**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, otherwise the Roadway Design Division Director provides final approval. Exceptions to Type I criteria are rare and additional information shall be provided.

**Type II Exception to Controlling Criteria**

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

For exceptions based on Type II Criteria, all roadways on the **NHS** with design speeds ≥ 50 mph may require FHWA’s review, otherwise the Roadway Design Division Director provides final approval.

All other roadways (non-NHS) exceptions to controlling criteria do not require FHWA’s approval; the Roadway Design Division Director provides final approval.

**Note:**

Roadways on the Appalachian Development Highway System, or FHWA Projects of Division Interest (PODI) require FHWA’s approval 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 Form 5-5 Design Waiver Request.

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| **PROJECT DATA** | |
| **Current Project Phase** | **Planning**   **Design**   **Construction**  **Scope change**  **(Evaluate NEPA impact)** |
| **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  Maintenance  be required)  Road Safety Audit  Bridge Repair  Bridge Rehabilitation  Signilization  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) |  |

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| **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:** |  |
| **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 ☐ |

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| **GEOMETRIC DESIGN CONTROLLING CRITERIA**  **Controlling elements must be completed for all**  **Design Exception Requests** | | | | | | | |
|  | **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: |  |  |  |  |  |  |  |

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| **BRIDGE DESIGN FEATURES** | | | | | | | |
|  | **Existing** |  | **Proposed** |  | **Exception** |  | **REQ** |
| Traffic Lane Widths: |  |  |  |  |  |  |  |
| Outside Shoulder Widths: |  |  |  |  |  |  |  |
| Inside Shoulder Widths: |  |  |  |  |  |  |  |
| Sufficiency Rating: |  |  |  |  |  |  |  |

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| **CRASH HISTORY** | | | | | |
| Years Reviewed | Total Crashes |  | Fatal Crashes |  | Injury Crashes |
|  |  |  |  |  |  |

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| **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** | | | |
| 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 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.)

**JUSTIFICATION OF THE DESIGN EXCEPTION:**

(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.)

|  |  |  |  |  |  |
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| **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 IS REVIEWED AND RECOMMENDED FOR APPROVAL BY:**

|  |  |  |
| --- | --- | --- |
| Choose an item. |  | Click here to enter a date. |
| **Regional Project Development Director** |  | **Date** |

**DESIGN EXCEPTION APPROVED BY:**

|  |  |  |
| --- | --- | --- |
| Choose an item. |  | Click here to enter a date. |
| **Roadway Design Division Director** |  | **Date** |

Reviewer Comments Attached

Attachments