	☐	☐	☐	☐	
TDOT Standard Drawings	☐	☐	☐	☐	
Guidance from other states	☐	☐	☐	☐	
Other					

DESCRIBE THE ALTERNATIVES CONSIDERED
(Provide an explanation of proposed mitigation measures to offset impact such as cost, ROW, environmental, multimodal, safety and operation, community and usability, or compatibility with adjacent section of the roadway)

DESIGN EXCEPTION APPROVED BY:

	Click here to enter a date.
Regional Project Development Director	**Date**

☐ Reviewer Comments Attached
☐ Additional Design Exception Information Attached