

## PS&E CONTINUUM

The tables below show the progression of each of the major deliverables throughout the project development phase. Most projects will follow this progression, although individual items may be moved to an earlier phase if necessitated by project requirements. Also, if the project is developed with fewer milestones, i.e., one milestone is eliminated, the project schedule, via its activities and steps, needs to detail the development of deliverables at each milestone.

### PLANS

Plan Sheet or Section	Design Phase			
	30%	70%	95%	100%
<b>Title Sheet</b>	Include all information that is available.	Include/update all information.	Update information.	Show all information (see Sample Plans)
<b>Sheet Index</b> (may be placed on Title Sheet)	List the sections (A, B, C, etc.) included in the 30% package; do not list each sheet.	Update to include additional sections added at 70%; do not list each sheet.	Update to list all sheets, not just sections.	Show all information (see Sample Plans)
<b>Plan Symbols and Abbreviations</b>	Standard Drawing Note: Special line types should be added to the first page of the section in the Plans, not to the Standard Drawing (W101-1).	No change from 30%.	No change from 30%.	No change from 30%
<b>Vicinity Map</b>	Show as much information as available.	Update to include additional information.	Show all information (see Sample Plans).	No change from 95%.
<b>Summary of Quantities</b>	Only show items that are listed in the Engineer's Estimate. Enter quantities in the "Estimated Quantities, Bid Schedule" column, not in the columns for each Plan sheet sections. Do not list allowances at 30%.	Show quantities for all bid items. Enter quantities in the appropriate plan sheet section column. Include the allowance and show the total in the "Estimated Quantities, Bid Schedule" column.	Update information from 70%.	Update information from 95%.
<b>Typical Section</b>	Include everything shown in the Sample Plans except station ranges for guardrail. At 30%, geotechnical recommendations are only conceptual, and some typical section features will be updated in the 70% phase.	Ideally, show everything, although some features may need to be updated at 95%.	Show all information (see Sample Plans).	If needed, update from 95%.
<b>Tabulation of Quantities</b>	Include a Tabulation of Quantities sheet only for section D of the Plans. Show all quantities related to earthwork, aggregates, and asphalt, including 'for information only' quantities. Also show tabulation table for other major quantities such as guardrail.	Include Tabulation of Quantities sheets for <u>all known quantities</u> , including 'for information only quantities.'	Include Tabulation of Quantities sheets for <u>all quantities</u> , including 'for information only quantities.'	Update from 95%.
<b>Plan-Profile Sheets</b>	Show preliminary annotated H & V alignment; existing ground line (profile only); slope catch points; and drainage structures > 48" inch diameter and preferably ≤48". Include callouts needed to convey design intent, such as size and length of major structures, guardrail length, etc.	Show final annotated H & V alignment. Include all information (see Sample Plans) for items of work (walls, culverts, guardrail, etc.) shown for 70% phase in the P6 project schedule;	Show information (see Sample Plans)	Update from 95%.
<b>Detail Sheets (riprap ditch detail, riprap blanket detail, etc.)</b>	Include draft details for major items of work.	Include draft details all items of work.	Include final details for all items of work.	Update from 95%.
<b>Grading Plan (Material Sources, Parking Lots, etc.)</b>	For parking lots, show area of impact. For material sources, Grading Plan is not required at 30%	For Parking Lots and Material Sources, show preliminary grading identifying impacts and drainage flow.	For Parking Lots and Material Sources, show final grading identifying impacts and drainage flow, with all annotations and details.	Update from 95%.
<b>Survey Control</b>	Not provided	Not provided	Include all information (see Sample Plans).	No change from 95%.

## PLANS - continued

Plan Sheet or Section	Design Phase			
	30%	70%	95%	100%
<b>Tabulation of Erosion Control Quantities</b>	Not provided	Not provided	Include all information (see Sample Plans).	Update from 95%.
<b>Erosion Control Plan</b>	Not provided	Show location and type of devices at 70%. Include whatever information is needed for the permit applications, as the 70% Plans will be used for the permit application. Quantities for devices are not required.	Include all information (see Sample Plans).	Update from 95%.
<b>Erosion Control - Standard Drawings and/or WFL Details</b>	Not provided	Include Standard Drawings and/or WFL Details details for items of work shown in the 70% package.	Include Standard Drawings and/or WFL Details details all items of work.	Update from 95%.
<b>Tabulation of Drainage Quantities</b>	Not provided	Only show station, size, length, and type of culvert (metal, plastic, etc.)	Add structure exc, end sections, etc.	Show all information (see Sample Plans)
<b>Drainage Plans for Culverts</b>	Not provided	See Sample Plans Provide plans for cross-drains, >48" culverts, and storm sewer drainage. Do not show annotations.	Show all information (See Sample Plans).	Update from 95%.
<b>Drainage – Standard Drawings and/or WFL Details</b>	Not provided	Include Standard Drawing or WFL Details for items of work shown in the 70% package.	Include Standard Drawing or WFL Details for all items of work.	No change from 95%.
<b>Bridge - Plan and Elevation</b>	At 30%, only the TS&L (Bridge type, size, and location) Sheet is provided. The TS&L shows the plan, elevation, and cross section of the bridge. Low chord is shown; foundation elevations are not provided. The TS&L sheet lists preliminary hydraulic information and it includes the LPSM cost based on SQFT of deck or approximate quantities.	Plan, elevation and typical section of the bridge all information included At this stage the bridge superstructure and substructure will be fully designed, but not fully checked.	All information is shown and has been checked.	Update from 95%.  Note: For the 100% reviews, the "Preliminary, Not for Construction" stamp will remain on the plans. The stamp is removed for the very final set that is sent to Acquisitions. The reinforcing bar list sheets are also stripped of quantity data (as the Contractor is responsible for submitting this info).
<b>Bridge - General Notes and Estimate</b>	Not provided	At 70%, everything is shown; however quantities are preliminary (bar list not developed so steel quantity is only an estimate.) General notes include more information than other sections, since these sheets will be the only reference for next 75 to 100 years and are needed for load ratings, etc.	All information is shown and has been checked.	Update from 95%.  An updated version of the Engineer's Estimate for the Bridge pay items, and Quantity calculations is provided at 100%.
<b>Bridge Sheets</b> (Foundation Plan, Abutment Cap, Abutment Endwall, Wingwalls, Abutment Bearings, Pier Caps, etc.)	Not provided	All bridge sheets will be included.  At this stage the bridge superstructure and substructure will be fully designed, but not fully checked by the independent reviewer. Reinforcing bar lists will not be developed at this stage, blank sheets will normally be provided.  Note: Sheets are arranged in the order of construction (from the ground up). "Preliminary Not for Construction" is placed on all sheets.	At this stage the bridge is fully designed, detailed, and checked. Reinforcing bar lists are provided at this stage (in the Plans) and will have all details shown. The 'Preliminary Not for Construction' stamp will remain on the 95% Plans. A draft load rating of the structure will be completed at this stage.	Update from 95%.

## PLANS - continued

Plan Sheet or Section	Design Phase			
	30%	70%	95%	100%
Tabulation of Temporary Traffic Control Quantities	Not provided	Flagging hours are required at 70% regardless of the temporary traffic control plans; no other quantities are required.	Show all information (see Sample Plans)	Update from 95%.
Temporary Traffic Control Plan	Not provided	For projects where standard drawings are sufficient (i.e., single lane closure), include only the standard drawings; For projects where site specific plans are required (i.e., temporary bypasses, construction phasing, etc.) include project specific drawings needed to communicate intent.	all information (see Sample Plans)	Update from 95%.
Temporary Traffic Control – Standard Drawings and/or WFL Details	Not provided	Include Standard Drawing and/or WFL Details for items of work shown in the 70% package.	Include Standard Drawings and/or WFL Details for all items of work.	Same as 95%.
Permanent Traffic Control Quantities	Not provided	Quantities are not required at 70%.	Show all information (see Sample Plans).	Update from 95%.
Permanent Traffic Control Plan	Not provided	Show all permanent traffic control devices. Striping plan is not required at 70%.	Show all information, including striping plan (see Sample Plans).	Update from 95%.
Permanent Traffic Control – Standard Drawings and/or WFL Details	Not provided	Include Standard Drawing and/or WFL Details for items of work shown in the 70% package.	Include Standard Drawings and/or WFL Details for all items of work.	Same as 95%.

## OTHER DELIVERABLES

Deliverable	Design Phase			
	30%	70%	95%	100%
SCRs	Not provided	Include all relevant LOS with non-applicable language deleted.  Add preliminary project specific language from design and technical functions.	Final project specific language added from design and technical functions.	Update from 95%.
Engineer's Estimate	Class B estimate; all major work items (individually priced); grouped smaller items (percent of total project); include 20% to 30 % contingency.	Class A estimate; virtually every bid item (individually priced); include 10% to 20 % contingency.	Update Class A estimate; include every bid item (individually priced) (no contingency)	Update from 95%.
CPM for Construction Time	Not provided	MS Project schedule that includes all items on or influencing the critical path. Include all known restrictions (i.e. work windows, closures, etc.).	Update schedule to be consistent with final quantities. Include all restrictions.	Finalize schedule.

**OTHER DELIVERABLES**

Deliverable	Design Phase			
	30%	70%	95%	100%
<b>Cross-Sections</b>	Show only automated labeling; no hand labeling.	Show only automated labeling; no hand labeling.	Show all labeling - automated and hand labels.	Update from 95%.
<b>Earthwork Reports</b>	Provide reports for all quantities shown in the Engineer's Estimate / Summary of Quantities and for which the quantity is calculated in ORD.	Rerun to reflect changes to design	Rerun to reflect changes to design	Rerun to reflect final changes to design and reflect final quantities
<b>Quantity Calculations</b>	Provide quantity calculations for all quantities shown in the Engineer's Estimate / Summary of Quantities.	Provide quantity calculations for all quantities shown in the Engineer's Estimate / Summary of Quantities.	Provide quantity calculations for all quantities shown in the Engineer's Estimate / Summary of Quantities.	Update from 95%.
<b>Design Narrative</b>	Identify initial assumptions made for the geometry of the project. Identify any decisions made between WFL and Partner Agencies that have created a deviation from standard design. Obtain information from CFT members for respective areas of design narrative.	Update narrative to reflect current state of the project.	Update narrative to reflect current state of the project.	Update from 95%.
<b>Design QC Checklist with Designer QC completed</b>	QC Checklist for 30%	QC Checklist for 70%	QC Checklist for 95%	QC Checklist for 100%
<b>Highway Design Standards Form</b>	complete form except for Exception/Variance column and explanations	complete entire form except for signatures	HDS form with all signatures	No change from 95%.