STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
SUITE 1300 JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-3848
(615) 741-2221

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

INSTRUCTIONAL BULLETIN NO. 15-11

Regarding Design Exception Requests

Effective immediately, section 3-110.02 of the Design Guidelines and Design Exception and Justification Form are revised.

PURPOSE: To update the design exception request approval authority.

3-110.02 DESIGN EXCEPTION REQUESTS

Despite the range of flexibility that exists with respect to the controlling elements of design, there are situations in which the accepted criteria are not applicable to the project circumstances or could not reasonably be met. For such instances, when it is appropriate, the design exception process allows for the use of criteria other than the accepted values.

The design exception process requires formal approval for exceptions relating to the following 13 controlling criteria of design: (1) design speed, (2) lane width, (3) shoulder width, (4) bridge width, (5) structural capacity, (6) horizontal alignment, (7) vertical alignment, (8) grades, (9) stopping sight distance, (10) cross slopes, (11) superelevation, (12) vertical clearance, and (13) horizontal clearance (other than the clear zone).

Design exception requests for projects shall be submitted to the Director of the Roadway Design Division using **Design Exception and Justification Form**, shown in Figure 3-1. After review the Director of the Roadway Design Division will be forwarding the design exception request to approval authority for final approval.

The approval authority for design exceptions on the Appalachian Development Highway System is with the **FHWA Division Administrator**. The approval authority for design exceptions on the Interstate System and NHS is the **Assistant Chief Engineer** and any other system is the **TDOT Director of the Roadway Design Division**.

All applicable material from the following list shall be addressed in narrative form on the **Design Exception and Justification Form**, shown in Figure 3-1., by the roadway designer. For locally developed projects, the highest local official responsible for the project is responsible for this task.

1. Accident experience or data.

2. The effect of the variance from the design standard on safety and operation of the facility.

3. Any safety mitigation measures considered and provided to minimize the effect of the reduced design.

4. The compatibility of the design and operation with adjacent sections.

5. The comparative cost of the full standard versus the lower design being proposed.

6. The long term effect of the reduced design as compared to the full standard.

7. The difficulty in obtaining the full standard such as right-of-way restriction, delays, environmental impacts, etc.

8. Any capacity reductions or operational problems caused by the proposed exception.

9. Level of service for full standards versus the reduced design.

10. The cumulative effect of more than one standard that is being reduced.

11. The possibility of improving or correcting the reduced design feature in the future.

The completed Design Exception and Justification Form including any attachments shall be reviewed by Regional Project Development Director (PDD) and submitted to the Director of Roadway Design Division for final approval or forwarding to approval authority. Approved design exceptions **shall** be noted, with approval date, in the lower right corner of the title sheet.

Jennifer Lloyd

Jennifer Lloyd, PE
Civil Engineering Director
Roadway Design Division

Attached: Revised Design Exception and Justification Form

JL:ARH: arh

8/20/2015

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DESIGN EXCEPTION AND JUSTIFICATION FORM

TO: _____, Director, Roadway Design Division, TDOT

FROM: _____, Director, Regional Project Development, TDOT
or
_____, Highest Local Official Responsible for the Project, Title
(Locally Developed Projects)

DATE: _____

SUBJECT: **Design Exception Request**

Project No. _____ Pin _____
Project Description: _____

CONTROLLING CRITERIA FOR WHICH EXCEPTION IS REQUESTED:

Design Speed	☐	Lane Width	☐	Shoulder Width	☐	Grades	☐
Horizontal Alignment	☐	Vertical Alignment	☐	Cross Slopes	☐		
Stopping Sight Distance	☐	Superelevation	☐	Bridge Width	☐		
Horizontal Clearance (other than clear zone)	☐	Vertical Clearance	☐	Structural Capacity	☐		

DESIGN EXCEPTION REQUESTED:

(Note: List location and controlling element of the feature when an exception is requested. Example: 1) Station 4+50, 30 mph horizontal curve 2) Station 10+00 to 13+00, 11ft. lane width instead of 12ft. 3) 20 mph vertical alignment (Sag K=24) instead of 40 mph)

Figure 3-1
Design Exception and Justification Form

DESIGN DATA:

Highway Functional Classification: _____
Standard for the Above Classification: _____
Existing Posted Speed: _____
Proposed Posted Speed: _____
Type of Terrain: _____
Rural or Urban Area: _____
Traffic Data: ADT (20_____): _____ D: _____
ADT (20_____): _____ T: _____
DHV: _____ V:_____

DESIGN FEATURES:

	Standard	Existing	Proposed	N/A
Cross Slope:				
Superelevation:				
Minimum Radius of Curve:				
Minimum Stopping Sight Distance:				
Minimum "K" Value for Crest Vertical Curve:				
Minimum "K" Value for Sag Vertical Curve:				
Maximum Grade:				

ROADWAY TYPICAL SECTION:

	Standard	Existing	Proposed	N/A
Horizontal Clearance: (Other than the clear zone)				
Shoulder Widths:				
Outside Shoulders:				
Inside Shoulders:				
Lane Width:				

BRIDGE FEATURES:

	Standard	Existing	Proposed	N/A
Traffic Lane Widths:				
Outside Shoulder Widths:				
Inside Shoulder Widths:				
Load Capacity or Sufficiency Rating:				
Vertical Clearance:				
To Waterway:				
To Other Highway:				
To Railroad:				

Figure 3-1 (Continued)
Design Exception and Justification Form

FACTORS CONSIDERED:

(Note: Each of the following factors shall be addressed in narrative form. If a factor is not applicable, or data is not available, only the appropriate box needs to be checked. For factors that are not a consideration, justification should be included.)

1) Accident experience or data

Data Available ☐ No Data Available ☐ Not Applicable ☐

2) Effect of the variance from the design standards on safety and operation of the facility

Effect considered ☐ No effect on the facility ☐ Not Applicable ☐

3) Safety mitigation measures considered and provided

Measures provided ☐ Measures not justified ☐ Not Applicable ☐

4) Compatibility of the design and operation with adjacent sections

Considered ☐ Not a Consideration ☐ Not Applicable ☐

5) Comparative cost of the full standard versus the lower design proposed

Considered ☐ Not a Consideration ☐ Not Applicable ☐

6) Long term effect of the reduced design as compared to the full standard

Considered ☐ Not a Consideration ☐ Not Applicable ☐

7) Difficulty obtaining the full standard such as right-of-way restriction, environmental impacts, etc.

Considered ☐ Not a Consideration ☐ Not Applicable ☐

8) Capacity reductions or operational reductions caused by the design

Considered ☐ Not a Consideration ☐ Not Applicable ☐

9) Level of service for the full standard versus the proposed design

Considered ☐ Not a Consideration ☐ Not Applicable ☐

10) Cumulative effect of more than one standard that is being reduced

Considered ☐ Not a Consideration ☐ Not Applicable ☐

11) Possibility of improving or achieving the full standard feature in the future

Applicable ☐ Not on the state highway system ☐ Not Applicable ☐

Figure 3-1 (Continued)
Design Exception and Justification Form

DESIGN EXCEPTION AND JUSTIFICATION:

(Note: This section shall include a narrative description of the design exception request and includes a recommendation for approval)

ATTACHMENTS:

(Note: Include appropriate items such as plan prints, accident data, estimates, sketches, photos, etc.)

DESIGN EXCEPTION IS RECOMMENDED FOR APPROVAL BY:

Regional Project Development Director
and / or
Director of Roadway Design Division

☐ Comments Attached

APPROVED: _____ _____

Division Administrator, FHWA **Date**
or
Assistant Chief Engineer, TDOT
or
Director, Roadway Design Division, TDOT

Figure 3-1 (continued)
Design Exception and Justification Form