**Structures (Design) Checklist**

**Any item not checked yes on the list shall have a written explanation why the condition cannot or has not been met in the comments column.**

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| --- | --- |
| PIN: |  |
| County: |  |
| Federal Project No.: |  |
| State Project No.: |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **BRIDGES** | **YES** | **NO** | **COMMENTS** |
| Grade or drainage structure is over 20 feet in length measured along the roadway centerline |  |  |  |
| Timber materials are not being used in bridge construction |  |  |  |
| All bridge rails are specified according to current TDOT standards OR are rails meeting the requirements of AASHTO Manual for Assessing Safety Hardware, 2009. |  |  |  |
| Box and Slab type bridges are specified according to the LRFD Bridge Design Specifications, AASHTO, current edition with addenda |  |  |  |
| Certification that bridges meet structural design criteria per LRFD Bridge Design Specifications, AASHTO, current edition with addenda has been submitted |  |  |  |
| Geotechnical Report complete |  |  |  |
| All design notes have been included in the final structures submittal |  |  |  |

Certification of the following based on AASHTO Green Book guidelines have been submitted:

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| --- | --- | --- | --- |
| **GRADE CROSSINGS** | **YES** | **NO** | **COMMENTS** |
| The bridge length shall be the minimum required to accommodate the road or railroad plus the fill slopes (usually 2:1 unless otherwise specified by Geotechnical Study), ditches, and sidewalks, if required. |  |  |  |
| The minimum horizontal clearance for a bridge over a road shall be a distance equal to the width of shoulders plus ditches except that for bridges over federal aid systems shall be 30’-0” from the edge of the travel lane to any substructure. The minimum horizontal clearance for a bridge over a railroad shall be 25’-0” measured from the top of the rail elevation at the centerline of the track to any substructure or fill slope. |  |  |  |
| A minimum vertical clearance of 14’-6” shall be provided across the full extent of the required horizontal clearance for bridges over local roads and 16’-6” over state routes and interstates. Multimodal or pedestrian bridges shall provide a minimum vertical clearance of 17’6” over local routes, state routes, and interstates. For bridges over railroads, the minimum vertical clearance shall be 23’-0” above the top of rail, unless otherwise specified by the railroad. |  |  |  |
| Any greenways, bicycle or pedestrian lanes have been accounted for in the bridge design. |  |  |  |

Certification of the following has been submitted, when applicable:

|  |  |  |  |
| --- | --- | --- | --- |
| **HYDRAULIC CROSSINGS** | **YES** | **NO** | **COMMENTS** |
| All hydraulic design has been done according to the Tennessee Hydraulic Memoranda (THM), current version found on the TDOT Structures Division Hydraulics Section web page and HEC-RAS files are included in final submittal |  |  |  |
| Is the project located in Federal Emergency Management Agency (FEMA) Flood Plain?  If so, is the No-Rise Certification included in the final submittal? |  |  |  |
|  |  |
| A scour analysis has been performed according to procedures in the Federal Highway Administration (FHWA) publication HEC-18 for all span bridges in TDOT Region 4 and any other part of the state where foundations will not be placed on bedrock. |  |  |  |
| Bridge deck drainage analysis has been performed according to procedures in the FHWA publication HEC-21 and submitted with the hydraulic design file for all span bridges unless the TDOT Standard Drawing STD 7-1 (Open) bridge rail is used. |  |  |  |