This document offers “at-a-glance” information about deliverables during design and project development. Check appropriate resources and subject matter experts for details regarding specific deliverables for your project.

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**LEGEND**

- Blue shading = a newer row, added since earlier versions of the deliverables expectations matrix
- Orange shading = these groups/activities may be involved at these times in your project
- Grey = sometimes these activities are happening during this time frame
Deliverables Expectation Matrix

Communicates typical expectations for project deliverables and helps establish mutual understanding of these expectations.

Provides a “schematic” of the Project Development Process at WSDOT - The matrix is foundational to seasoned project managers, project teams, staff, and our consultant partners. The matrix offers additional value as a guide for staff learning how to complete a WSDOT project.

This tool is used to help plan and execute work for project development. The matrix offers Quality Control, Quality Assurance and Quality Verification benefits. The matrix helps team readiness for project reviews and organizes the project development process as follows:

Planning (corridor sketch strategies)
  Scoping
    Project Management Plan Development (endorse)
    Geometric design review / design approval (~ 30% design level)
    Constructability review (~60 design level)
    Pre-contract review (~90% design level)
    Contract documents ready (~100% design level)
    Contract ad and award
    PE Phase Close Out

Master Deliverable List (MDL)

Project Management Guide

Target Audience for the Deliverables Expectations Matrix includes...

<table>
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<th>project teams</th>
<th>new designers</th>
<th>subject matter experts</th>
<th>traffic</th>
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<tr>
<td>consultants</td>
<td>design</td>
<td>design-builders</td>
<td>specialty firms</td>
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</table>
| corridor sketch / planning study | Identify team members  
- consultants, WSDOT staff, or combination  
- core team members  
- extended team members  
- roles and responsibilities  
project endorsement  
project design criteria draft  
asumptions  
deliverable requirements  
project delivery method | design criteria final  
design decisions  
design approval  
Design Manual Ch. 300  
Basis of Design complete | major design elements  
completed  
geological & hydrogeological conflicts identified  
resolve conflicts: utilities, drainage, etc.  
review constructability  
3D modeling complete | deliverables substantially complete  
document to reviewers | Region PS&E review  
(typically 10 weeks). | WSDOT publicly solicits  
bids from contractors to  
construct the project. | organized cessation of  
activities; transition work  
or staff | Archive required records |

### 2. Project Management

| corridor level vision | Design Manual 305  
PMW & work plan (DBE goals)  
Project Kickoff (initiate & align worksheet)  
Baseline schedule and Budget  
Risk Management Plan  
Communication plan  
Change management plan  
Quality Management Plan (QA, QC, QV)  
Endorsement  
Executing work | Quality  
Control – actions at the production level to deliver the desired quality and professional services.  
Assurance – actions to ensure prudent quality control procedures are in place.  
Verification – actions to ensure a Quality Management Plan (QMP) was implemented and followed. | Constructability  
Goals of Constructability  
- Maximize ease with which a project is constructed while maintaining quality, standards, and meeting expectations.  
- Integrate construction expertise into the design to optimize efficiency during construction.  
- Ensure design is environmentally and socially responsible and continues during construction. | Official closure and handoff  
Lessons learned  
recognized accomplishments  
organized end of design activities  
transition of work or staff  
documentation per retention requirements |

### 3. Cost Estimates

| Preliminary cost estimate | updated estimate & basis  
Budget assumptions communicated | Determine if project needs: Value Engineering  
and Risk Assessment  
updated estimate & basis | Begin item by item  
Project Estimate  
(update basis of estimate)  
R/W Project Funding  
Estimate completed | Estimate item quantities  
and unit costs.  
(update basis of estimate)  
updated estimate & basis  
Pay groups and pay items determined | Check that all items are  
included and correct.  
(update basis of estimate)  
Cost estimate completed  
with below the line items. Summary of quantities completed, item prices determined, lump sum cost detail completed | Engineer’s estimate at ad  
Verify that all items are  
included and correct.  
(final basis of estimate)  
Construction estimate finalized |

### 4. Environmental Review, Permitting, & Documentation

| Environmental Review Summary completed. | Verify permits and documentation needed  
Environmental budget and schedule submittal  
Agreement on Area of Potential Affect for Section 106 and Action Area for ESA  
coordination with agencies  
Environmental surveys of project footprint  
Complete necessary Env docs and permits to complete Geotech work | Coordination with agencies  
NEPA/SEPA compliance documentation  
Environmental Permit Applications | Coordination with agencies  
NEPA/SEPA Compliance documentation  
Environmental Permit Applications | Coordination with agencies  
NEPA/SEPA Compliance documentation  
Environmental Permit Applications |
|-------------|---------|------------------------------------|-------------------------|------------------------|-------------------|----------------------------------------|----------------------|------------------|
| Scoping     | corridor sketch / planning study | Scoping Level Pavement Design completed, including:  
- WSPMS/Historical Data/Maintenance Input  
- Projected Traffic Type/Usage  
- Existing Conditions/Primary Deterioration  
- HATS  
- Pavement Policy | Scoping Level Pavement Design reviewed Region materials Pavement Design Report requested  
Preliminary Pavement Type Selection Completed  
Field and Core Investigation completed  
Draft Pavement Design Report completed | Draft Pavement Type Selection completed  
Draft Design Report approved by Region, (sent to Pavement Office for concurrence) | Pavement Type Selection submitted to Pavement Office for Final Approval  
Draft Pavement Design Report completed | Final Pavilion Design Report with Region stamp and Pavement Office signed concurrence to Region for Plan Review | Pavement Repair quantities and locations reviewed with Construction PEO for verification of field accuracy |
| Contract Ad and Award | bid letting | | | | | | | Transfer summary of project risk status to construction office. |

**5. Cost Risk Estimating Management**

Early determination of project needs for project risk assessment:  
Cost Risk Assessment, CRA or Cost Estimate Validation Process, CEVP.  
Project Risk Assessment process steps are built into the project management plan, work schedule and scope of work.  
Review the Project Risk Management Guide; milestones for Scope, Schedule and Estimate are used to inform the timing of activities for project risk assessment. This includes updates.  
Establish milestones for cost risk assessment prep meetings and activities, workshop(s), and post workshop activities in the project schedule.  
Schedule Risk monitoring and control activities.

**6. Value Engineering**

Early determination of benefit of Value Engineering for the project.  
Review the Value Engineering chapter of the Design Manual. Value Engineering is an effective process for ensuring Practical Design. Value Engineering activities are built into the project schedule.  
Value Engineering workshop.  
Implementation of Value Engineering recommendations.  
Follow-up and follow-through of value engineering recommendations.  
Prepare summary of value engineering recommendations as implemented into the final design.

**7. Pavement**

|-------------|---------|------------------------------------|-------------------------|------------------------|-------------------|----------------------------------------|----------------------|------------------|
| Scoping     | corridor sketch / planning study | Scoping Level Pavement Design completed, including:  
- WSPMS/Historical Data/Maintenance Input  
- Projected Traffic Type/Usage  
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| Contract Ad and Award | bid letting | | | | | | | Transfer summary of project risk status to construction office. |

**Corridor Scoping**

|-------------|---------|------------------------------------|-------------------------|------------------------|-------------------|----------------------------------------|----------------------|------------------|
| Scoping     | corridor sketch / planning study | Scoping Level Pavement Design completed, including:  
- WSPMS/Historical Data/Maintenance Input  
- Projected Traffic Type/Usage  
- Existing Conditions/Primary Deterioration  
- HATS  
- Pavement Policy | Scoping Level Pavement Design reviewed Region materials Pavement Design Report requested  
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<p>| Contract Ad and Award | bid letting | | | | | | | Transfer summary of project risk status to construction office. |</p>
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<tbody>
<tr>
<td>corridor sketch / planning study</td>
<td>endorse</td>
<td>~30%</td>
<td>~60%</td>
<td>~90%</td>
<td>100%</td>
<td>bid letting</td>
<td>transition to construction</td>
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</table>

### 8. Utilities and Railroad
- Potential utility relocations identified
- Responsibility for costs established
- Utilities within the project limits notified.
- Washington Utilities Transportation Commission (WUTC) permit application for railroad crossings submitted.
- Utility As-Builts requested.
- Railroad (RR) issues identified.
- Relocation cost responsibility defined.
- Franchise and permit documentation collected.
- Utility relocation strategy for project established.
- Utility Conflict Report & Plan with as-built info.
- Preliminary Utility conflicts identified.
- Utility Object Relocation Record-UORR sent to Utilities.
- Project Overview Meet w/Utility Owners
- Utility Quality Level C & D completed.
- Determine need for Subsurface Utility Engineering, SUE Utility Quality Level A & B
- Relocation plans/schedule request from Utilities.
- Franchise/Permit process initiated; cost recovery accounts initiated.
- Utility property rights verified.
- Railroad standard
- Construction Maintenance Agreement (CMA) obtained.
- Utility relocation Plan information and specifications incorporated in PS&E.
- Letters of Understanding issued to Utilities requiring relocation.
- Utility, service, and railroad agreements completed.
- Utility relocation and schedule monitored, and coordination completed.
- Construction and Maintenance Agreement completed.

### 9. Access
**limited/managed**
- DM 520, 530, 540, 550, 1103
- M 210 (hearings)
- Define existing access status; managed access and/or limited access
- A choice to change current or planned access is to be consistent with the contextual information, desired performance targets, and modal priorities. DM 1103. Evaluate Access Master plan - determine most appropriate access control. Document in BOD Section 3.
- Identify general project impacts to access.
- Identify affected abutters for access report and hearings.
- Determine if an access hearing is required.
- Evaluate access connections and identify improvements.
- Limited Access Change
- Access hearing required or notice of opportunity for a hearing.
- Access hearing
- Access Report and Access Report Plan
- prehearing packet
- Managed Access
- Review grandfathered approaches and existing permitted approaches.
- Evaluate access connections and identify improvements. Is it appropriate to combine or close connections and reduce traffic conflicts?
- Managed Access Control Permits in the RAMPS database, reviewed, and updated.
- RAMPS = Roadway Access Management Permit System

**Managed Access**
- Managed Access Control
- Note: Managed Access connections are not noted on the Right-Of-Way plans. There is no Right-Of-Way plan change unless WSDOT requires Right-Of-Way.
### 10. Right-Of-Way

**Right of Way Manual, Chapter 6**

#### Design Manual 510

**Property required for a public facility, includes square footage, access rights, easements, and any property impacts.**

Consider significant right of way elements in accordance with the Right of Way Manual.

**Scoping**

- corridor sketch/planning study

**Project Management Plan Development**

- endorse

**Geometric Design Review**

- ~30%

**Constructability Review**

- ~60%

**Pre-contract Review**

- ~90%

**Contract Documents Ready (Final Review)**

- 100%

**Contract Ad and Award**

- bid letting

**PE Phase Close Out**

- transition to construction

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<td>Plan development: &quot;red line R/W plan&quot; R/W cost estimates made by Real Estate Services. Request title reports for identified right of way parcels. Real Estate Services performs field inspections as appropriate.</td>
<td>Confirm status of right of way acquisition. • Examine Title reports. • Add easements to right of way and limited access plan. • Obtain utility, railroad, haul road, detour routes, or other essential agreements. Utilities Manual and the Agreements Manual. • Plan right of way acquisition, disposal, and maintenance. • Plan easements and obtain permits (to accommodate activities outside of the right of way).</td>
<td>Right-of-way acquisitions complete.</td>
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### 11. Community Engagement

**multimodal, multijurisdiction, multidisciplinary engagement concept**

- team launch

- create stakeholders list

- get input from region communications

- confirm need & context

- Design controls

- Alternatives Analysis

- preferred alternative Elements/Dimensions identified

- Dimensioned

**Community Engagement Plan Complete**

- Investigate design concepts that incorporate community feedback

- Investigate design concepts that incorporate community feedback

**Community Engagement Ideas Fully Implemented Into Contract Plans**

### 12. Design Documentation

**Context Management Assessment Report (CMAR) Complete**

- BOD initiated

- Section 1 and 2 of the BOD complete. Baseline and contextual needs including performance metrics and targets. Context determined. Section 3 and 4 in draft form circulated for concurrence.

**Context Management Assessment Report (CMAR) Complete**

- All sections of BOD complete and BOD approved

- If a separate Design Approval is necessary, it should be completed in this phase. Design Analysis completed.

**Project Development Approval Complete or Combined Design Approval/Project Development Approval Complete.**

**Design Documentation Package Complete**

**Design Documentation Transferred to Construction Project Office.**

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### 13. Roadway Geometrics and Plans

**Project Limits Identified**

- Affected alignments identified

- New versus existing alignment

- Target speed

- Preliminary design criteria established

**Design Criteria and Parameters Approved**

- Preliminary footprint designed

**Typical roadway section(s) completed; station to station roadway geometrics, surfacing type & depth, slope information, guardrail, vertical cut locations, and construction notes Mainline and major horizontal, & vertical alignments, and superelevations designed**

**All horizontal & vertical alignments & superelevations completed**

**Design Analysis Approved**

**DDP updated as required**

**All geometric plans completed (alignment, profiles, roadway sections, interchange contours, site preparation, road approach plans, etc.)**

**Design compared to endorsed design criteria/parameters**

**Final Plans for PS&E Contract**

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<tr>
<td><strong>14. Channelization and Pavement Marking Plans</strong></td>
<td>Intersection Control Analysis (ICA) approved (if not already complete in scoping)</td>
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<td>Roundabout Geometric Design Peer Review complete.</td>
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<td>Intersection Plans for Approval submitted for review.</td>
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<td>Signal permits completed.</td>
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<td>Stripping material selected.</td>
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<tr>
<td></td>
<td>Design Analysis submitted and approved Intersection plans for approval complete</td>
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<td></td>
<td>All plans completed Approved Channelization Plan verified for consistency with pavement marking plans and specifications</td>
</tr>
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</table>

| **15. Hydraulics & Stormwater** | Drainage needs identified in accordance with Maintenance and Regional Hydraulics |
|                                | Stormwater Management requirements identified |
|                                | Design criteria identified |
|                                | Water quality requirements identified |
|                                | Stormwater Retrofit Cost-Effectiveness and Feasibility (RCEF) Phase I Analysis complete |
|                                | Confirm specific criteria for: |
|                                | - Fish Passage |
|                                | - Chronic Env Deficiency |
|                                | - Major Drainage |
|                                | - Bridge Scour/ replacement |
|                                | Stormwater Management strategies, including locations for treatment and/or flow control, identified (to meet hydraulic and stormwater requirements) |
|                                | Sensitive Area Documentation completed (Water Resource Inventory) |
|                                | Stormwater Management Strategy endorsed by region or HQ hydraulics engineer |
|                                | Stormwater Management options to identify K/W needs completed |
|                                | Preliminary Stormwater Design, i.e., stream design |
|                                | Stormwater RCEF Phase II Analysis complete |
|                                | Hydraulic Report Final approved verified for consistency with plans and specifications |
|                                | Stormwater details completed |
|                                | As a result of previous Stormwater RCEF analysis, if applicable, transfer stormwater retrofit funds to the I-4 Subprogram, Stormwater Retrofit Category |
|                                | Final Hydraulic Design, i.e., stream design |

| **16. Survey & Mapping** | LIDAR or existing aerial photos or other preliminary information. |
|                         | Project survey requirements finalized, including areas that may be outside roadway corridor improvements. |
|                         | Project survey control completed Cadstral survey performed. Topographic Survey complete. |
|                         | Design level mapping completed Record of Survey completed and filed Right of Way plan completed and approved Relocation plan completed |
|                         | Mapping of new roadway features completed Field review of proposed features completed |
|                         | DNR Permits to Destroy Monuments obtained |
|                         | Preliminary construction staking data completed |

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<td>corridor sketch / planning study</td>
<td>Submittal: TS&amp;L (when required)</td>
<td>~30%</td>
<td>~60%</td>
<td>~90%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**17. Structures (Bridges, Retaining Walls, Noise Walls, high mast lighting, sign structures)**

Determine needed structure and/or geotech work. Square footage cost estimates of structures

Structural Input for Environmental Documentation and Permits

Begin Coordination: project scope, preservation activities, construction staging, layout and span lengths, design constraints, seismic operational classification

Submittal: TS&L (when required)

Structural Participation in Agency Coordination

Finalize Scope of Work Agreements

Refer to Deliverables in the Structural Matrix: "Bridge Preliminary Plan"

Required Information from Others:
- Structure Site Data
- Preliminary Hydraulic Design (PHD)
- Geotechnical Information for Bridge Preliminary Plan

Submittal: Draft Bridge Preliminary Plan

End of Phase Document: Approved Bridge Preliminary Plan

Refer to Deliverables in the Structural Matrix: "Constructability Review Set"

Required Information from Others (4 weeks prior to submittal):
- Geotechnical Information for Bridge Substructure Design
- Draft Bridge Scour Recommendations

Submittal: Constructability Review Set

End of Phase Document: Finalized Comment Resolution Form

Refer to "Structural Submittal Expectations Matrix".

Also, refer to "Structural Submittal Expectations Matrix".

**18. Illumination, Signals, and ITS**

Establish required light levels (roadway and pedestrian classification).

Determine ITS needs and preliminary equipment locations.

Coordinate with signal operations for any proposed new or modified traffic signal systems. Signal operations will develop signal-phasing plan(s) as part of signal system analysis. Start speed study for existing intersections.

Begin collection of as-built data for existing locations.

As-built information collected and verified on-site with maintenance. Illumination Light Level Analysis complete. Signal phasing plan complete. Preliminary signal plan approved.

Pole locations provided to design for coordination of grading and drainage. Confirm lateral bearing pressure design for poles. Wind load charts for signal standards Contact structural designer for poles mounted on structures. Determine preliminary utility connections (power or communications) and initiate coordination with serving utilities.

Box/vault, cabinet, and conduit layout complete. Wiring / network (fiber) diagram complete.

Signal display and detection laid out and identified. Provide data to Bridge and Structures Office for any special design equipment or foundations.

All notes and schedules complete, including review and approval of supporting calculations. Supporting detail plans complete. Provide service agreement requests (power or communications) to utilities office for processing.

Final plans complete. Service agreements complete.

Refer to Deliverables in the Structural Matrix: "PS&E Review Set"

Required Information from Others (6 weeks prior to End of Phase)
- Geotechnical Recommendations
- Final Hydraulics Design (FHD)

Submittal = End of Phase Document: PS&E Review Set

**19. Geotechnical Recommendations**

Scoping level cost estimate for project/workforce planning, based on project size, location, known elements & historical costs.

Support for TS&L

Submittal: TS&L (when required)

Required Information from Others:
- PMP
- Work Request
- Scope of Work Agreement
- Draft Schedule

Required Information from Others:
- Project Site Data:
  - Mainline and major horizontal & vertical alignments

Required Information from Others:
- Approved Bridge Preliminary Plan
- Roadway sections
- Draft Bridge Scour Recommendations

Required Information from Others:
- Final Hydraulic Design (FHD)

End of Phase Document: Finalized Comment Resolution Form

referables expectations matrix_2021.docx
<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Expectations</th>
<th>Matrix 2021</th>
<th>Dec 16.docx</th>
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</table>

### Deliverables
- **Scoping**
  - Project Management Plan Development
  - Geometric Design Review
  - Constructability Review
  - Pre-contract Review
  - Contract Documents Ready (Final Review)
  - Contract Ad and Award
  - PE Phase Close Out

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<td>deliverables</td>
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<tr>
<th>Work Zone Traffic Control</th>
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<th>Safety Analysis</th>
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<tr>
<td>20. Work Zone Traffic Control</td>
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<td>Safety Analysis</td>
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<td>Basic traffic control strategies &amp; alternatives identified. Projects of significance must have Traffic Management Plan (TMP) scoped.</td>
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<tr>
<td>Scoping level operational analysis complete for alternatives consideration</td>
<td>Operations analysis scope determined</td>
<td>Assumptions and conclusions in Safety Analysis verified for consistency with design.</td>
</tr>
<tr>
<td>Operations data collected</td>
<td>Traffic data collected</td>
<td>Safety Analysis complete.</td>
</tr>
<tr>
<td>Operations Analysis</td>
<td>Perform Operations Analysis</td>
<td></td>
</tr>
<tr>
<td>Intersection Control Evaluation (ICE) approved (if not already complete in scoping)</td>
<td>Interchange Justification Report (IJK)</td>
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<tr>
<td>Safety Analysis complete.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference Safety Analysis Guide for what will be needed for Safety analysis for the funding program.</td>
<td></td>
<td></td>
</tr>
<tr>
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### Temporary Traffic Control
- **20. Work Zone Traffic Control**
  - Basic traffic control strategies & alternatives identified. Projects of significance must have Traffic Management Plan (TMP) scoped.
  - Preliminary Traffic Management Plan/Traffic Control Plan
  - TMP showing construction sequence and staging completed

### Safety Analysis
- **22. Safety Analysis**
  - Crash Analysis Report (CAR)
  - Reference Safety Analysis Guide for what will be needed for Safety analysis for the funding program.
  - CAR is complete if funded from the Collision Reduction program.
  - Gather data necessary for Safety Analysis. Perform Safety Analysis
  - Safety Analysis complete.

### Construction
- **21. Traffic Analysis**
  - Operations Analysis Report (ARR)
  - Reference Safety Analysis Guide for what will be needed for Safety analysis for the funding program.
  - CAR is complete if funded from the Collision Reduction program.

### Contract
- **21. Traffic Analysis**
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### 23. Signing

- Contact Region Traffic Office to discuss scheduling, scope of project, and needed information for sign design
- Gather and deliver signing information to the Traffic Office

**Expected Deliverables:***

- Existing signs to reuse and relocate defined
- Existing sign inventory complete (include electrical items for sign lighting, flashing beacons, or variable/dynamic message signs)
- Potential conflicts between light standards, camera poles, and signal poles with signs identified
- Requests for sign structures submitted to HQ Bridge and Structures
- Preliminary Guide Sign Plan developed
- Preliminary Lump Sum Estimate calculated

**Expected Contract Documents Ready (Final Review):***

- Updated Sign Design Plan Sheets (Sign Specification Sheets – Removal, Relocation, & Roadside Sign Structures; Sign Plans; Sign Details)
- Overhead Sign Structure Plan Sheets completed
- Update Lump Sum Estimate

### 24. Temporary Erosion and Sediment Control (TESC)

**Extent of anticipated ground disturbance identified:**
- Need for environmental permits identified (including but not limited to NPDES)
- Preliminary identification of specific site conditions (sensitive areas, contamination, etc.) and potential environmental commitments
- Environmental Review Summary (ERS) developed and submitted to Region Environmental for review and comment

**Type of TESC plan identified – full TESC Plan vs. Abbreviated TESC Plan/TESC Memo:**
- Project timing/duration determined

**Locations of disturbance and BMPs identified for TESC Plan:**
- Preliminary Grading Plans developed
- Streams/water bodies and other sensitive areas finalized for Construction Stormwater General Permit (CSWGP) Notice of Intent (NOI) and TESC planning
- Preliminary TESC Plan developed and reviewed by Region Environmental & Construction
- Cut and fill lines identified
- Clearing limits identified
- Preliminary TESC Plan finalized and accepted
- Bid items, Special provisions identified
- CSWGP NOI submitted
- Preliminary TESC Plan, partially completed
- Transfer of Coverage (TOC) forms, and CSWGP added to contract and sent to Contract Ad & Award
- Contractor signs TOC and sends back to WSDOT
- WSDOT State Construction Engineer signs TOC form
- Contract Administration and Payments Section (CAPS) adds “Specific Date of Transfer” and mails final TOC form to Ecology
- Contractor either accepts TESC Plan (and modifies) or develops their own
- Contractor develops S Spill Prevention, Control, and Countermeasure (SPCC) Plan as a Type 2 working drawing and submits to WSDOT for review/acceptance

**Temporary Erosion and Sediment Control (TESC):**
25. Specifications

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<tr>
<td>corridor sketch / planning study</td>
<td>endorse</td>
<td>~30%</td>
<td>~60%</td>
<td>~90%</td>
<td>100%</td>
<td>bid letting</td>
<td>transition to construction</td>
</tr>
</tbody>
</table>

- Start writing specials for non-standard bid items.
- Specifications preliminary run list completed
- Specifications run list completed
- All special provisions submitted for review and approval.
- Specialty groups specifications and special provisions completed Pay groups and pay items determined
- Approved Specifications included in PS&E

26. Maintenance

| Include nearest Maintenance Operations Area to ensure initial planning optimizes maintainability to maximize life cycle costs of all features for maintenance operations after project completion. Meet to discuss current:
- Pavement
- Utilities
- Right-Of-Way
- Hydraulics
- Structures
- Drainage
- Safety

- Identify how the planning may affect existing assets. Establish whether the scoping will have budgetary impacts to the Maintenance Operations forces after project completion. See Pavement Policy (section 7.5).

- Ensure initial planning considers maintainability, life cycle costs, and accessibility for maintenance operations after project completion. Meet to discuss current issues with:
  - Pavement
  - Utilities
  - Right-Of-Way
  - Hydraulics and Storm water
  - Structures
  - Drainage
  - Safety

- Ensure that the environmental impacts to Maintenance concerns have been documented and are part of the completed Environmental Review Summary.

- Verify guardrail design type considers:
  - maintainability
  - material costs and accessibility
  - limit exposure for traffic control

- Review previously discussed maintenance and operations (M&O) items:
  - Pavement
  - Utilities, Right-Of-Way
  - Hydraulics
  - Roadway Geometrics
  - Plans
  - Structures
  - Drainage
  - Safety items

- Allow Maintenance the opportunity to review the PS&E Package for maintainability to maximize the life cycle of all highway features within the project.

- Ensure plan sets are received by all Maintenance offices involved in the process.

- Include asset owner’s manuals and notes needed for as-builds.

- Maintenance needs to receive any changes that occurred during design/construction for asset management purposes.