

STRUCTURES MANUAL INTRODUCTION - REVISION HISTORY

- I.1** The paragraph is added to state the intent of the commentary.
- I.6** Modifications to adopt current criteria.
- I.8** Email contact information provided.

VOLUME 1 - REVISION HISTORY

Extensive Commentary has been added throughout the Structures Design Guidelines. These changes have been marked with change bars in the left margin but have not been included in the revision history below.

- 1.2** Brackets are removed from the LRFD references for readability.
- 1.3** Cross references added.
- 1.1.7** Editorial change to be consistent with the language in NCHRP 12-108.
- 1.2** Clarification of existing criteria.
- 1.4.2** Clarification of existing criteria.
- 1.4.3** To provide design criteria on Class VII concrete which was introduced in the January 2019 Standard Specifications for Road and Bridge Construction.
- 1.4.4** Clarification of existing criteria.
- 1.4.5** To shift the responsibility of approving the use of Class 5 finishes from the Chief Engineer to the District Design Engineer.
- 1.10** Cross-reference provided to clarify existing criteria.
- 1.11.1** 1) Clarification of existing criteria.
2) Table 1.11.1-2: Dimension E has been corrected for the 15- strand tendon.
- 1.11.4** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 1.11.5** Clarification of existing criteria.
- 1.15** Modifications are based on recommendations from the National Transportation Safety Board and clarify the existing criteria.
- 2.4.3** Clarification of existing criteria.
- 2.6.1** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 2.6.3** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 2.6.4** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 2.6.5** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 2.6.6** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 2.6.8** Clarification of criteria.
- 2.10** 1) General Statement: Modifications are based on recommendations

- from the National Transportation Safety Board and clarify the existing criteria.
- 2) Table Footnote: To implement minimum requirements for exterior intermediate diaphragms, as recommended in the report by Connor et al, in order to use the reduced redundancy factors.
- 3.1** G) Standard details are provided for accuracy and consistency.
J) Clarification is needed to ensure designers are accounting for Dynamic Load Allowance (DLA) for piles that are not entirely buried, as is the case for intermediate pile bents. Although clearly implied, the AASHTO LRFD BDS criteria does not explicitly require application of DLA for above-ground piles.
- 3.3** Editorial change to update the reference.
- 3.5.1** C) To clarify that the tension pile details do not develop a fixed connection.
H) Clarification of existing criteria.
- 3.5.7** Table 3.5.7-1) These revisions should decrease costs for future projects utilizing EDC instrumented piles by providing a mechanism to reduce the quantity of piles with tip instrumentation and documenting how piles without tip instrumentation will be evaluated during construction.
Commentary)To correct the Standard Plans Index Number.
- 3.5.13** Clarification of existing criteria.
- 3.8** Criteria rearrangement
- 3.8.2** Modifications are made to prominently list GRS abutments as a foundation type.
- 3.11.1** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 3.11.2** To list the appropriate agencies required for coordination.
- 3.11.4** Clarification of existing criteria.
- 3.12.7** Modifications are made to prominently list GRS abutments as a foundation type.
- 3.13.1** Clarification of existing criteria.
- 3.13.2** Clarification of existing criteria.
- 3.13.4** Modifications are made to prominently list GRS abutments as a foundation type.
- 3.14.3** Clarification of existing criteria.
- 3.15** Criteria regarding load modifiers and load factors has been removed from the SDG to default to the criteria as stated in the AASHTO LRFD BDS, 9th Edition.

- 4.1.3** Department policy moved from the commentary to the main text.
- 4.2.3** Modifications are in line with recent changes to the Standard Specifications for Road and Bridge Construction.
- 4.2.5** Editorial changes for clarity.
- 4.2.6** Clarification of existing criteria.
- 4.3.1** C.2) Criteria regarding strand debonding has been updated based on the adoption of the AASHTO LRFD BDS, 9th Edition.
C.4) To provide design criteria on Class VII concrete which was introduced in the January 2019 Standard Specifications for Road and Bridge Construction,
G and H) Department policy moved from the commentary to the main text.
- 4.3.4** Bracing requirements for concrete I-beams are clarified and concerns regarding intermediate bracing being specified for 36", 45" and 54" Florida I-beams when not required by calculations are addressed.
- 4.5.1** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 4.5.5** Criteria stated in the AASHTO LRFD BDS, 9th edition has been removed from point B.
- 4.6** Clarification of existing criteria.
- 4.6.2** Limitations are placed on the slope of the ramp for maintenance.
- 4.6.4** Transverse ribs may be required by the design.
- 4.7** 1) Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
2) Closure pour criteria has been clarified.
- 4.8.1** 1) Criteria related to additional non-composite dead load for horizontally curved U-girders has been removed as the forming technique which created the additional loading is obsolete.
2) Clarification of existing closure pour criteria.
- 4.8.3** Criteria regarding strand debonding his been removed based on the adoption of the 9th Edition of the AASHTO LRFD.
- 4.8.4** The criteria requiring use of internal post-tensioning within the webs and flanges has been removed as external post-tensioning is permitted.
- 5.1** Clarification of current criteria.
- 5.3.2** To clarify the Department's policy that when the web is in tension, the web to flange welds are fracture critical and are required to follow more stringent criteria.
- 5.6.3** To implement minimum requirements for exterior intermediate

diaphragms, as recommended in the report by Connor et al, in order to use the reduced redundancy factors.

- 5.7** Language conflicting with the current preferred practices, SDM Figures and NSBA Documents has been removed from points A and B.
- 5.11** Clarification of criteria.
- 5.11.2** D) Criteria moved from SDM 16.10 to SDG 5.11.2.D.
E) Modifications are based on the adoption of the 9th Edition of AASHTO.
- 5.12.1** Editorial
- 5.12.2** Criteria requiring galvanized bolts on painted steel members has been removed to be consistent with the Department's Policy in the Standard Specifications for Road and Bridge Construction.
- 6.5** C) The selection of the MR bearing type and design is placed upon the Contractor.
E) Clarification of existing criteria.
- 6.5.1** Editorial
- 6.5.2** Clarification of current criteria.
- 6.7.1** A and C) To clarify existing criteria.
F) The number of conduits per railing varies based on the project specific requirements.
- 6.7.2** Clarification of existing criteria.
- 6.7.4** Clarification of existing criteria.
- 6.7.5** Criteria correction
- 7.3.6** To state requirements for substructure and foundation design.
- 7.6** To ensure that the design is based on the actual field conditions.
- 7.7** Modifications are in line with recent changes to the Standard Specifications for Road and Bridge Construction.
- 8.1** Moveable bridge criteria has been updated to the current standards and practices.
- 8.1.10** Moveable bridge criteria has been updated to the current standards and practices.
- 8.1.11** Moveable bridge criteria has been updated to the current standards and practices.
- 8.2.5** Moveable bridge criteria has been updated to the current standards and practices.

- 8.6.6** Moveable bridge criteria has been updated to the current standards and practices.
- 8.8.3** Moveable bridge criteria has been updated to the current standards and practices.
- 8.8.4** Moveable bridge criteria has been updated to the current standards and practices.
- 8.8.7** Moveable bridge criteria has been updated to the current standards and practices.
- 8.8.20** Moveable bridge criteria has been updated to the current standards and practices.
- 9.2** Costs are updated to reflect current pricing data.
- 9.4** Reference to the Project Management Handbook has been removed and replaced with the Project Management Guide.
- 10.1** Clarification of existing criteria.
- 10.4** Clarification of existing criteria.
- 11.1** Cross-reference added
- 11.6.4** Reference to the applicable research report is added.

VOLUME 2 - REVISION HISTORY

Extensive Commentary has been added throughout the Structures Detailing Manual. These changes have been marked with change bars in the left margin but have not been included in the revision history below.

- 1.2**..... Document references added for clarity.
- 1.4**..... 1) Modification from "sub-unit" to "secondary unit" is consistent with language in the BOE.
2) Change in requirements for quantity reports as directed in the FDM.
- 1.5**..... Change in requirements for quantity reports as directed in the FDM.
- 3.1**..... Change in requirements for quantity reports as directed in the FDM.
- 3.5**..... Outdated reference to the CADD Manual has been removed.
- 5.3**..... Clarification of existing criteria.
- 5.5**..... Outdated criteria has been removed from this section.
- 11**..... Content rearrangement for clarity.
- 11.4**..... References to the Standard Plans have been corrected.
- 11.6.1** Tension pile details have been moved from SDM 13.5. Outdated details for concrete tension piles have been removed from the Manual. Guidance has been added for steel tension piles.
- 11.6.2** Steel pipe pile tip details are added for consistency.
- 11.7** Drilled shaft reinforcement details have been moved from SDM 13.7.
- 12.3**..... Details added for crack control of the End Bent/MSE Wall interface lug.
- 13.5**..... Tension pile details are moved from SDM 13.5 to SDM 11.6.1.
- 13.7** 1) Drilled shaft reinforcement details moved from SDM 13.7 to SDM 11.7.
2) The selection of the MR bearing type and design is placed upon the Contractor.
- 14.3**..... Additional information required for construction.
- 15**..... Clarification of content.
- 15.3**..... Clarification of existing criteria.
- 15.5**..... The gap in Figure 15.5-2 was corrected to show 3-inches.
- 15.10** Modifications to allow for the selection of the MR bearing type and design to be placed upon the Contractor.

- 16.8** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 16.9** Additional information required for construction.
- 16.10** Criteria moved from SDM 16.10 to SDG 5.11.2.D.
- 16.11** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 19.2.2** Criteria stated in the specifications has been removed.
- 21.11** Modifications to adopt the AASHTO LRFD BDS, 9th Edition.
- 21.12** Railings which have been successfully crash tested per the MASH standards or determined to meet the MASH standards through equivalence are provided.
- 25.3.1** Clarification of existing criteria.

VOLUME 3 - REVISION HISTORY

- 2.5.9** New criteria is added.
- 2.6.1** Editorial
- 3.8.2** Editorial
- 3.9.1** New criteria is added.
- 5.12** New criteria added
- 11.6** Updated criteria
- 13.6.2.1** Editorial
- 18** Clarification of content.
- 18.1** Clarification of content.
- 18.2** Content clarification
- 18.3** New criteria is added.

VOLUME 4 - REVISION HISTORY

2.3..... Clarification of existing criteria.