

SITUATION AND LAYOUT CHECKLIST FOR HIGHWAY / WATERWAY CROSSINGS

PROJECT NAME: _____

PROJECT KEY NUMBER: _____

BRIDGE DRAWING NUMBER: _____

CHECKED BY: _____

Use pencil to mark items. Use an X or ✓ to indicate completion. Use “INC” to indicate items which are incomplete and “N/A” to indicate items which do not apply. For additional information on the design requirements refer to Chapter 17 of the “LRFD” Manual.

BORDER

- Designed and Detailed Names
- Design Checked and DWG Checked Names (required when work has been checked)
- Corrections Name (need only be completed when corrections have been made)
- Engineers Stamp (For Full and Half sized Sheets)
- Project Number
- Sheet Title
- Project Description (Length, Type of Support, Crossing, Station)
- Bridge Inspection Master Key (Only required on sheet 1)
- Bridge Drawing Number (required but may not be available during preliminary design)
- Project County and Key Number
- Sheet Numbering (required for final design and PS&E submittals)

SHEET 1

PLAN VIEW

- View Title with scale factor
- Length of Structure (out to out) along survey line
- Station and Finished Grade Elevation at the Beginning and End of structure along Centerline.
- Abutment / Pier number, Station, and Finished Grade Elevation shown at the Intersection of the Abutment / Pier Centerline and Survey line at the following locations:
 - Centerline of bearing of Abutments
 - Center of Piers / Bents
- Span lengths along survey line shown as follows:
 - Single Spans or End Spans: abutment centerline bearing - centerline pier/bent
 - Interior Spans: centerline pier/bent - centerline pier/bent
- Bridge Width shown (out - out). Width should include the parapet, curb and sidewalk as applicable.
- Curb-to-Curb Width shown
- Roadway Lane and Shoulder Widths shown
- Lane Direction and Name of Closest Town/Geographical Feature in that Direction indicated
- North arrow shown
- Intersection Angle shown if not a 90° crossing
- horizontal and vertical clearances shown as follows:
 - Highway Crossings: Show the point of minimum vert. and horiz. clearance for the highway
 - Stream Crossings: Show the point of minimum clearance above Q50 high water elevation
- Identification of Survey and Profile lines
- Existing Bridge Details shown (as needed)
- Existing Bridge Drawing Number given (Needed only if existing bridge is to be removed)
- Plan View Oriented so Elevation View can be placed below Plan View
- Bridge Stationing at Centerline of Structure shown and runs Left to Right of sheet
- Culvert Stationing at Centerline of Roadway shown and runs Bottom to Top of sheet
- Rip Rap Limits shown with pay note (as applicable)
- Contour lines shown and gray shaded
- Utilities Crossing the structure shown (as applicable)

- Deck drains shown (as applicable)
- Survey Cap shown with installation note

ELEVATION VIEW

- View Title with scale factor
- Total length between abutment centerlines along survey line shown
- Abutment/Pier Number and Station shown at the following locations:
 - Centerline Bearing of Abutments
 - Centerline of Piers/Bents
- Span Length Shown
- Span Number Shown (Multi-Span Structures only)
- Fixity Shown (“E” Expansion, “P” Pinned, or “F” Fixed) (not required on culverts)
- Minimum Vertical Clearances shown as follows:
 - Highway Crossing: Minimum Clearance from roadway
 - Stream Crossing: Minimum Clearance from Q_{50} High Water Elevation
- Ground Line along the Centerline of Structure Shown
- Abutment Slopes shown and annotated
- Abutment / Pier Projection lines shown (Do not show where projection lines may be confusing)
- Roadway approach Guardrails shown with associated note

PROFILE DATA

- View Title with scale factor
- Profile Grade Across Structure Shown
- Structure Location Shown on Profile
- Station and Elevation for the Beginning and End of Structure Shown
- Profile Grades for all Highways involved in Crossing Shown
- The following Vertical Curve Data Shown:
 - Stations and Elevations at Point of Curvature, Point of Intersection, and Point of Tangency
 - Length of Vertical Curve
 - Incoming and Outgoing Grades as a percent

HORIZONTAL ALIGNMENT DATA

* Horizontal Alignment Data should be included in the Plan view if possible.

- View Title
- Stations at Point of Curvature, Point of Intersection, and Point of Tangency Shown
- Horizontal Curve data Shown (Δ , T, L, R, S, RL, and Z)
- Horizontal Curve described in Degree of Curve
- Super Elevation Transition Data Shown (If applicable)
- Alignment Bearing (Should be shown in Plan View if possible)

HYDRAULIC DATA

- View Title
- Hydraulic Data for Streams and Rivers shown for the following conditions:
 - Design (Flood, discharge, H.W. Elev., and Velocity)
 - Base (Flood, discharge, H.W. Elev., and Velocity)
 - Scour (Flood, discharge, H.W. Elev., and Velocity)
- Hydraulic Data for Canals Shown (Canal Flow, H.W. Elev., Velocity, and Flow Controller)

SHEET 2

INDEX OF SHEETS

<input type="checkbox"/>	View Title
<input type="checkbox"/>	Sheet number and Sheet Title Shown for all Sheets

QUANTITIES

<input type="checkbox"/>	View Title
<input type="checkbox"/>	Bid Item Number, Description, and Unit Shown for all applicable items
<input type="checkbox"/>	Bid Item Quantity Shown (Not Required until Final Design)

TRAFFIC DATA

<input type="checkbox"/>	View Title: One Directional Data
<input type="checkbox"/>	Construction Year ADT & ADTT
<input type="checkbox"/>	Future Year ADT & ADTT

VICINITY MAP

<input type="checkbox"/>	Map of the State of Idaho showing location of the project
<input type="checkbox"/>	Vicinity map showing the location of the bridge site

Revisions:

March 2011 Revised Checklist to agree with 17.2
Changed location of stationing for culverts from “centerline of structure” to “centerline of roadway”.
Added traffic data to sheet 2 to provide one directional data required for load rating.