CONSULTANT SUBMITTAL PROCEDURE

Local Sponsor Projects
Sponsors shall make all submittals to the Local Highway Technical Assistance Council (LHTAC) for review and approval. LHTAC will make distribution to the necessary ITD Sections for review if needed. Submittals should be posted into ProjectWise in the Bridge/Review folder for the project.

State Consultant Projects
Consultants shall make all submittals to the District Project Manager, and the District will make distribution to the necessary ITD Sections for review. Submittals should be posted into ProjectWise in the Bridge/Review folder for the project. Returned transmittals by the Bridge Section will be sent to the District project manager and posted on ProjectWise.

Submittal Criteria
The following data is required for the various submittals:

Project Concept Report
A Concept Report for the project shall be prepared according to the criteria in the Roadway Design Manual. A bridge concept study shall be developed as required for the Alternate Solutions & Cost. A copy of the approved Concept Report shall be submitted with the TS&L Report. On small projects, the Concept Report and TS&L Report may be combined into one document.

Type, Size & Location Report
A submittal of data is to be made showing the concepts of the structures. Drilling for the foundation investigation for multi-span structures should be delayed until the concept is approved. The data should include:

- Bridge layout showing plan and elevation views
- Bridge cross-section
- Roadway cross-section
- Stream cross-section,
- Vicinity map
- Preliminary profile grade
- Draft Geological Engineering Report (if available)
- Draft ITD-211 Bridge Structures Hydraulic Survey (if available)
- Other data pertinent to type or location selection
- Cost Estimate. Add a 30% contingency amount.

Show as much of the above data as possible on the layout drawing.
Refer to Article 0.07 for TS&L Report criteria.
Consultants are encouraged to contact the Bridge Section/LHTAC during development of the structure concept.

Final Situation and Layout Review
The plans shall consist of the following:

- Situation and layout. Refer to Articles 17.2 and A17.1 in Chapter 17 of the BDM.
- Foundation investigation sheet
- Sketches or views of unusual structural details
- Abutment/pier details to clarify the concept
- Stage construction details

The plans shall also be accompanied by:

- Approved Geological Engineering Report
- Approved ITD-211 Bridge Structures Hydraulic Survey.
- Approved ITD-783 Design Standards forms
- District approved roadway profile and alignment data
- Topographic map with contours
- Cost Estimate. Add a 15% contingency amount.

The Bridge Section shall approve the Situation and Layout plans for State consultant projects before proceeding with final design.

LHTAC shall approve the Situation and Layout plans for LPA consultant projects with Federal-Aid funds before proceeding with final design.

Intermediate Design Reviews
If needed, these reviews can be handled informally between the Local Public Agency/State Consultant and the Bridge Section/LHTAC.

- Cost Estimate. Add a 5% contingency amount.

Final Design Review
The submittal shall include the following:

- Drawings in reproducible form
- Special Provisions
- Cost Estimate. No contingency amount.
- Quantity Calculations
- Construction Schedule
- Design Calculations
- Check Calculations
- Consultant QA/QC Check Lists

Plans, Specifications, Estimates
After the consultant has made the necessary corrections from the Final Design Review, the final drawings and the revised final design data shall be submitted. The Bridge Section will publish a PS&E letter of acceptance. In the transmittal letter the Bridge Section will include an estimate of man-hours for checking shop plans and construction drawings. On Local Sponsor Projects, LHTAC will arrange for a supplemental engineering agreement to cover this additional work.

Plans (SS4 format)
The final drawings shall include the following:

- 22”x34” 3 mil (minimum) mylars stamped by the Engineer
- Electronic drawings in .pdf format with electronic stamp
- Electronic CADDS files in .dgn format

Plans (ORD format)
The final drawings shall include the following:

- 11”x17” prints on 28 lb (minimum) paper stamped & signed by the Engineer
- Electronic drawings in .pdf format of the signed and stamped plans
- Electronic CADDS files in .dgn format

Design Calculations

- A title page shall have the bridge name, project number, project key number, and drawing number and shall be stamped by an Engineer licensed in Idaho.
- The calculations shall be indexed, and pages numbered.
- The calculations shall be submitted in .pdf format.

Load Rating
Local Sponsor Projects
There is no load rating performed as part of the PS&E submittal. The load rating shall be completed within 45 days of the bridge being opened to traffic. The consultant doing the load rating shall be selected from ITD’s Load Rating Term Agreement list. This consultant may or may not be the firm that designed the bridge. The load rating shall include the items listed below.
State Consultant Projects
Initial Load rating for all structure types except precast culverts shall be performed as part of the Final Design submittal and

shall be done in accordance with Article 0.04 and revised for any changes or comments for the PS&E submittal. Final load rating shall be completed prior to the bridge being opened to traffic. Precast culvert load rating shall be done after approval of the shop drawings as part of the Supplemental Agreement for construction support and prior to the bridge being opened to traffic.

To maximize the efficiency of its operations, the Department has selected the AASHTOWare Bridge Design and Rating software (BrDR formerly known as VIRTIS) for load rating. BrR or BrDR software shall be used to do the rating for the structure types listed below. For structure types not listed below, curved girders, or structures with complex geometry, alternate rating software may be used, but needs to be approved in advance by the ITD Asset Management Office.

The Load Rating will be completed using Load and Resistance Factor Rating (LRFR) method. The Load Rating will be run using the Load Factor Rating (LFR) method and results will be reported on the LFR Summary Form. The LFR results are for information only and are not required to be signed and sealed. Coding instructions for the BrDR software are in Chapter 6 of the Idaho Manual for Bridge Evaluation. (http://itd.idaho.gov/Bridge/IMBEFirstEdition.pdf)

Structure types that shall be rated in Brr or BrDR:

- Prestressed girders
- Steel rolled girders, plate girders, or built-up sections
- Reinforced concrete girders
- Timber girders
- Trusses
- Cast-in-place or precast box culverts and stiffleg culverts

Load rating submittal shall include:

- AASHTOWare BridgeRating software file (XML electronic file only)
- Load Rating Summary Form (LRFR) Signed and Sealed by the Load Rating Engineer (PDF electronic file only)
- Load Rating Summary Form (LFR) (PDF electronic file)
- Excel Load Rating Summary Form (LRFR and LFR) (MS Excel electronic file only)
- Load Rating Supporting Calculations (PDF electronic file only)

<u>Load Rating on Rehabilitation Projects</u>

When consultants are involved with bridge rehabilitation projects the load rating shall be reviewed and updated as necessary by ITD.

Revisions:

April 2008	Added TS&L Report requirements in Structure Concept Review. Added requirement for Virtis load rating.
July 2009	Added Check Calculations & QA/QC check lists submittal at Final Design.
July 2010	Revised plans, specifications, & estimate submittal section to include updated load rating information.
March 2011	Added Concept Report for project. Renamed “Structure Concept Report” to “TS&L Report”.
Feb 2012	Added Design Calculations format requirements Changed reference to Bridge Asset Management Changed reference to District PDE for returning comments on State projects. Changed reference to LHTAC for returning comments on LPA projects.
August 2012	Clarified Load Rating for New Bridges Added Guidance for Load Rating of Bridge Rehabilitation Projects

Sept 2012	Changed “should” to “shall” for the Situation Layout and Final Design Review attachments.
October 2013	Deleted the requirement for Load Rating on Local Sponsor Projects at the PS&E submittal stage. Added requirement for load rating after construction is completed be done by a consultant on the ITD Load Rating Term Agreement list within 180 days of the bridge being opened to traffic. Clarified that the initial load rating on State sponsored projects shall be done at the PS&E submittal stage and final load rating be completed within 90 days of the bridge being opened to traffic. Rehab load rating shall be done by ITD staff.
May 2014	Revised notation of VIRTIS to BrR. Added reference to BrR coding instructions in Chapter 6 of the Idaho Manual for Bridge Evaluation.
March 2015	Final load rating for Local Sponsor projects completion date changed to 45 days after bridge opened to traffic to allow QA/QC process to be completed prior to the 180 day mandated limit. Final load rating for State Sponsor projects completion date changed to 45 days after bridge opened to traffic to allow QA/QC process to be completed prior to the 90 day mandated limit.
Oct 2016	Changed Article number from 0.3 to 0.03.
Oct 2017	Added a requirement of submitting a cost estimate with a contingency amount for each review stage. The intent of this requirement is to keep a closer track of the project cost during the design phase and allow changes in programming costs to occur at an early stage. Clarified when the load rating shall be done for precast culverts.
Feb 2018	Added reference to Articles 17.2 & A17.1 in the Final Situation Layout Review Added Stage construction details in the Final Situation Layout Review. Added abutment/pier details to clarify the concept in the Final Situation Layout Review
Nov 2019	Changed submittal of drawings for the Final Design Review from “reproducible form” to “.pdf format”. Added “minimum” for thickness of 3 mil mylars for PS&E submittal. Changed PS&E plan submittal from “11x17 prints” to “.pdf format”. Added PS&E Design Calculation submitted in .pdf format. Changed final precast culvert load rating from being completed within 45 days of the bridge opening to traffic to being completed prior to the bridge opening to traffic. Added precast culvert load rating done as part of construction support Supplemental Agreement.
Sep 2020	Added PS&E Plans submittal requirements for SS4 & ORD format. Changed name of “Phase 4 Foundation Report” to “Geotechnical Engineering Report” to agree with the Materials Manual. Changed reference to AASHTOWare Bridge Rating software (BrR) to Bridge Design and Rating software BrDR).
July 2021	Revised ITD-210 to ITD-211 to conform to the ITD Bridge Hydraulics Manual.
Sept 2021	Revised Load Rating procedures and submittal requirements.
Apr 2022	Deleted requirement for stamped calculations at Final design review.